Maltese Nurses' and Midwives' Attitudes towards Mental Illness: A National Comparative Study

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A thesis submitted in fulfilment of the requirements of Kingston University for the degree of Doctor of Philosophy

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To

Luca

May this work inspire you to follow your father's footsteps.

Declaration

I declare that all material contained in the thesis is my own original work, and that any references to or use of other sources have been clearly acknowledged within the text. Also no material contained in the thesis has been used in any other submission for an academic award. Finally, I declare that while registered for a research degree at Kingston University, I have not been a registered candidate or enrolled student for another award at any other academic or professional institution.

Abstract

BACKGROUND: Mental health problems are of serious concern across Europe. A major barrier to the realisation of good mental health and well-being is stigma and discrimination. To date there is limited knowledge or understanding of mental health nurses' attitudes towards mental illness and individuals experiencing mental health problems. No previous study has been conducted in Malta that addresses this aim, and prior to this study the attitudes of nurses and midwives towards mental illness were unknown. This study is the first of its kind to sample the nursing and midwifery population of an entire country. This study is also the first to attempt to compare the attitudes of nurses according to the years within a mental health setting as well as a comparison between attitudes and the different mental health settings. To the researcher's knowledge this study is also the first to include a midwifery population within the comparisons.

OBJECTIVES: To identify the attitudes of Maltese nurses and midwives towards mental illness and also the investigation of factors that contribute to the formation of attitudes towards mental illness.

DESIGN: A nation-wide cross sectional questionnaire survey.

SETTINGS: All Maltese state-owned hospitals, departments, units and clinics employing nurses and midwives.

PARTICIPANTS: A total of 1483 nurses and midwives participated in this study, representing all the various nursing and midwifery grades and work settings.

METHODS: Data were collected using The Community Attitudes towards the Mentally Ill (CAMI) scale, which is a 40-item self-report questionnaire. Data were analysed using quantitative methods using SPSS ver.21.

RESULTS: Maltese nurses and midwives hold a positive attitude towards mental illness. Positive attitudes are also seen for each of the 3 subscales of the CAMI tool, namely Fear and Exclusion, Social Control and Goodwill. This study concurs with existing literature and also identifies the importance of education in the formation of attitudes. Results show that Registered Mental Health nurses hold the highest attitudinal score. Apart from education and professional grade, age, years in service and working specifically within the mental health field also seem to infer on the attitudes of Maltese nurses and midwives towards mental illness.

CONCLUSIONS: Understanding the variables influencing nurses' and midwives' attitudes towards mental illness is critical to deliver effective care. Although Education has been identified as the most influential variable in this study, influencing variables only account for 6.9% of the total variation in the responses. This implies that other predictors exist that affect attitudes, thus further research is warranted.

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Abbreviations

AMIQ	Attitudes of Mental Illness Questionnaire
ASP	Attitudes to Suicide Prevention
ATAMH	Attitudes towards Acute Mental Health
BSc	Bachelor of Science
CASP	Critical Appraisal Skills Programme
CNP	Certificate in Nursing Practice
DNM	Departmental Nursing Manager
DNO	Deputy Nursing Officer
EN	Enrolled Nurse
HLS-EU-Q16	The European Health Literacy Survey Questionnaire – short version
Hons	Honours
KMO	Kaiser-Meyer-Olkin
MHA	Mental Health Act
NO	Nursing Officer
PCA	Principal component analysis
PND	Postnatal Depression
pp	Pages
QATOCCS	Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies
RMN	Registered Mental Health Nurse
$\mathbf{r_s}$	Correlation coefficient
SAAS	Substance Abuse Attitude Survey
SCIE	Social Care Institute for Excellence's quality assessment tool
SN	Staff Nurse
UK	United Kingdom
WHO	World Health Organisation
Yrs	Years

Chapter 1
Introduction

1.1 Introduction

Reflecting upon the research title, "Maltese nurses' and midwives' attitudes towards mental illness: A Comparative study", several questions come to mind. What are Attitudes and why such attitudes may be key to the delivery of care by nurses and midwives? What impact such attitudes can have towards mental health service users and ultimately what may influence attitudes? This research tries to answer these questions, by investigating various variables both novel or already identified in literature, as contributors to positive or negative attitudes held by the nursing and midwifery populations worldwide. Nordt, Rössler and Lauber, (2006) add that mental health professionals play a key role in educating the public about mental illness, however they first need to examine their own attitudes.

Literature indicates that nurses' attitudes and the knowledge and understanding of mental illness shapes the therapeutic relationship and the process of recovery (Liu, Gerdtz and Liu, 2011). Lauber, Nordt and Rössler (2005) add that stigma may jeopardize the rehabilitation process. This is further supported by Chambers *et al.* (2010), who adds that stigma in mental health professionals affects negatively the quality of care delivery as well as recovery rates.

1.2 Reflections on the personal rationale of the study

I would like to introduce my background and myself. My aunt is a nurse and at a tender age this profession always fascinated me. The idea of helping sick people get better always intrigued me. Also my father was a biology teacher so I always wanted to be involved in something related with the human body. During my student nursing years, I have experienced a lot of emotions, saw people rejoice for receiving good news and also people cry in pain after the loss of a loved one. One of my lecturers has taught me that nursing is a profession but the essence of such a profession is caring. This struck me and I carried this teaching with me along my student years and in my 13 years of clinical practice. I always wanted to work in a setting where the human aspect is important and where human interactions make a difference. Once graduated, I was lucky enough to be placed within the mental health field. Although eager to work I found myself not equipped with the skills needed to work in such a setting, therefore I enrolled on a Mental Health Nursing course,

leading to a Registration as a Mental Health Nurse. The clinical experience and the knowledge gained from such a course broadened my perspectives towards mental health. I try to look at the mental health services offered from a service user's perspective and reflect on what would my reactions be? Would the interaction with the health professionals be satisfactory? During the course of this research I increasingly became conscious of the attitudes held by professionals towards service users, whom at times are at their most vulnerable. I have worked in a variety of settings including acute psychiatry, old age psychiatry and a learning disability setting. These issues became even more apparent to me when I was promoted to Deputy Charge Nurse of the local admissions ward within the state owned psychiatric hospital. The human interaction of myself, and the rest of the nursing team were crucial in providing the highest quality care possible and ensure a positive and rewarding experience for the service users. This being said, I must acknowledge that this was even more apparent when nurses failed to address issues in the appropriate manner, giving rise to difficult situations. Nowadays my role has changed significantly having taken on a lecturing role within the Department of Mental Health at the University of Malta. Although I still maintain contact with the clinical areas, my focus has now shifted to the socialisation of mental health nursing students. I feel even more responsible and I do my best to ensure that mental health students receive, during the course of their training, the required education, knowledge and skills in order to provide a therapeutic alliance without it being hindered by their attitudes.

I would like to take a little time to reflect on what it means to have a positive attitude towards mental illness. Quoting from one of my favourite books, Zen and the Art of Motorcycle Maintenance, the author Robert M. Pirsig states:

> *"Is it hard?" Not if you have the right attitudes. It's having the right attitudes that's hard." (1999, p 411)*

Mental health professionals can inform and teach the public about mental illness, create awareness and thus help to reduce its stigma, but firstly it is important for them to examine their own attitudes (Nordt, Rössler and Lauber, 2006). Literature (Kipping, 2000; Jorm *et al.,* 2006; Nordt, Rössler and Lauber, 2006) describes mental health service users as challenging, difficult to manage, and even pose potential risk to themselves and their caregivers. However, these can be minimised if nurses and midwives have a positive attitude. With proper education, knowledge and skills, the focus does not remain on the

difficulty of the job but shift on maintaining and improving our own attitudes. This reminds me of the quote:

"You want to know how to paint a perfect painting? It's easy. Make yourself perfect and then just paint naturally." (Pirsig, 1999, p 324-325)

The philosophical underpinnings of this statement apply in life as much as in nursing. Being a caring profession, build on the fundamentals of benevolence, non-maleficence and justice, nurses and midwives strive to provide the highest level of care they can possible give. Providing the highest level of care can be easily compared to the concept of painting a perfect picture. If nurses and midwives always strive to be the best they possible can, without being judgmental or discriminatory and not harbour professional stigma, they can simply provide the highest level of care naturally. When discussing quality of care, it is important to understand what this entails. It is not simply a measure of performance, but it's the ultimate perception of the service user of how much of an impact/difference the nurse or midwives left on his/her life. Again quoting Zen and the Art of Motorcycle Maintenance,

"Care and Quality are internal and external aspects of the same thing. A person who sees Quality and feels it as he works is a person who cares. A person who cares about what he sees and does is a person who's bound to have some characteristic of quality." (Pirsig, 1999, p 275)

The above quote echoes respect and dignity towards mental health service user. Professional attitudes reflect the perceptions held by nurses and midwives of and towards such service users. Therefore, providing quality care translates into respect, dignity and autonomy. These will be explored later within this study when results were analysed according to the subscales, Fear and Exclusion, Social Control and Goodwill.

Quoting one last sentence from Zen and the Art of Motorcycle Maintenance, (Pirsig, 1999),

"The place to improve the world is first in one's own heart and head and hands, and then work outward from there." (1999, p 297)

Nurses and other mental health professionals are qualified to care for people with mental illness, and instruct lay people about mental illness, but they should not assume that they themselves have no negative stereotypes or are more willing to interact with the affected

more than anyone else, therefore they must first attend to their personal attitudes in order to provide better care.

1.3 Background

Research widely documents the severe repercussions of negative professionals' attitudes on the delivery of care to mental health services users (Anderson and Standen, 2007; Chambers *et al.,* 2010; Watson *et al.,* 2007; Schafer, Wood and William, 2010). Lauber, Nordt and Rössler, (2005) report that mental health stigma affects different life domains including interpersonal relationships, housing and employment and quality of life in general. Thornicroft (2008) adds that stigma also involves prejudice that is derived from negative attitudes, as well as discrimination, which is a result of social exclusion or avoidance. Stigmatising attitudes are not uncommon among health professionals and may increase if such professionals are less optimistic about the outcomes for people with long term mental health problems (Horsfall, Cleary, and Hunt, 2010). Horsfall*,* Cleary, and Hunt (2010) add that mental health professionals are likely to embark on their career with at least the same stereotypical beliefs as the rest of society. Negative attitudes and stigma can have severe implications on the lives of people with mental health problems (Schafer, Wood, and Williams, 2010). Hamdan-Mansour and Wardam (2009) report that 60% of mental health nurses perceive patients with mental illness as cold hearted, immature, dangerous, harmful, having poor hygiene and also pessimistic in their nature. People with mental health problems sometimes internalise the stigma themselves, giving rise to low self-esteem, reduced self-efficacy as well as reduced prospects for recovery (Watson *et al.,* 2007).

Contradicting literature exist about the attitudes held by nurses towards individuals with mental illness. Some studies report positive attitudes (Williams, 1999; Richmond and Foster, 2003; Munro and Baker, 2007), whilst others identified that nurses were found to have negative attitudes towards mental illness (Howard and Chung, 2000; Kukulu and Ergün, 2007, Giannouli *et al.,* 2009; Hamdan-Mansour and Wardam, 2009).

No documented literature is available that reports the attitudes of nurses and midwives towards mental illness in Malta. The lack of research and data within the local context

prompted this study to investigate the attitudes of Maltese nurses and midwives towards mental illness, including what variables may affect such attitudes. It is anticipated for the study will also serve as a baseline by providing comparative data for further studies, both locally and internationally.

1.4 Research Aim and Objectives

The aim of this study is to explore, compare and critically analyse the attitudes of Maltese Nurses and Midwives towards mental illness and identify the various variables that influence those attitudes.

The Objectives are to:

- Identify the attitudes of Maltese nurses towards mental illness.
- Explore the attitudes of Maltese midwives towards mental illness.
- Validate the Community Attitudes towards mental Illness scale (Wolff *et al.,* 1996) in Malta.
- Investigate if age contributes to the formation of attitude towards mental illness.
- Identify whether gender influences the attitudes towards mental illness.
- Explore whether nursing and midwifery grades effect attitudes towards mental illness.
- Investigate if nursing and midwifery education is a contributor to the formation of attitudes towards mental illness.
- Explore whether years in the nursing and midwifery profession influences attitudes towards mental illness.
- Identify if work setting is a contributor to the formation of attitudes towards mental illness.
- Investigate if years in a mental health setting is a contributor to the formation of attitudes towards mental illness.
- Explore whether mental health work setting is a contributor to the formation of attitudes towards mental illness.
- Investigate if Contact with mental health service users contributes to the formation of attitudes towards mental illness.

The following research Hypothesis were generated:

- Maltese nurses hold a negative attitude towards mental illness.
- Maltese midwives hold a negative attitude towards mental illness.
- A reduction in stigmatising attitudes is observed with the increase of nurses and midwives' age.
- Female nurses and midwives hold less stigmatising attitudes than their male counterparts.
- Attitudes of nurses and midwives towards mental illness do not differ across grades.
- The level of education will have an impact on the attitudes of nurses and midwives towards mental illness.
- A reduction in stigmatising attitudes is observed with the increase of nurses and midwives' years in service.
- Work setting will have an impact on the attitudes of nurses and midwives towards mental illness.
- A reduction in stigmatising attitudes is observed with the increase of nurses and midwives' years in a mental health setting.
- Mental health work setting will not have an impact on the attitudes of nurses and midwives towards mental illness.
- Previous interaction with mental health service users would potentiate the reduction in stigmatising attitudes.

1.5 Method

In order to conduct this research a cross-sectional survey design was considered most suitable. All state employed nurses and midwives working within all state owned hospitals or points of service were included in the study after obtaining the necessary permissions and ethical approval. The Community Attitudes towards Mental Illness Scale (CAMI) (Wolff *et al.,* 1996a) was identified as the data collection tool, following an in-depth analysis of other tools used in similar research.

1.6 Conclusion

The aim of this study was to explore, compare and critically analyse the attitudes of Maltese Nurses and Midwives towards mental illness and identify the various variables that influence those attitudes, (namely Grade, Gender, Age, Nursing Education, Years in Nursing Service, Work Setting, Years in Mental Health Setting, Mental Health Work Setting and Contact with Mental Health Service users). This study provides a picture of the attitudes held by the nursing and midwifery profession in Malta and the variables contributing to such attitudes. This may lead to the development of strategies to further promote positive attitudes and shape a positive therapeutic service user outcome.

The next chapter gives an overview of Malta and the evolution of its mental health services, and insights on the local nursing and midwifery grades and job descriptions. The educational pathways leading to employment with the Maltese Department of Health will also be discussed. Chapter 3 provides an in-depth review and appraisal of the research found in literature as well as identifies research gaps which this study can potentially contribute to. Areas within the chapter include, the effects of stigma, mental health literacy, attitudes of nurses and midwives towards a variety of mental health conditions including, borderline personality Disorders, substance misuse, self-harm, schizophrenia, major depression as well as psychiatric disorders in pregnancy and the puerperium. The research methods adopted to carry out this study are discussed in Chapter 4. This chapter provides the blueprint of the study showcasing the actual design that guided the study protocol whilst Chapter 5 presents the study's findings together with the relevant data analyses techniques. The interpretation of findings in relation to existing literature and the local scenario is presented in Chapter 6. Included within this chapter are the strengths and limitations of this study as well as recommendations for policy, practice, education and further research. The Overall Conclusion chapter provides a reflection of the research and its outcomes.

Chapter 2
Maltese Background

2.1 Introduction

The Maltese islands consist of three main islands, namely Malta, Gozo and Comino, covering an area of 316 km^2, with an estimated 450,000 inhabitants, making Malta one of the smallest and most densely populated countries in the world. The capital city of Malta is Valletta and it is the smallest national capital in the European Union, which Malta joined in 2004 (Government of Malta, 2017). The national language is Maltese however English is also an official language. The Maltese Constitution declares Catholicism as the religion recognised by the state, although other religions can also be practiced (Government of Malta, 1964).

Historically Malta has been ruled by several powers including the Phoenicians, Carthaginians, Romans, Moors, Normans, Sicilians, Spanish, Knights of St. John, French and the British. Nowadays Malta is a popular tourist destination with numerous cultural and recreational facilities, together with its warm climate and sandy beaches.

2.2 Health Care in Malta

In Malta there has always been the availability of a publicly funded health system. Records show that the first hospital was already functioning by 1373 (Savona-Ventura, 1997). Nowadays Malta has a private health care system as well as public health care provided by the state, known as the government healthcare service, which is offered free at the point of delivery. Whilst hospitals provide secondary and tertiary care, health clinics and general practitioners deliver primary care. Malta has 5 state owned hospitals servicing various health care needs. Mater Dei Hospital in the only general acute hospital in Malta whilst Gozo General Hospital is the general acute hospital located in Malta's sister island Gozo. Sir Anthony Mamo oncology centre has recently replaced Sir Paul Boffa Hospital as a new state of the art Oncology and research centre. Sir Paul Boffa still functions as a specialised dermatology hospital. Several Primary Health Clinics are located strategically across the island to provide easy accessible primary care to those in need. Karin Grech Rehabilitation hospital is a centre focused to deliver specialised care and rehabilitation, whilst St Vincent De Paul Residence and state owned Elderly homes provide residential care to the elderly. Finally, Mental health and Psychiatric services are provided at Mount Carmel Hospital and the Mental Health Community Clinics, which cater for in-patient and community care

respectively. All mental health and psychiatric services fall under the management of the Mental Health Services.

2.3   Maltese Mental Health Services

Savona-Ventura (2004) reports the first Maltese record of a mentally infirm patient dates back to May 1519, who was confined at Santo Spirito Hospital in Rabat. Mental health care only appeared in Malta after the Valletta Sacra Infermeria was established in 1574. During this time management of patients was custodial and not therapeutic, as elsewhere in Europe around that time.

The Floriana Ospizio, also known as Casa di Carita' served as another establishment to house the mentally infirm when the Sacra Infermeria became overcrowded. It also housed those patients that had been declared incurable, for example. Similarly, the patients at the Floriana Ospizio were also chained to the walls and confined in small casement rooms. In 1725, female patients were cared for at the Casetta, however during the French ruling all female patients were relocated to the Floriana Ospizio, whist male patients were relocated to the newly established Civil Hospital in Valletta. In 1816 it was decided that all patients should be transferred to the Ospizio in Floriana. Records show that the number of inmates in March 1816 totalled to 46. In 1826, following structural alterations the number of patients increased to 67. In 1835 the Floriana Ospizio became unsuitable to provide care for the mentally infirm and the Commissioners of Charity put forward a proposal for establishing a dedicated mental health asylum, reflecting contemporaneous European practices.

That same year the Mental Asylum in Floriana was established. This old mansion was known as Villa Franconi. In January of 1836 the number of inmates rose to 116. The Casa di Carita' closed for good and all remaining patients were transferred to the Mental Asylum by 1838, following structural changes to increase bed capacity. Unfortunately, the location of Villa Franconi was not ideal as inmates were constantly mocked and teased by surrounding neighbours. In the year 1848 the asylum reached its full capacity and in 1851 the Commissioners of Charitable Institutions and the Visiting Physician recommended a new asylum in a more suitable location

After a suitable site was identified in Attard, works to build a new lunatic asylum started in September of 1853. A public competition was set up to submit design plans and was won by F. Cianciolo. It was later discovered that the plans submitted by Francesco Cianciolo were exact copies of the 1818 plans of Wakefield Asylum in the UK.

The new lunatic asylum, named Asylum for Imbeciles was completed in 1861 with a cost of £14.000 and accommodated 180 to 200 inmates. It became immediately evident that accommodation space was inadequate and new proposals to expand the building were sought. Records show that in December of 1898 the Asylum for Imbeciles housed 653 inmates. Of note is that in 1893 the Asylum for Imbeciles was awarded a medal and certificate of special merit for structural and sanitary improvements and evidence of general comfort and welfare on inmates. This medal was given by the Wold's Columbian Commission set up by the Congress of the USA after the plans and photographs were exhibited at the International Exhibition held in Chicago. This hospital is still in use today and is knows as Mount Carmel Hospital.

During the Hospitallier Period (1530 to 1770) no treatment was available, thus inmates were restrained and chained to walls or beds and often beaten up to expel the devil as these individuals were believed to be possessed. During the late eighteenth century a number of European doctors attempted to cure the mentally infirm by using opium, solitary confinement in dark rooms, ice cold baths, venesection, laxatives and bitters. It is not known whether any of these practices were actually conducted in Malta, however it is reported that a number of Maltese practitioners showed active academic interest in various forms of mental disease (Savona-Ventura, 2004). Dr. Thomaso Chetcuti, a visiting physician appointed circa 1840s, was influential in the development of mental health in Malta. Dr. Chectcuti restricted the use of seclusion and abolished the use of chaining patients. Strait-jackets were introduced, however, their use was only restricted to cases of violence or potential danger. He also tried to improve the attitudes of attendants from referring to individuals with mental illness as mad and by treating the patients with more respect and dignity. Dr. Chetcuti remains known as the father of Maltese psychiatry.

2.4   *Mental Health Services in Malta today*

Malta's current and only psychiatric hospital is Mount Carmel Hospital which forms part of the Maltese Mental Health services. Mount Carmel Hospital was established in 1861 and was previously known as Lunatic Asylum. Psychiatric treatment was still in its infancy and very rudimental, with the primary aim to isolate psychiatric patients from society, rather than aiming to reintegrate them back in the community. At that time patients received little therapeutic care, however there has been an incremental reorganisation of services based on International practices, which helped to transform the Maltese Mental Health Services over the past 150 years. During the 19th century mental health evolved steadily. In the beginning, Mount Carmel Hospital functioned on the lines of an institution rather than an actual hospital. Fortunately, however, the field of psychiatry in Malta progressed so much that the hospital went through various changes and introduced new psychiatric measures, reflecting the changes and developments occurring in Britain and USA (Chircop, 2013). These included new pharmaceutical and psychological interventions as well as different forms of mechanical, surgical and physical procedures. New equipment was also introduced which allowed for new medical procedures to be implemented such as electroconvulsive therapy.

In the late 1930s the Maltese Government developed clinics outside hospital with served as an out-patients service. Chircop (2013) adds that the mental health outpatients department was crucial to the improvement of mental health services in Malta as it facilitated the services being provided and reduced hospital stay. Other important milestones within the Maltese mental health service includes community care, which started as a pilot project between 1996 and 1997 but launched in 2006. Currently Community services consist of a psychiatric out-patient facility, 6 mental health clinics, an outreach service, 5 day centres, 3 hostels, 2 roaming clinics and a crisis intervention team. A new mental health act (MHA 2014) addressing challenges and needs, as well as a total new approach to deliver care therapeutically supported by evidence based practice all influenced the reorganisation of services. Camilleri (2014) reports that the new Maltese Mental Health Act (MHA 2014), although still addressing Compulsory Hospital Admission; Institutions providing mental health services; and Patients concerned in criminal proceedings, introduces seven new concepts. These concepts are:

- The rights of users and carers.

- The establishment of a Commissioner to safeguard these rights.

- Compulsory treatment within the community (Community Treatment Order).

- The certification of lack of Mental Capacity and the additional functions of curators.

- Issues pertaining to minors receiving care in mental facilities or as dependent children of parents receiving such care.

- Special treatments, restrictive care, and clinical trials or other research involving persons with mental disorder.

- the promotion of social inclusion and elimination of all forms of discrimination on the basis of mental health status.

Zahra and Camilleri (2014) add that the new Mental Health Act is reflective of the changes occurring within the delivery of mental health care, increasing autonomy, rendering expert and humane care whilst still safeguarding professional accountability and transparency.

Although medical and technological advances play an important part in the care of individuals with mental health problems, the professionalism and capabilities of human resources forming the multi-disciplinary team remains vital. The multi-disciplinary team is assigned to each individual on admission to hospital and consists of a number of professionals including psychiatrist, doctors, nurses, social workers, psychologists and occupational therapists. These professionals make up the backbone of all psychiatric services delivered to service users both in an inpatient setting and in the community. This ensures that the service user receives holistic, patient specific care. Table 2.1 below illustrates the Maltese population estimates for access of mental health care within various Maltese mental health services as reported in the World Health Organisation, Mental Health Atlas (2011).

Description	Population Estimate
Persons treated in mental health outpatient facilities	12,900
Persons treated in mental health day treatment facilities	14,700
Admission to psychiatric beds in general hospitals	152
Admission to Mental hospitals	6,600

Table 2.1. *Population estimates of Maltese Mental Health service usage in 2011.*

The treatment offered during rehabilitation reduces the patient's length of stay as well as equips the individual to live actively within the community. The World Health Organisation Mental Health Atlas (2011) reports that 52% of service users require less than 1 year of long term care in the psychiatric hospital, 14% require between 1 year and 5 years, whilst 34% require a care longer than 5 years.

Mental Health Services also offer a vast range of specialised psychiatric services including acute psychiatry and rehabilitation, child and adolescence, old age, learning disability and forensic psychiatry. A shift in mentality from custodial care to a therapeutic one is essential in today's culture. The Mental Health Atlas 2011, reports that Malta has an officially approved mental health policy with plans to shift services and resources from inpatient to community facilities and also to integrate psychiatric and mental health services within primary care. Unfortunately, no data were reported for Malta in the 2014 version of the Mental Health Atlas, thus no further comparison could be made. Galea and Mifsud (2004) highlight that although Malta has one of the highest number of psychiatric beds per 100,000 population allocated solely for acute mental health admissions this is still insufficient. They add that such insufficiency may be a consequence of the custodial care approach employed within the mental health services, as well as an ineffective mental health community service (Galea and Mifsud, 2004). In recent years, community based mental health services has undergone major development and expansion.

Azzopardi-Muscat *et al.,* (2017) add that the Maltese expansion of the community services is further branching into towns and villages. This would make community services closer to the individuals and help reduce stigma associated with mental illness. Services provided include home visits, psychological sessions and support groups. Depot administration, Psychotherapy and Social work interventions are also being offered. This is in line with the Maltese Mental Health Service strategy for the future aims at increasing the community services network so that service users will have better and easier access to care. Also part of this strategy aims at improving and developing further hospital-based care, especially rehabilitation services. In Malta like all over the world the psychiatric sector is negatively influenced by stigma. Stakeholders within the Maltese psychiatric sector must collaborate together and increase mental health literacy and awareness, in order to overcome the varied challenges that mental health services are constantly facing. Ultimately the primary aim

should always remain to work in a collaborative manner and expanding new services for the welfare of the service users (Mental Health and Geriatric Services, 2012). Azzopardi-Muscat *et al.* (2017) highlight the forthcoming developments within the mental health sector in Malta to include the further strengthening of the mental health sector and the construction of a new mental health facility. Azzopardi-Muscat *et al.* (2017) add that both Non-governmental organisations and the private sector should be integrated in the delivery of mental health services.

2.5   *The Office of the Mental Health Commissioner*

Following a revamp of the Maltese Mental Health Act in 2012 the Office of the Commissioner for Mental Health was set up. Differences between the old and new Maltese Mental Health Act are outlined by Buttigieg (2014), describing shorter length of stays and the introduction of a Community treatment order.

This Office is responsible to promote and safeguard the rights of individuals suffering from mental illness. It is also responsible for the implementation of the Maltese Mental Health Act (2012). Other functions include, promoting and protecting the rights and interests of persons with mental disorders and their carers, investigating alleged breach of rights and interests, influence legislation and polices for the safeguarding of these rights and interests, receive complaints and queries and take necessary actions, develop and foster partnerships with all relevant stakeholders including policy makers, public and private entities, patient representative groups and related non-governmental organizations as well as increase the awareness and knowledge of the general public about mental health and persons with mental health disorders. From its inception to date the Commissioner for Mental Health is Dr. John M. Cachia.

The Commissioner is not responsible for nurses and midwives working in the public sector as these fall under the responsibility of the Director of Nursing Services within the Department of Health Services, Ministry of Health.

2.6   *Nursing and Midwifery in Malta*

This study recruits nurses and midwives working within the Maltese public health system. Therefore, it is essential to give an overview of the eligibility process and how one can register and practice as a nurse or midwife in Malta. This provides an understanding of the background Maltese nurses and midwives should have to practice locally. Also the varied nursing grades within the Maltese health system are outlined in detail in order to facilitate better understanding of data analysis and the comparison between the various grades investigated within this study.

Nursing in Malta has a rich and long history. Savona-Ventura (1997) dates the first hospital in Malta to 1373, however the first records of nursing dates back to the fourteenth century whilst under the rule of the Knights of St John. These Knights also known as the Knights of Malta, built a hospital known as the Sacra Infermeria in 1574. Similar to nursing, midwifery also followed with the developments of the health care system in Malta. Savona-Ventura (2009) reports that the first documented entry of Maltese midwifery dates back to 1554, where a midwife by the name of Czairi Coruel was responsible for the orphans at Santo Spirito Hospital. Another more detailed report of a Maltese midwife dates back to 1598, where Bernarda Micallef is reported to have unsuccessfully dealt with a breech presentation (Savona-Ventura, 2009). Maltese modern nursing and midwifery originates from the British health and education system whilst under the ruling of the British from 1813 up to the Independence of Malta in 1964. The nursing and midwifery role has remained fairly stable through the years.

In order for a person to be able to practice as a nurse or midwife in Malta, they need to apply, after completing a nurse/midwife education programme, to the Maltese Council for Nurses and Midwives. If approved by the Council, they would have their name listed on the register. After this process, nurses and midwives can then apply for a nursing or midwifery position either with a private institution or with the government when calls for applications are issued. Currently, nurses and midwives can opt to work to the age of 65 years if they wish by requesting a work extension past their retirement age. Retirement age in Malta depends on two factors, the year the individual was born and also the gender. Currently those males born before the end of December of 1951 retire at the age of 61, whilst females retire at the age of 60. Those born during 1952 to 1955 retire at the age of

62, from 1956 to 1958 retire at age 63, from 1959 to 1961 retire at age 64, and all those born in the year or after 1962 retire at the age of 65. In Malta nurses are allocated to their place of work according to the present health needs, therefore we have a scenario were non-specialized nursing staff work within a specialized filed, such as mental health.

Nomenclatures have changed over the years with latest change occurring in 2013, following increments in the remuneration of nurses and midwives. At the time of data collection, the pre 2013 nursing and midwifery nomenclature was still in effect. Figure 2.1 below illustrates the current Maltese nursing/midwifery hierarchy in the public sector.
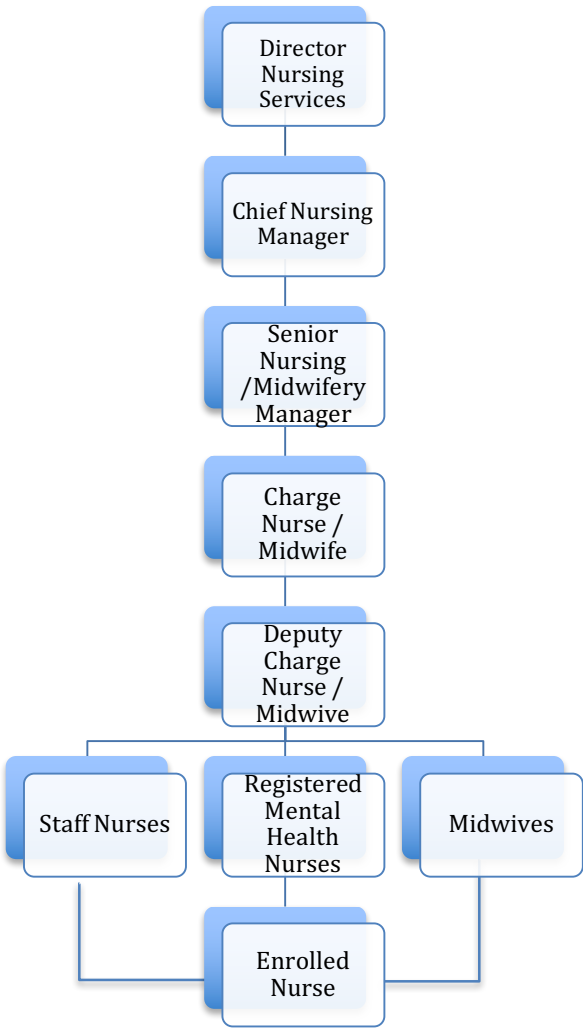
Figure 2.1 *The Nursing/midwifery hierarchy within the Maltese public sector.*

The various nursing and midwifery grades in Malta are outlined below, reflecting the nomenclature at the time, together with the recent changes in title as well as their job description.

2.6.1 Departmental Nursing Manager (DNM) or Higher

Departmental Nursing Managers, are directly responsible to manage a specific setting, such as medical wards or acute mental health settings. This group also includes Manager nursing services, who are directly responsible to manage nurses within that particular hospital or services, such as, Mental Health Services or Mater Dei Hospital. Following the change in nomenclature the new title is Senior Nursing Manager and Chief Nursing Manager respectively.

2.6.2 Nursing Officers (NO)

Nursing Officers are directly responsible for one particular ward or area. The new title is Charge Nurse. Nurses with this grade are all qualified as staff nurses or registered mental health nurses prior to the progression to this grade by a call for application and interview.

2.6.3 Deputy Nursing Officer (DNO)

This group includes Nurses who assist and act as a deputy to the Nursing Officer. The Deputy Nursing Officer is also responsible for a particular ward or area when the Nursing Officer is not on duty. The new title is Deputy Charge Nurse. Nurses within this grade are all qualified staff nurses or registered mental health nurses prior to the progression to this grade by a call for application and interview.

2.6.4 Staff Nurse (SN)

Staff Nurse includes all nurses who are qualified and registered with the Maltese Council of Midwives and Nurses on the "Register of Nurses for the Sick" and are employed within the Maltese Health Department. Staff nurses hold a qualification of either Diploma in Nursing Studies, Degree in Nursing Studies or else have successfully completed a conversion course from Enrolled Nurse to Staff Nurse. Such nurses might have successfully completed other courses such as a Master's course but still work at ward level. There was no change in nomenclature for this grade however all those nurses with 15 years of experience or more have been promoted to Senior Staff Nurse grade following the sectoral agreement changes in 2013.

2.6.5 Registered Mental Health Nurse (RMN)

This Grade includes all nurses who are qualified and registered with the Maltese Council of Midwives and Nurses under the special register of "Registered Nurses for Mentally Sick" and are employed within the Maltese Health Department. Registered Mental Health nurses hold a Mental Health Nursing qualification at either Diploma or Degree level or have successfully completed a conversion course from Staff nurse (at any level of qualification) to Registered Mental Health Nurse (RMN) (Diploma to Degree conversion course). This specialised group of nurses might have successfully completed other courses such as a Masters course but still work at ward level. No change in nomenclature was implemented for this grade however all those registered mental health nurses with 15 years or more of experience have been promoted to Senior RMN grade following the sectoral agreement changes in 2013.

2.6.6 Enrolled Nurse (EN)

This grade includes all those nurses who have successfully completed either a Pupil Nurse Course or Certificate in Nursing Practice (CNP) course and work at ward level. Enrolled Nurses are classified as second level nurses and should work under the supervision of Staff Nurses. No change in nomenclature occurred following the 2013 sectoral agreement.

2.6.7 Midwifery Officer

For the purpose of this study this group also includes Deputy Midwifery Officers. The limited number of employees within this group warranted collapsing of these two groups as one. The individuals within the group have the same description as Nursing Officer and Deputy Nursing Officer with the difference that they are midwives and not nurses, thus are in possession of a Midwifery qualification either at Diploma or Degree level. Following the new nomenclature in 2013, the new title is Charge Midwife and Deputy Charge Midwife respectively.

2.6.8 Midwife

This Grade includes all midwives who are qualified and registered within the Council of Midwives and Nurses under the special register for Midwives and are employed within the Maltese Health Department. These midwives hold a qualification in Midwifery

studies at either Diploma or Degree level. These midwives might have successfully completed other courses such as a Masters course but still work at ward level. No change in nomenclature was implemented for this grade however all those midwives with 15 years or more of experience have been promoted to Senior Midwives as per the sectoral agreement changes in 2013.

In order to apply for a nursing or midwifery registration in Malta, the individual has to successfully complete a nursing course. These educational courses are not restricted to those offered in Malta, however in Malta to date only the University of Malta offers courses leading to a nursing or midwifery degree.

2.7   Nursing Education in Malta

Maltese Nursing Education has evolved significantly in the last 30 years. Nursing has achieved a professional status within the caring profession. Currently the University of Malta is the only local university that offers courses leading to a Nursing or Midwifery qualification at Diploma, Bachelors level. It also offers postgraduate Nursing and Midwifery Masters programs. For the purpose of this study, the education programs offered locally are described, however any individual with a nursing or midwifery qualification recognized by the Council for Nurses and Midwives can apply to work within the Maltese health sector. Between 250 to 300 nurses have trained outside Malta, ranging from UK, Spain, Hungry, Romania, India and Pakistan. Any qualification held by nurses/midwives which is recognized by the Council for Nurses and Midwives but not at the Diploma, Degree or Masters level, is considered under the "*Other*" subgroup.

2.7.1   Masters Degrees

The University of Malta offers nurses/midwives four distinct Masters programs, namely Master of science in Health Service Management, Master of science in Nursing Studies, Master of science in Mental Health Nursing and Master of science in Midwifery Studies. In order for nurses to follow one of these courses they would need to be in possession of a Bachelor's degree in Nursing, Mental Health Nursing or Midwifery at Second class Upper or higher.

2.7.2 Bachelor's Degrees

Three Bachelor's degree programs offered by the University of Malta lead to nursing/midwifery qualifications and these include, Bachelor of Science (Hons) in Nursing Studies, Bachelor of Science (Hons) in Mental Health Nursing and Bachelor of Science (Hons) in Midwifery Studies. Students can apply for these courses after successfully completing their Advanced Level examination or as mature students as per University of Malta admission policy. These three-year bachelor degree programs conform with the European Union Directives on Nursing Education and on successful completion it provides recognition as a first level nurse (Staff Nurse) across all EU member states.

2.7.3 Diploma Degrees

Currently the University of Malta only offers Diploma in Health Science (Nursing). In previous years Diploma in Midwifery studies and Diploma in Mental Health Nursing were also offered, thus nurses working within the health services may have undergone any of these courses for their qualification and registration. These courses all conformed to the EU directives and also ensured recognition as first level nurses (Staff Nurse) across all EU member states.

2.7.4 Student Nurse Course

This was the course leading to a first level nurse qualification before Nursing was offered at University level. The Nursing school offered this course. This course was the only route to a first level nursing career (Staff Nurse) up to 35 years ago. This course was subsequently replaced by Diploma and Degree courses.

2.7.5 Traditional Midwifery Course

The traditional Midwifery course lead to a first level midwifery qualification before Midwifery studies was offered at University level. The Nursing school offered this course and was the only route to a first level nursing career (Midwife) up to 35 years ago. This course was later replaced by Diploma and Degree courses in Midwifery Studies.

2.7.6 *Pupil Nurse Course*

This was the course leading to a second level nurse (Enrolled Nurse) qualification offered by the Nursing school. It offered individuals a nursing career up to 35 years ago and later offered as Certificate in Nursing Practice (CNP course).

2.7.7 *Certificate in Nursing Practice (CNP)*

This course replaced the traditional Pupil Nurse Course and was offered by the Institute of Health Care, an Institute within the University of Malta. The Institute of Health Care was later replaced by the Faculty of Health Sciences. Nursing, Midwifery and Mental Health are separate departments within the Faculty of Health Sciences, University of Malta. This course provided registration as second level nurses (Enrolled Nurse) and the last students completed their studies in 2003. No other courses leading to second level nursing qualifications were offered following this date.

2.7.8 *Conversion Course*

In 2001 the Department of Health offered Enrolled Nurses the opportunity to upgrade to Staff Nurses after completion of a conversion course. This was a part-time three-year course in which, after completion nurses could register as first level nurses (Staff Nurse). The last intake successfully completed their studies in 2014.

2.7.9 *Other*

This includes nurses who have followed other nursing courses such as Learning Disability, Community Nursing or any foreign Nursing qualification recognized by the Council for Nurses and Midwives.

2.8 Conclusion

As outlined, Malta's ruling by different powers have shaped its healthcare system. Predominantly Malta's system is very similar to that of Britain, however the small size of the country makes up for an easily accessibly centralized health care system, with small towns where people practically know each other coupled with a close knit family system all contribute to a particular Maltese health care context. The Maltese Government and

professionals working within the mental health field strive to keep abreast with current International developments, upgrade and improve services and implement new reforms to address the challenges of an evolving mental health climate in Malta.

Chapter 3
Literature Review

3.1 Introduction

In this chapter the search strategy is outlined. This is followed by an evaluation of literature identifying attitudes towards mental illness. Various research designs and data collection methods are compared and contrasted. The relationship of attitudes to socio-demographic variables, such as gender, age, grade, work setting and working experience are also considered. Finally, the conclusion sums up the main points of the literature review and highlights deficits in the existing body of knowledge, which provides the driving force to conduct this study.

3.2 Search Strategy

In order to be able to write the literature review, relevant research-based articles on the attitudes of nurses and midwives towards mental illness, need to be identified and obtained. This was achieved by using several search engines such as SciVerse Scopus, Wiley Online Library, CINHAL, Medline, PubMed, PsychInfo and iCat. Several key words were used to guide the search. These included, '*attitudes to mental illness*', '*nurses attitudes*', '*discrimination*', '*health professionals*', '*stigma*', '*stigmatisation*', '*feelings*', '*negative beliefs*', '*mentally ill patients, 'mental health literacy*', '*attitude formation*', '*mental health surveys*', '*midwives attitudes*', '*mental illness in pregnancy*' and '*mental illness postpartum*'. The search covered the period from 1960 to 2016 in order to obtain relevant archival and contemporary literature. This time period was chosen as all relevant key articles related to the focus of the study were produced during this time frame. SciVerse Scopus, Wiley Online Library, and PubMed yielded the highest results with the most recent articles ranging from 1993 to 2016.

Database	Total Number articles extracted using keywords indicated	Number of articles by database after removal of non-related material and duplicates
SciVerse Scopus	406	355
Wiley Online Library	241	223
PubMed	397	214

Table 3.1. Search results per individual database

The search engines provided a total of 1044 potential articles. After identifying non-related (n=247) and/or duplicate papers (n=545) the search results yielded 252 potentially relevant studies. After reading through the abstracts, a further 190 articles were excluded, leaving 62 potential relevant articles. The excluded articles (n=190) mainly focused on the attitudes of the general public or the media's portrayal of mental illness.

The retrieved articles were systematically analysed using critical appraisal tools to judge if the research question is being addressed, employ adequate methodologies, are valid and trustworthy (Burls, 2009). These tools help to apply the rules of evidence to factors such as, adherence to reporting standards, internal validity, generalizability and conclusion. These tools are utilized in evidence-based healthcare training to assist in clinical decision-making and are being used extensively in evidence-based social care (Katrak, Grimmer, Kumar, Westropp & Bialocerkowski, 2004). Several critical appraisal tools were employed, namely the Critical Appraisal Skills Programme (CASP Team, 1993), Methods Appraisal Tool (MMAT) and the appraised using the tool by the Centre for Evidence-Based Management (CEBM). The CASP tools were used to critique qualitative studies, observational and systematic reviews. Studies employing a mixed methods design were critically appraised using the Mixed Methods Appraisal Tool (MMAT), whilst quantitative research including survey designs were critically appraised using the tool by the Centre for Evidence-Based Management (CEBM) (CEBM, 1995).

After screening the remaining 62 articles on full text, 27 articles were discarded, leaving a total of 35 articles relevant to the current work. The 27 studies were discarded according to the Inclusion/Exclusion criteria listed below:

Inclusion Criteria

- Studies investigating attitudes towards mental illness, not restricted to, but including nurses as part of the sample.

- Studies in the English Language

- Studies not restricted to any geographical region

Exclusion Criteria

- Non-English Language studies

- Studies of nurses' attitudes towards non-mental health conditions

- Studies of nurses not addressing attitudes towards mental health

- Studies involving health care professionals/student nurses/general public not including nurses.

The flowchart below outlines the process of article selection:

Total Number of hits from search engines according to keywords (n=1044)

Studies excluded after screening on title (n= 792), of which 545 being duplicate results and 247 non-related articles.

Potentially relevant studies identified after removal of duplicates and screening by title (n=252)

Studies excluded after screening on abstract (n=190)

Potentially relevant studies identified after screening on abstract (n=62)

Studies excluded after screening on full text of which did not fit the inclusion criteria as follows (n=27):
Studies of nurses' attitudes towards non-mental health conditions (n=9)
Did not address nurses' attitudes towards mental health (n=15)
Text not in English (n=4)

Studies included after screening on full text (n=34)

Figure 3.1. Flow chart illustrating inclusion procedure

Literature included after screening were all in English and originated mainly from Australia, New Zealand, United Kingdom, USA, Malaysia, China, Singapore, Fiji, Turkey and mainland Europe. Articles reviewed have been obtained using Kingston's University online library system.

Articles discarded after screening by full text (n=27) included literature reviews, quantitative and qualitative research designs, as well as expert opinion articles. These articles were discarded as they did not meet the inclusion criteria, mainly text not in the English language (n=4), related to health care professionals but did not include nurses or midwives (n=15) and/or investigating nurses' or midwives attitudes but not towards mental illness (n=9). The distribution of these articles is outlined in Table 3.2 below.

Research Design	Total Number of Articles
Literature Reviews	5
Quantitative	13
Qualitative	8
Expert Opinion articles	2

Table 3.2. *Distribution of discarded articles by research design*

The quantitative research listed in Table 3.2 included descriptive designs as well as quasi-experimental designs, whilst the qualitative research includes phenomenological, ethnographic and case study research designs. The distribution of these designs for discarded articles is outlined in Table 3.3 below.

Quantitative		Qualitative	
Design	No of papers	Design	No of papers
Quasi-Experimental	1	*Phenomenology*	5
Descriptive	7	*Ethnography*	2
Cross-sectional	3		
Longitudinal	2		
		Case study	1

Table 3.3. *Classification of discarded articles according to research design*

Although discarded, some of these papers have provided an insight on how attitudes are formed. Understanding attitude formation is important as countermeasures can be investigated to eliminate or reduce negative attitudes at their formation stage. Other papers also discussed the importance of reducing stigma as well as outlining measures that could be effective in anti-stigma campaigns. The CASP (Critical Appraisal Skills Programme) tool was used to review the articles and to determine which ones best address the research

focus (i.e., to Investigate the attitudes of Maltese nurses and midwives towards mental illness).

Thirty four articles (n=34) were identified as relevant. These articles included literature reviews, quantitative and qualitative designs, a mixed method approach as well as expert opinion articles. The distribution of these articles is outlined in Table 3.4 below.

Research Design	Total Number of Articles
Literature Reviews	7
Quantitative	23
Qualitative	3
Mixed Method design	1

Table 3.4. *Distribution of included articles by research design*

The quantitative research studies included design and validation of scales/tools that measure attitudes, as well as descriptive designs; qualitative research studies included phenomenological, ethnographic, grounded theory and case study designs. The distribution of these designs is outlined in Table 3.5 below.

Quantitative		Mixed Method	Qualitative	
Design	No of papers	No of papers	Design	No of papers
Descriptive Cross-sectional Longitudinal Comparative	13 1 4	1	*Phenomenology*	1
Tool Design	5		*Ethnography*	1
			Grounded Theory	1

Table 3.5. *Classification of included articles according to research design*

The majority of articles (n=23) identified as relevant to the focus of my study on nurses' and/or midwives' attitudes towards mental illness made use of a quantitative approach. This design is ideal when trying to generalise results to the target population. Also it was noted from the literature search that quantitative studies gathered data using questionnaires, whilst non-quantitative designs used other measures for data collection, such as face-to-face interviews or observation. The relevant articles are summarised Table 3.6 below.

Author/s Year Country	Purpose	Methodology	Sample	Main Findings
Castillo 2001 UK	To explore the views of service users regarding Personality Disorders.	Qualitative design using semi-structured interviews of people diagnosed with personality disorder	20 men and 30 women were recruited for this study.	Many professionals label individuals with personality disorder as attention seeking, implying that individuals are not worth the attention of professionals, thus very dismissive. Respondents describe themselves as being: Service's leper, ignored, hostile, not a mental illness, brought on oneself, people are scared of the diagnosis, being labelled as trouble makers. Service users highlight the need of professional understanding.
Castillo 2003 UK	User led study investigating the lived experience of being diagnosed and living with a personality disorder	Survey design using a mixed method approach with semi structured interviews, of people diagnosed with personality disorder	50 participated in the study with over 75% of the sample being woman.	Findings showcase a sense of exclusion and hopelessness. When asked what services users want they replied, "Staff to change their attitude and become more sympathetic" and to be treated like human beings not animals.
Chambers et al., 2010 Finland, Lithuania, Ireland, Italy and Portugal	To compare the attitudes of nurses' attitudes in 5 European countries	Questionnaire survey on a total of 72 inpatients wards and units in five community facilities in Europe. The Community Attitudes towards Mentally Ill (CAMI) scale, which consists of a 40 item self-reported questionnaire, was utilised. The demographic section asked respondents about age, gender, highest educational attainment, qualification type, length of experience, position held, personal contact with people with mental health problems, and proximity of contact.	1095 questionnaires were distributed with 813 returned giving a response rate of 74.2%. A total of 810 registered nurses working in mental health settings, including the community were recruited for this questionnaire survey.	Nurses' attitudes towards individuals with mental illness are positive. A great predictor for the differences in attitudes was the country of practice. Gender and position held were found to have an association with the attitudes of nurses. Females were found to be more sympathetic and more positive than male nurses. The higher the position held the less negative attitudes one holds. The majority of observed differences in attitude scores related to socio-demographic variables have a fairly effect. This makes such differences not necessary noticeable. The different methods of data collection could have influenced the findings. Although the CAMI tool was developed over 30 years ago, the use of an old tool such as this one could be a benefit as it has seen sustained use with a wide variety of participants and in a number of different contexts.
Cleary et al., 2002 Australia	To investigate the experience, knowledge and attitudes of mental health staff regarding clients with a borderline personality disorder	Quantitative survey design using a 23-item questionnaire. Demographic data was included in the tool, including age, gender, professional designation, place of work and number of years in the mental health field.	516 community and hospital based mental health employees participated in the study. Out of the 516 employees, 229 responded to the questionnaire, giving a response rate of 44%.	This study recruited various mental health professionals including registered nurses, enrolled nurses, social workers, occupational therapists, psychiatrists, psychiatrist registrars, psychologists and non-specified professionals grouped as "others". Findings show that most staff (80%) admitted to finding dealing with clients diagnosed with borderline personality disorder moderately to very difficult.
Emerson 2010	To review how nurses' perceive patients who self-harm	Literature Review	Five relevant studies reviewed	Three themes identified. 1st theme involves the exposure of nurses towards self-harm. It was found that the length of time on the nursing register correlates with a more positive attitude. 2nd theme described the stigma associated with self-harm and how applying a label of mental illness to persons who self-harm can have a negative impact on the delivery of care. 3rd theme identifies the need for health professionals to receive up-to-date training.

Fallon 2003 UK	Investigate the lived experience of people with borderline personality disorder in contact with psychiatric services	Grounded theory approach using unstructured interviews	Seven participants were recruited and interviewed in this study.	From the perspective of the patients, attitudes of health professionals were perceived as negative and unhelpful. Service users valued their contact with psychiatric services despite negative experiences and encountering negative staff attitudes.
Filer 2005	To review the attitudes of mental health nurses towards borderline personality disorder	Literature Review	Three relevant studies reviewed	The lived experience from patients with borderline personality disorder has been negative and unhelpful Mental Health Nurses often consider patients with borderline personality disorder as attention seeking and manipulating. Research suggests that such a negative attitude may be multi-factorial and this include: • Attributions of control • Optimism for change • Beliefs about dangerousness
Fraser & Gullop 1993 Canada	To compare the level of empathy that nurses showed towards people with borderline personality disorders as opposed to other diagnosis.	Nurse lead patient groups using the Heineken Confirmation / Disconfirmation Rating Instrument and the Staff Response subscale of the Colson's Hospital Treatment Rating Scale. .	The sample recruited 164 patients and 17 registered nurses.	The study reported that nurses were less empathic to patients with borderline personality disorders than to patients with affective disorders or other diagnosis.
Giannouli et al., 2009 Greece	Compared the attitudes, knowledge and experience of nurses towards borderline personality disorders working in Greek psychiatric hospitals	Survey design using a 23-item questionnaire. The instrument was the same as that used by Cleary et al., (2002). Demographic information included, age, gender, number of years working in mental health services and nursing qualification.	Out of the 127 nurses, 69 nurses replied giving a response rate of 54.3%. Two study groups were set up, Group A consisted of the nurses working in psychiatric hospitals (n=34) whilst control Group B included nurses (n=35) working in psychiatric clinics of general hospitals.	The study was conducted in two public Psychiatric hospitals and the psychiatric clinics of two public hospitals in Athens. It was reported that only 4.3% of nurses received specific training in relation to the care of borderline personality disorder. The great majority of nurses believe that management of patients with borderline personality disorder is moderate to difficult, whilst 65.2% perceive it to be more difficult than other disorders.
Ghodse et al., 1986 Malta	To investigate the attitudes of health care professionals towards patients who take overdoses.	Survey design using the questionnaire used by Ghodse (1978), which included age, sex, occupation and experience in dealing with drug overdose	Out of the 350 questionnaires sent, 322 were returned, giving a response rate of 92%.	Results highlight that no significant differences between heath care professionals, although nursing staff reported to have the highest negative attitude towards substance mis-users.
Hamdan-Mansour & Wardam 2009 Jordan	To examine Jordanian mental health nurses' attitudes towards mental illness and patients with mental illness.	Descriptive correlational design using an adaptation from scale developed by Cleary et al., (2005), ATAMH-33, and demographics including age, gender, level of education, years in nursing, work setting, job title, length of employment on current ward, length of employment in the profession as well as primary work duties.	A target sample of 105 registered and associate nurses were recruited, representing the entire nurses working within mental health in Jordan. Out of the 105 nurses, 92 participated, giving a response rate of 88%.	Overall results show that gender does not play a significant role in determining the mental health nurses' attitudes towards mental illness and patients with mental illness. Findings suggest that place of work does influence nurses' attitudes. Marital status, job title and level of education had minimal contribution to the differences in nurses' attitudes

Hori et al 2011 Japan	To assess the attitudes towards schizophrenia in the general public, psychiatric staff, physicians and psychiatrists	Web based Survey design using an Internet-based questionnaire. The questionnaire was based on a 13-item questionnaire of Ucok *et al.*, (2006). Demographic section included gender, age, education, occupation/qualification, location of living, income of household, experience of mental illness, experience of schizophrenia via family members or close friends, years of psychiatric education and number of books read on the subject.	445 participants were included in the study, classified into four groups. These groups consisted of 197 subjects from the general public, 100 psychiatric staff, 112 physicians and 36 psychiatrists. The psychiatric staff group consisted of 83 nurses, 16 pharmacologists, and one community health worker.	Findings illustrate that stigma towards schizophrenia was most common in the general population and physicians. All four groups had the same degree of scepticism regarding the treatment of schizophrenia. Findings revealed that both psychiatrists and psychiatric staff wish to keep a certain distance from individuals with schizophrenia.
Hsiao, Lu & Tsai 2015 Taiwan	To investigate the variables influencing mental health nurses' attitudes towards people with mental illness.	Cross sectional, descriptive correlational design. Demographic variables investigated included age, gender, mental health care setting, position and length of mental health practice. Data was collected using the 20 item JSE-HP scale.	180 nurses out of the eligible 206 were recruited for the study, giving a response rate of 87.4%.	Findings report negative attitudes among mental health nurses, especially towards those with substance misuse followed by schizophrenia and major depression. Older and senior mental health nurses held more positive attitudes than other nursing staff. More negative attitudes are observed in those working in acute settings as opposed to those working in rehabilitation.
Hugo 2001 Australia	To investigating the attitudes of mental health professionals towards people who have experienced schizophrenia and depression.	Survey design. The respondents were administered a questionnaire based on one of two vignettes describing a person with schizophrenia or depression.	266 mental health professionals, consisting of 156 mental health nurses, 51 medical officers and psychiatrists and 59 allied health staff.	Medical staff was identified as the least optimistic whilst mental health nurses were the most optimistic about long-term outcomes. The majority of mental health professionals based their attitudes on their own experience with people experiencing mental illness. As for prognosis there was no significant difference between the different groups of professionals, all reporting that without professional help the individual may not experience recovery and may also relapse.
Jacq, Norful & Larson 2016	The attitudes of nurses towards mental illness.	Integrative Review guided by the Preferred Reporting Items for Systematic Reviews and Meta-analysis (PRISMA) statement. Quality of the studies was assessed using Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies (QATOCCS)	Search yielded a total of 14 studies after removal of duplicates and screening. Studies originate from 20 different countries, not including USA.	Contradiction exists between the attitudes held by psychiatric nurses and non-psychiatric nurses. No study compares directly the attitudes of psychiatric versus non-psychiatric nurses. Various measuring tools were used which might promote inconsistencies when comparing data.
Kukulu & Ergun 2007 Turkey	To evaluate nurses' opinions about individuals who had been diagnosed with schizophrenia.	Survey Questionnaire assessing the nurses' opinions about etiology of the illness, the treatment, diagnosis and social distance of individuals diagnosed with schizophrenia.	543 out of 693 nurses working in psychiatric wards participated in the study, giving a response rate of 78.3%.	The majority of nurses' state that schizophrenia is caused by social problems. Nurses who work on psychiatric wards have stigmatizing approaches when they interact with such a client group as well as social distance. Nurses evaluate people with schizophrenia as aggressive.

Lau et al., 2015 Australia	To investigate the attitudes of midwives and maternal child health nurses towards suicide.	A cross sectional study. Demographic information including gender, age and if they had any general nursing, psychiatric, maternal child health and or midwifery training.	Convenience sampling from three maternity settings and ten maternal child health nurse services in the south-eastern area of Melbourne in Australia. A total of 95 midwives and 86 maternal child health nurses completed the survey	Results indicate that midwives have an overall more negative attitude towards suicide than maternal child health nurses. Results showed no statistical significances when analysed by age groups. No significant differences were observed between midwives with a general nursing qualification and those with only a midwifery qualification, however those participants who had previous mental health nursing experience showed significant differences when compared with the groups that had no such experience.
Liu et al., 2011 China	To compare the level of mental health literacy between psychiatrists and registered nurses in China.	Descriptive cross-sectional survey. The instrument for data collection was adapted from the work of Jorm *et al.* (1997a).	31 registered nurses participated in the study, giving a response rate of 89%. None of the registered nurses held an educational qualification at a postgraduate level	Registered nurses were highly accurate in identifying the correct diagnosis for the schizophrenia vignette but less accurate in identifying the depression vignette. Findings might indicate a lack of mental health specialization training in nursing.
Maltese National Statistics Office 2014 Malta	National Survey on health literacy as part of the European Health Literacy Survey (EU- HLS) linked to the European Year dedicated to Citizenship	Nation-wide Survey. The same HLS-EU-Q16 tool (16 item questionnaire scored on a 5 point Likert scale and translated to Maltese) was used, administered using Computer Assisted Telephone interviewing	Stratified random sampling which generated a sample population of 1514 participants.	45% of the population over 18 years of age have a sufficient level of health literacy. 42.5% of the Maltese population have a problematic level of health literacy. No significant statistical differences could be noted when results were analysed by age, gender, marital status or geographical location.
Markham 2003 UK	To evaluate the effects of the label Borderline Personality Disorder on nursing staff attitudes	Repeated measures factorial design. The study instrument employed a modified version of the Social distance scale to investigate Social Distance. Beliefs about dangerousness were measured using the scale developed by Link *et al.*, (cited in Markham & Trower 2003).	Sample consisted of 50 Registered Mental Health nurses and 21 Health Care Assistants.	Staff optimism for change was assessed by self-rating their level of agreement to four optimism statements as well as information was collected regarding their work experience. Staff were least optimistic about patients with BPD as well as more negative about their experience with such client group. Only Registered Mental Health Nurses could distinguish between people with BPD and Schizophrenia label on measures of dangerousness and social distance.
Markham & Trower 2003 UK	To investigate the effects of the psychiatric label 'borderline personality disorder' on nursing staff's perceptions and causal attributions for challenging behaviours	Within-participants, quantitative questionnaire methodology. The tool used was based on Dagnan *et al.*, (cited in Markham & Trower 2003) modified version of Peterson *et al.*, (cited in Markham & Trower 2003) Attribution Style Questionnaire as well as basic demographic details.	50 registered mental health nurses participated in the study, although 48 nurses successfully returned the questionnaire. Sample consisted on 33 females (69%), 12 males (25%) and 3 (6%) others did not specify gender.	Findings show that staff reported less sympathy and optimism towards patients with Borderline Personality Disorder (BPD). Nurses rated their personal experience as more negative than their experience of working with patients diagnosed with depression or schizophrenia.

Martensson *et al.*, 2014 Sweden	To investigate factors (earlier personal contact, professional contact, knowledge and socio-demographic characteristic) association with mental health nursing staff's general attitudes towards persons with mental illness	Cross-sectional, correlational and comparative mail based questionnaire design. The questionnaire included CAMI-S, MAKS & RIBS tools as well as socio-demographic characteristics	256 out of 393 mental health nursing staff participated in this study (Response rate 65%).	Nurses have positive attitudes towards persons with mental if their knowledge about mental illness is less stigmatised, if their workplace is in the country council and if they currently have, or once have had a friend with mental illness. Stigma-related knowledge, employer/work place and personal contact are associated with mental health nursing staff's general attitudes towards people with mental illness.
McHale & Felton 2010	To review the factors affecting attitudes towards self-harm	Literature Review	19 papers reviewed, 13 of which originated from the UK.	Nurses and health care professionals perceive individuals who self-harm negatively. Key factors contributing to this negativity include the necessity of more education and training on the subject, staff confidence and poor knowledge on self-harm. Lack of education, is considered the primary rational for negative attitudes. Mental health nurses were less likely to have negative attitudes compared to medical nurses.
Mivšek, Hundley& Kiger 2008 Slovenia	To explore the perceptions and experiences of Slovenian midwives and nurses towards postnatal depression	Exploratory qualitative design using focus groups.	Community nurses, general nurses and midwives were chosen. A total of 5 volunteers from the maternity hospital and the another 5 volunteers from the community services.	Findings report that continuing contact with women with PND, could establish a trusting relationship and also influence behaviour, enabling them to better express negative feelings. An important recommendation for further research is the investigation of how specific variables may affect attitudes.
Munro & Baker 2007 UK	To identify the attitudes of acute mental health nurses	Survey design. The Attitudes towards Mental Health ATAMH-33 was used in this study (Baker *et al.*, 2005).	Convenience sample of 140 nurses, qualified and unqualified, working in acute mental health units in the North of West England.	Nurses show positive attitudes towards their clients. Results did not identify any significant statistical differences were in relation to variables such as age, gender and qualification
Nordt *et al.*, 2006 Switzerland (German part)	To investigate the attitudes of mental health professionals towards people with schizophrenia and depression	Survey design. Data was collected by computer-assisted telephone interviews. The interview asked questions about participant's work profession, stereotypes, restrictions, recognition of vignettes and also social distance.	Various professionals consisting of 518 psychiatrists, 2250 nurses and 320 other professionals who had daily contact with patients were approached during sampling procedures. Response rate for this survey was 34.7% (n=1073). The participation rate varied amongst professionals of which 30.4% of the respondents were nurses	Nurses' mean value for negative stereotypes indicated that they ascribe more to negative and less to positive attributes for people with mental illness compared to other individuals. Psychiatrists, nurses and psychologists had high scores as regards to the identifying the schizophrenia vignette, but nurses struggled to recognise the description of the major depression vignette. All professional groups reacted with great social distance towards the person in the schizophrenia vignette as opposed to the depression vignette.

Parker *et al.*, 2000 Singapore	To compare mental health literacy of psychiatrists and other mental health professionals	Survey design using a questionnaire based on that developed by Jorm *et al.*, (1997). Data analyses was conducted by comparing the results of psychiatrists to other staff which included, psychiatrically trained nurses, generally trained nurses and allied health staff.	69 psychiatrists, 128 psychiatrically trained nurses, 102 generally trained nurse and 104 Allied health Staff participated in the study giving a response rate of 81%.	Results showed that the two contrast groups (psychiatrists vs. other mental health professionals) differed slightly in terms of diagnostic accuracy. No analyses were conducted solely on the level of nurses' mental health literacy as results were combined into a group mainly 'other staff'. Direct comparison of psychiatrist ratings generated in Singapore and in Australia revealed quite similar responses.
Richmond & Foster 2003 UK	To investigate the negative attitudes towards people with co-morbid mental health and substance misuse problems	Survey design. The questionnaire, Substance Abuse Attitude Survey (SAAS), measures five factors, which are, non-stereotyping, permissiveness, non-moralism, treatment optimism and treatment intervention.	The convenience sample consisted of different professional groups. 103 usable questionnaires were returned, giving a response rate of 54%.	Mental health professionals have an accepting and tolerant attitude toward substance misusers and generally do not tend to make stereotypical assumptions about mental health users who misuse substances. Nurses were less permissive. The authors outline the importance of attitude education.
Ross & Goldner 2009	To review the views of nurses towards stigma, negative attitudes and discrimination towards mental illness.	Literature Review	Search yielded a total of 28 relevant papers	Thematic analyses, identifying three themes: 1 – Nurses as the stigmatisers, 2 – Nurses as the stigmatized and 3 – Nurses as the de-stigmatisers. Nurses hold negative attitudes towards mental illness mainly due to fear, a sense of hostility and blame. Education and lack of skills to adequately care of clients with mental illness have an impact on attitudes. Attitudes held by psychiatric and mental health nurses are more positive than general nurses and the general public.
Sadow *et al.*, 2002 USA	To investigate if education of health care professionals is encouraging stigma towards mental illness	Survey design using multiple research. Instruments employed included The Marlowe-Crowne Social Desirability Scale Attitudes Towards Mental Illness Scale', Link's Devaluation-Discrimination Scale' as well as Vignettes as well as Courtesy Stigma Scale.	Out of 97 potential participants, 67 female and 6 male nurses responded the questionnaire giving a response rate of 69%.	Attitudes become increasingly stigmatising the higher one moves in the hierarchy of his profession and the more expert one becomes in one's field. Health education and experience did not significantly affect attitudes towards the mentally ill but subjects overall rated mental health professionals more 'kindly' after being exposed to health education and experience.
Saunders et al., 2011	To review the attitudes and knowledge of clinical staff regarding people who self-harm.	Systematic Review	73 studies were reviewed, published between 1971 and 2009. Studies all in English, originating from various countries. The majority (36) originated from the UK. Quality ratings were given using a combination of the Critical Appraisal Skills Programme (CASP, 2002) and the Social Care Institute for Excellence's quality assessment tool (SCIE, 2006).	Six common themes emerged from this review which include, general attitudes, relationship between staff characteristics and attitudes, influence of characteristics of people who harm themselves on staff attitudes, knowledge and understanding of why people self-harm, effects of training on staff attitudes and knowledge and lastly suggestions for improving attitudes and services. Psychiatric setting experience was found to be associated with improvements in attitude whilst this was seen as the complete opposite in the general hospital setting. Working environment might also play a key factor on the attitudes of nurses.

Talseth & Gilje 2011	To review the nurses' response to suicide and suicidal patients	Meta-study employing a Reflexive and iterative design using Critical Interpretative Synthesis methodology.	26 relevant studies were retrieved, which were analysed qualitatively using content analysis.	Older nurses have more positive attitudes towards patients with suicidal intent and ideation. Nurses with a higher level of nursing education showed more positive attitudes in relation to individuals who attempted suicide.
Van Boekel et al., 2003	Stigma among health professionals towards individuals with substance abuse disorders and its consequences for the delivery of care.	Systematic Review	The initial search yielded 1562 citations, but after screening and selection 28 studies were included in this review. Only studies published between the year 2000 till 2011 were considered and only those studies carried out in Western countries were included	Health care professionals have a negative attitude towards clients with substance misuse. Nurses were reported to be unmotivated and reported low level of satisfaction when caring for such a client group. Professionals who had more work experience or contact with individuals with substance use disorders held more positive attitudes. Nurses reported more difficulties in caring for such clients than any other client group.
Williams 1999 UK	To investigate the attitudes of mental health professionals to co-morbidity between mental health problems and substance misuse	Survey design. Attitudes to Substance Use Questionnaire (SASUQ) was used in this study	189 mental health professionals in Bristol, UK were recruited for the study. Out of the 189 questionnaires sent, only 127 were returned, giving a response rate of 67%. Nurses had the highest response rate (n=82), whilst the others ranged from doctors, psychologists and social workers.	There was no significant correlation between age, time of qualification or gender and attitudinal score. Of note is that nurses had a high attitudinal score and viewed their role in the management of substance misuse as being important as opposed to other professional groups such as social workers and psychologists

Table 3.6. *Summary of relevant articles.*

3.3 Negative Attitudes, Stigma, Stereotypes and Prejudice

Stigma because of mental illness is widespread (Lauber, *et al.,* 2003; Lauber *et al.,* 2004; Graf *et al.,* 2004; Jorm *et al.,* 2006). Different forms of stigmatising attitudes are known, mainly stereotypes, prejudice and discrimination and these attitudes are mostly negative. Stereotypes are judgements that characterise collectively agreed upon qualities of groups or persons. They mostly represent the false pairing of person and behaviour, for example, individuals with mental illness are dangerous (Lauber *et al.,* 2006). Stereotypes have devastating consequences because of people quickly generating impressions and expectations of individuals who belong to a stereotyped group. These impressions give rise to prejudice, which is a consenting emotional reaction to a stereotype. Following the above example, people with mental illness are stereotyped as dangerous, thus individuals are afraid of them (Lauber *et al.,* 2006).

If an individual shows prejudice against a stereotyped group, the prejudice may then give rise to discrimination. Discrimination is the actual behaviour based upon prejudice (Lauber *et al.,* 2006). The actual behaviour is manifested by individuals not wanting to come in contact with those experiencing mental illness, because of the stereotype of being dangerous (Jorm *et al.,* 2006). Such unfavourable views about people with mental illness can be observed in different social contexts and in turn, they may affect several life domains of those afflicted (Lauber *et al.,* 2006).

In 2014, the Maltese National Statistics Office on behalf of the Office of the Commissioner of Mental Health within the Department of Energy and Health carried out a national survey on Health Literacy. This study formed part of the European Health Literacy project. Individuals over the age of 18 could participant. Stratified random sampling was used and generated a sample population of 1514 participants. The same HLS-EU-Q16 tool as used in other European studies within this project was also utilised. It is a 16 item questionnaire scored on a 5 point Likert scale and translated to Maltese so that participants could respond in their preferred language. This questionnaire was administered using Computer Assisted Telephone interviewing. Results illustrate that 45% of the population over 18 years of age have a sufficient level of health literacy. On the other hand, 42.5% of the Maltese population have a problematic level of health literacy. No significant statistical differences could be noted when results were analysed by age, gender, marital status or geographical location. Although this study provides valuable insight on the local situation, it is not specific to mental health literacy, and not specific to professionals working within the health services.

Negative professional attitudes originate from various sources, including lack of knowledge (Richmond and Foster, 2003) and mental health literacy (Lauber, Nordt and Rössler, 2005; Lauber *et al.,* 2006, Liu, Gerdtz, and Liu, 2011), frustration (Hugo, 2001), and a sense of inadequacy in managing the difficulties posed by a client group (Payne *et al.,* 2002). Stigmatising attitudes are not uncommon among health professionals. Such attitudes may be increased if professionals are less optimistic about the outcomes for people with long term mental health problems (Horsfall, Cleary, & Hunt, 2010). Horsfall Cleary, and Hunt (2010) add that mental health professionals are likely to embark on their career with at least the same stereotypical beliefs as the rest of the society.

Thornicroft (2008) views stigma as an amalgamation of three related areas involving ignorance and misinformation which flow from lack of knowledge. This statement agrees with that of Richmond and Foster (2003) who also suggest that stigma can originate due to lack of knowledge. Thornicroft *et al.,* (2008) adds that stigma also involves prejudice that is derived from negative attitudes, as well as discrimination, which is a result of social exclusion or avoidance.

3.4 The Effects of Stigma

It is a common understanding that people often know a lot about common physical health problems, but there is widespread ignorance of mental health problems (Kitchener and Jorm, 2006). Negative attitudes and stigma can have severe implications on the lives of people with mental health problems (Schafer, Wood, and Williams, 2011). Kitchener and Jorm (2006) state that lack of knowledge adds to the stigma associated with mental illness, prevents from seeking adequate help and is a deterrent for people to provide appropriate support to sufferers simply because they do not know how. Lauber, Nordt and Rössler, (2005) discussed how stigma towards mental health affects different life domains, including interpersonal relationships, housing, employment and ultimately quality of life. They added that because of stigma, the rehabilitation process which health care professionals play a key role in, may be jeopardized. Chambers *et al.,* (2010) adds that stigma in mental health professionals affects adversely both quality of care as well as recovery rates of service users. People with mental health problems sometimes internalise the stigma themselves, giving rise to low self-esteem, reduced self-efficacy as well as reduced prospects for recovery (Watson *et al.,* 2007). Kukulu and Ergün (2007) also suggest that stigmatization can be discrediting and may cause a person to lose his self-esteem. They continue by suggesting that an individual who suffers from stigmatization becomes more and more isolated from society and in time can experience feelings of loneliness, pessimism, hopelessness and weakness. If stigmatization continues, this can lead to a decreased enjoyment of life, and a loss of will to live (Ferriman, 2000). Crisp *et al.* (2000) report that individuals diagnosed with mental illness are stigmatised by society and receive less social support.

3.5 Mental Health Literacy

Several authors describe Mental Health Literacy as the knowledge and the beliefs about mental illness which aid their recognition, management as well as prevention of conditions that threaten a person's emotional well-being. (Lauber *et al.,* 2003; Jorm, Christensen and Griffiths, 2005; Jorm, Christensen and Griffiths, 2006; Liu, Gerdtz and Liu, 2011). It also refers to the ability to recognise specific illnesses, knowing how to seek mental health information, understanding of risk factors and causes, which professional services are available and which are those attitudes that promote recognition and appropriate help-seeking behaviour. Recognition of mental illness is one aspect of mental health literacy. Lack of appropriate recognition of mental disorders in oneself or in others may lead to delays and inappropriate health seeking behaviour. Recognition influences a person's attitude and behaviour towards mentally ill people, thus, it is crucial in anti-stigma campaigns (Lauber *et al.,* 2003). Nordt, Rössler and Lauber, (2006) describe that the mental health literacy of professionals seems to be far from perfect. They state that one out of eleven psychiatrists and one out of three nurses lack appropriate recognition of mental disorders.

Nurses' attitudes towards, and understanding of, mental illness will ultimately shape therapeutic relationships and support patients with mental illness to recover easily (Liu, Gerdtz and Liu, 2011). These authors investigated the levels of mental health literacy of psychiatrists and registered nurses in a Chinese general hospital. For the purpose of this review only the results of the nursing population will be discussed. A descriptive cross sectional survey design was used, recruiting 31 registered nurses, giving a response rate of 89%. Of particular note is that all recruited registered nurses were females. Their age ranged from 20 to 30 years. The number of nurses with less working experience was slightly more than those with more experience. None of the registered nurses held an educational qualification at a postgraduate level. The instrument for data collection was adapted from the work of Jorm *et al.* (1997b). Liu, Gerdtz and Liu, (2011) state that registered nurses were highly accurate in identifying the correct diagnosis for the schizophrenia vignette but less accurate in identifying the depression vignette. This may be attributed to the fact that two-thirds of the patients in the wards who have direct exposure to the nursing population have a diagnosis of schizophrenia. The authors conclude that the findings might indicate a lack of mental health specialization training in nursing. Parker *et*

al. (2000), replicated and extended the study conducted by Jorm *et al.* (1997a). The sample included both psychiatrically trained nurses and generally trained nurses amongst the recruited professionals in Singapore. Unfortunately, data analyses were conducted by comparing the results of psychiatrists to other staff, which included, psychiatrically trained nurses, generally trained nurses and allied health staff. The allied health staff group included occupational therapists, clinical psychologists and social workers. Results showed that the two contrast groups differed slightly in terms of diagnostic accuracy. Moreover, no analyses were conducted solely on the level of nurses' mental health literacy as results were combined into a group mainly 'other staff'.

3.6 Attitudes towards individuals with different mental illnesses

Kitchener and Jorm, (2006) state that lack of knowledge adds to the stigma of mental health problems, prevents people from seeking help and is a deterrent for people to provide appropriate support to sufferers simply because they do not know how. Lauber, Nordt and Rössler (2005) discussed how stigma towards mental health affects different life domains, including interpersonal relationships, housing, employment and ultimately quality of life. They added that because of stigma, the rehabilitation process which health care professionals play a key role in, may be jeopardized.

Stigmatisation and discrimination of people suffering from mental illness should be reduced as much as possible. Mental health professionals can inform and teach the public about mental illness, create awareness and thus help to reduce its stigma, but firstly it is important for them to examine their own attitudes (Nordt, Rössler and Lauber, 2006). Nurses and other mental health professionals are qualified to care for people with mental illness, and instruct lay people about mental illness, but they should not assume that they themselves have no negative stereotypes or are more willing to interact with the affected more than anyone else. Negative stereotypes are commonly linked to client groups. Various researchers (Jorm, Christensen and Griffiths, 2006; Nordt, Rössler and Lauber, 2006) agreed that some client groups are more challenging than others thus possibly giving rise to stereotypes. Such examples of client groups include people suffering from personality disorders, substance misuse, schizophrenia and depression.

Munro and Baker (2007) using The Attitude Towards Acute Mental Health scale (ATAMH) surveyed the attitudes of acute mental health nurses towards mental illness in

the North-west of England. They argued that from their convenience sample of 140 nurses, their overall findings report that nurses show positive attitudes towards their clients. No significant statistical differences were found in relation to variables such as age, gender and qualification (Munro and Baker, 2007). These results must be interpreted with caution, as the sample recruited was relatively small with a limited geographical coverage. This limited the generalisability of the results. Besides, although the type of sampling technique employed is widely used, it is also the weakest form of sampling as subjects might be atypical of the population thus the risk of bias is greater (Polit and Beck, 2006).

Hamdan-Mansour and Wardam (2009) investigated the attitudes of mental health nurses towards mental illness and patients with mental illness in Jordan. The authors used a descriptive correlational design with a target sample of 105 registered and associate nurses. This number represents the entire number of nurses working at acute and chronic inpatient/outpatient mental health agencies both in the governmental and private sector in Jordan. Out of the 105 nurses, 92 participated in the study, giving a high response rate of 88%. Nursing managers served as liaisons for distribution and collection of questionnaires. The questionnaire package contained two instruments, the Attitudes towards Mental Health Scale (Baker, Richards and Campbell, 2005) and another tool adapted from the 11 item scale instrument developed by Cleary, Walter and Hunt (2005). A demographic section developed by the authors also made part of the questionnaire package. This section included information about the participants' age, gender, level of nursing education, years in nursing, work setting, job title, length of employment on the current ward, length of employment in the nursing profession as well as primary work duties. Translations of the research instruments from English to Arabic were done by a professional English language translator. This was again back translated to English by another professional English language translator. Both English versions were than compared and pilot tested using a sample of 10 nurses, to evaluate readability and comprehension of the instruments. These scales were also checked for cultural variation. Out of the 92 participants, 66 (n=72%) were female and 26 (n=28%) were male. The age ranged from 22 to 51 years with only 21% of the sample (n=19) having received specialised training in the psychiatric and mental health field. Of note is that Hamdan-Mansour and Wardam (2009) report that only 5 psychiatric nurses work in Joran, (3 psychiatric nurses and 2 psychiatric nurse practitioners). The nurses' qualifications included Master's degree (3%), Bachelor's degree (62%) and Associate's degree (35%). Ethical approval was sought from the relevant local

authorities prior to the start of the study. Findings show that in general, nurses have negative attitudes towards mental illness and patients with mental illness. Male and female nurses had significant differences in their attitudes in questions regarding the perception of patients as polite versus rude. Female nurses had generally higher positive scores, which indicates that female nurses perceive patients with mental illness more positively than males. The authors add that the overall results show that gender within Mental Health Nurses as opposed to other nurses within the study, does not play a significant role in determining the attitudes towards mental illness and patients with mental illness. Findings do suggest that place of work does influence nurses' attitudes, as results showed a difference in nurses' attitudes according to the different work settings. Marital status, job title and level of education had minimal contribution to the differences in nurses' attitudes. Of particular note is the fact that this study recruited nearly all the target population of nurses in Jordan. Having such a high response rate (n=88%) supports the generalisability of findings within Jordan. These findings might not reflect the attitudes of nurses in western countries due to cultural differences.

Hsiao, Lu and Tsai, (2015) conducted a cross sectional study investigating the variables influencing mental health nurses' attitudes towards people with mental illness in Taiwan. They adopted a descriptive correlational design, recruiting 180 nurses out of 206 eligible nurses, giving a response rate of 87.4%. Demographic variables investigated in this study included age, sex (gender), mental health care setting, position and length of mental health nursing practice. Data were collected using the 20-item Jefferson Scale of Empathy – Health Profession version (JSE-HP version). This scale detects health care professionals' empathic reactions to patient care (Hojat *et al.,* 2002). Attitudes towards mental illness were measured by presenting participants with vignettes about substance misuse, schizophrenia and major depression than asked to complete the Attitudes of Mental Illness Questionnaire, AMIQ (Luty *et al.,* 2006) for each vignette. Computer software was used to analyse the data. Results indicate that the majority of nurses were female, staff nurses, in their 30s, working within the acute psychiatric inpatient setting with an average of 8 years of mental health practice. Hsiao, Lu and Tsai, (2015) report negative attitudes amongst mental health nurses, especially towards individuals with substance misuse, followed by patients with schizophrenia than major depression.

Findings corroborate with those by Chambers *et al.* (2010) as mental health nurses holding a senior position reported more positive attitudes than nursing staff. The authors also report that older mental health nurses expressed more positive attitudes (Hsiao, Lu and Tsai, 2015). This contradicts research findings who unanimously report no correlation between age and attitudes towards mental illness (Williams, 1999; Munro and Baker, 2007; Chambers *et al.,* 2010; Hori *et al.,* 2011). Results also illustrate more negative attitudes by nurses working in an acute psychiatric setting as opposed to those working in rehabilitation units. No statistical significant differences were reported when data were analysed by sex (gender), however the authors do acknowledge that further research is needed considering that their sample was predominantly female (n=149 females, n= 31 males). This study is the only one that reports the influence of years within the mental health setting and attitudes towards mental illness. Hsiao, Lu and Tsai, (2015) report that the longer one works within the mental health setting, the less negative the attitudes. The authors acknowledge further limitations with their recruitment procedures. Since participants were not randomly selected and predominantly females, results cannot be generalised to the entire Taiwanese mental health population. The design adopted is less informative than longitudinal research when investigating relationship of attributes. Self-administered instruments could have introduced social desirability bias. Conversely, this study is amongst the first to explore the influence of variables on mental health nurses' attitudes towards mental illness with Asia. Such study provides valuable cross-cultural data comparison.

Chambers *et al.* (2010) compared the nurses' attitudes to mental illness in five European countries. Nurses were recruited from Portugal, Finland, Italy, Ireland and Lithuania. A total of 810 registered nurses working in mental health settings, including the community were recruited for this questionnaire survey. The Community Attitudes towards Mentally Ill (CAMI) scale (Taylor, Dear and Hall., 1979; Taylor and Dear, 1981), which consists of a 40 item self-reported questionnaire, was utilised. Three items were modified in order to make them gender neutral. For non-English speaking countries, the tool was translated into the specific language then blind back translated into English and assessed for face-validity, content validity and semantic and conceptual equivalence of the translated tool. The tool included a demographic section which asked respondents about age, gender, highest educational attainment, qualification type, length of experience, position held, personal contact with people with mental health problems, and proximity of contact. All ethical

permissions were sought from the relevant authorities in the respective five countries. Data were collected both electronically or in paper form, depending on the resources of each particular country. 1095 questionnaires were distributed with 813 returned giving a response rate of 74.2%. Data were analysed using statistical software. Findings show that nurses' attitudes towards mental illness are positive. Although the attitudes differ across the five countries they are still positive. A great predictor for the differences in attitudes was the country of practice. Chambers *et al.* (2010) also explored which socio-demographic characteristics are associated with nurses' attitudes towards mental illness. Out of the six variables, only gender and position held were found to have an association with the attitudes of nurses. Females were found to be more sympathetic and more positive than male nurses. This also correlates with the literature review carried out by Saunders *et al.* (2011). The authors also add that the higher the position held the less negative attitudes one holds (Chambers *et al.,* 2010). This opposes the findings by Sadow, Ryder and Webster, (2002) who suggest that attitudes become increasingly stigmatising the higher one moves in the hierarchy of his profession and the more expert one becomes in one's field. This might be due to decreased contact with the service users, or increased accountability due to higher position. The authors acknowledge several limitations of this study, which include the small number of nurses sampled in each country. This limits the generalisability of the results to the general population. Chambers *et al.* (2010) add that the small effect sizes of the socio-demographic variables make the observed differences in attitude scores not necessary noticeable. The different methods of data collection could have influenced the findings. Although the CAMI tool was developed over 30 years ago, the use of an old tool such as this one could be a benefit as it has seen sustained use with a wide variety of participants and in a number of different contexts. Of note is that the CAMI tool was not validated on a nurse sample bar face validation.

Jacq, Norful and Larson (2016) carried an integrative review to explore nurses' attitudes towards patients with mental illness. The initial database search using Ovid MEDLINE, CINHAL, PsychINFO and PubMed was carried out in September 2015 and yielded a total of 2615 articles. After removal of duplicates, titles screening and abstract review 50 articles were considered eligible. After full text screen, 14 articles were identified to satisfy the inclusion criteria. Reference search yielded another 5 eligible articles. A full text review was again conducted by two researches and only one of the five articles meet the criteria set by the authors. These criteria included studies published in English between

1995 to 2015 and included nurses' participation to measure the attitudes toward mental health and/or illness in patient was measured as an outcome. Keywords used to guide this search include 'mental illness' OR 'mental health' AND 'nurses' OR 'nurs*' AND 'stereotyp*' OR 'stigma' OR 'prejudice' OR 'discrimination' OR 'attitudes' OR 'beliefs'. The methodological quality of the studies was appraised using the Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies (QATOCCS) from the National Institute of Health, National Heart, Lung and Blood Institute. Twelve studies were ranked as high quality, one as moderate and 2 were identified to be of low quality. One study lacked methodological rigor and was eliminated, leaving a total of 14 studies in this review. The studies were carried out in 20 different countries but not within the USA. Various measuring tools were used within these 14 studies and this might promote inconsistencies when comparing data. Jacq, Norful and Larson (2016) add that no study compared directly the attitudes of psychiatric versus non-psychiatric nurses in different work settings. The authors conclude that globally nursing attitudes tend to differ depending on the mental illness and cultural beliefs. Also there seems to be a contradiction in the attitudes held by psychiatric nurses and non-psychiatric nurses. Education regarding mental illness could potentially reduce the negative attitudes held by nurses. Jacq, Norful and Larson (2016) add that their findings are indicative that professional attitudes seems to be comparable to those held by the general public, questioning the impact of professional training on attitudes towards mental illness. The authors suggest that having clear operational guidelines on how to deal with individuals with mental illness, manage the symptomology associated with such conditions and understand what therapeutic intervention is most indicated. Such guidelines give nurses the required empowerment in their role, which in turn would promote a more positive outlook to individuals with mental health conditions and mental illness alike (Jacq, Norful and Larson, 2016).

Ross and Goldner (2009), carried out a literature review on the views of nurses towards stigma, negative attitudes and discrimination towards mental illness. Key words used for the search included 'attitudes to mental illness', 'mental illness OR psychiatry AND negative attitudes AND nurses' as well as 'discrimination and mental illness AND nurses'. Seminal work and secondary sources obtained from the primary search were also included. A total of 28 papers were considered relevant to this review and results were analysed using thematic analyses. Three main themes emerged from this review, Theme 1 Nurses as

the stigmatisers, Theme 2 Nurses as the stigmatised and Theme 3 Nurses as de-stigmatisers. The third theme was not discussed in this review but the authors outline that it will be discussed in a separate work. For the purpose of this study, only the findings in Theme 1 will be discussed. Findings confirm that nurses hold negative attitudes towards mental illness mainly due to fear as well as a sense of hostility and blame. Nurses working in general wards views the clients as having two separate needs, the physical and the psychiatric. Such nurses felt that the psychiatric part of the client's care was not their responsibility. Education and lack of skills to adequately care for clients with mental health issues as well as lack of resources and infrastructure to provide adequate and safe care all have an impact on the attitudes of nurses. Ross and Goldner (2009) add that literature shows the attitudes held by psychiatric and mental health nurses are more positive than the general public and general nurses, however negative attitudes still exist.

Although several studies (Hamdan-Mansour & Wardam, 2009; Munro & Baker, 2009; Chambers *et al.,* 2010; Jacq, Norful and Larson, 2016) have been identified that investigate the attitudes of nurses towards mental illness, other studies focus specifically on attitudes of nurses/midwives towards specific mental health conditions. Such conditions include substance misuse, self-harm, schizophrenia, depression, mental health conditions during pregnancy and the puerperium, and personality disorders. These studies looked at specific subgroups in order to explore the attitudes to specific groups which may be more challenging than others. It is widely known that challenging behaviours associated with specific mental illnesses may influence negatively the attitudes of nurses or midwives caring for such a specific group. Such negative attitudes include pessimistic attitudes towards client prognosis and outcomes as well as negative attitudes towards a specific client group such as individuals with personality disorders. Therefore, in order to provide a more comprehensive view of attitudes held by nurses and/or midwives and explore in more depth the variables that may contribute to such attitudes, specific groups were also included in this literature review.

3.7 Attitudes of staff towards people with Borderline Personality disorders.

Borderline personality disorder is one of the many subtypes of personality disorders. Fraser and Gullop (1993) and Flood (1999) described common characteristic traits of individuals suffering from this personality disorder, which include recurrent threats and acts of self-

harm, disturbed self-image, unstable relationships and excessive efforts to avoid real or imagined abandonment. Coid (2003) added that individuals with borderline personality disorders are treatment seeking and also significant consumers of psychiatric services. Nehls (2000) referred to individuals with personality disorders as the most stereotyped and stigmatised out of all psychiatric service users. They have been referred to as, 'not sick', 'manipulative', 'non-compliant', 'time wasters', 'difficult', and 'bed wasters'. Castillo (2001; 2003) and Fallon (2003), discussed a prevailing theme that emerged from their research regarding patients with personality disorder and their lived experience whilst hospitalised. From the perspective of the patients, attitudes of health professionals were perceived as negative and unhelpful. This is in agreement with the findings of other researchers (Markham 2003; Markham and Trower 2003), who unanimously identified negative attitudes as a service response, and that nurses presented themselves as impervious, indifferent, unsympathetic, hostile, indifferent, angry and frustrated. Clients with borderline personality disorders reported that the negative attitudes of staff adversely affect the delivery of their care (Filer, 2005).

A common negative response by professionals regarding borderline personality clients is that they are attention seeking (Castillo, 2001). Fallon (2003) asserted that this implies that the individual is not worthy of attention, thus it is dismissive and leaves the client feeling undeserving of care. Cleary, Siegfried and Walter (2002) describe that the self-destructive gestures and acting out behaviours that may occur in borderline personality disorders often leave staff feeling inadequate, incompetent in the provision of care as well as helpless. Clients with borderline personality disorders may refuse therapeutic interventions as well as engage in difficult to manage behaviours. This generates negative attitudes in nursing staff, giving rise to frustration and anger. Giannouli *et al.* (2009) add that the stressful nature of borderline personality disorder therapy for the therapists themselves leads to less than favourable attitudes of the staff towards these clients.

Fraser and Gullop (1993) carried out a study to compare the level of empathy that nurses showed towards people with borderline personality disorders as opposed to other diagnosis. The sample recruited included 164 patients and 17 registered nurses. The study reported that nurses were less empathic to patients with borderline personality disorders than to patients with affective disorders or other diagnosis. These findings have to be interpreted with caution. If patients were more familiar or known by the nurses, results

may be biased as there is a tendency to provide more affection and empathy to familiar patients than to ones who are unfamiliar. Moreover, the sample is so small that it may not be reflective of the entire population. Such a study should be carried out on a larger scale and with nurses completely estranged to the patients recruited for the study.

Cleary, Siegfried and Walter (2002) researched the experience, knowledge and attitudes of mental health staff regarding clients with a borderline personality disorder. This study was carried out in Sydney, Australia. A 23-item questionnaire assessing experience, knowledge and attitudes was developed by the authors and posted to 516 community and hospital based mental health employees. Out of the 516 employees, 229 responded to the questionnaire, giving a response rate of 44%. Demographic data were included in the tool, including age, gender, professional designation, place of work and number of years in the mental health field. This study recruited various mental health professionals, including registered nurses, enrolled nurses, social workers, occupational therapists, psychiatrists, psychiatrist registrars, psychologists and non-specified professionals grouped as "others". Findings show that most staff (80%) admitted to finding dealing with clients diagnosed with borderline personality disorder moderately to very difficult. Unfortunately, results are discussed in relation to the entire staff sample, thus no specific data can be obtained for a particular professional group. No validation or reliability testing is mentioned regarding the self-developed 23-item questionnaire. Without testing, the research instrument might not be valid or reliable. The authors sought ethical approval prior to the commencement of the study. Although having a low response rate, the results still conform with those of previous studies.

In a similar study, Giannouli *et al.* (2009) compared the attitudes, knowledge and experience of nurses working in Greek psychiatric hospitals towards borderline personality disorders. The same instrument used by Cleary, Siegfried and Walter, (2002) was utilised in this study. The study was conducted in two public psychiatric hospitals and the psychiatric clinics of two public hospitals in the Greater Athens area. The questionnaire was sent to 127 nurses and 69 replied, giving a response rate of 54.3%. Two study groups were set up, namely Study Group A and B. Group A consisted of the nurses working in psychiatric hospitals (n=34) whilst Group B included nurses (n=35) working in psychiatric clinics of general hospitals. All necessary ethical approvals were obtained from all participating hospitals. The questionnaire was translated and adapted to the Greek

population. The research instrument also included demographic information, such as age, gender, number of years working in mental health services and nursing qualification. It was reported that only 4.3% of nurses received specific training in relation to the care of borderline personality disorder. The great majority of nurses (85.5%) believe that management of patients with borderline personality disorder is moderate to difficult, whilst 65.2% perceive it to be more difficult than other disorders. This finding is in agreement with other literature relevant to this field (Fraser and Gullop, 1993; Nehls, 2000; Cleary, Siegfried, and Walter 2002; Markham and Trower, 2003; Winship, 2010). Although results agree with the existing body of knowledge, they have to be viewed with caution, due to the relatively small sample size. The authors do not mention any validation of the tool once translated and adapted to the Greek population. This may possibly give rise to misinterpretation of the questionnaire.

Other researchers (Fraser and Gullop, 1993; Flood, 1999; Nehls, 2000) criticised the relative lack of studies carried out in relation to attitudes of health care professionals towards people with borderline personality disorders. In fact, literature found was mainly anecdotal or reviews of previous literature. Studies on other diagnosis exist but considering that in literature personality disorders are referred to as the most difficult to deal with, the most neglected and also highly stigmatised client group (Nehls, 2000; Castillo, 2001; Castillo, 2003; Coid, 2003), one has to wonder why research in this field is so poor.

Improved knowledge for mental health professionals is important so that rejecting and pessimistic attitudes are recognised as an unhelpful service response. The latter in turn may result in lack of skills and knowledge about the needs of people with personality disorders, schizophrenia, depression and substance misuse, thus ultimately result in poor care delivery.

3.8 Attitudes of staff towards Mental Health problems and Substance misuse.

There is evidence that co-morbid mental health and substance misuse problems presents particular management difficulties for mental health professionals. Both these conditions are difficult to treat, let alone when combined together, which may result in higher levels of social and psychological impairment (Richmond and Foster, 2003). Problems that are associated with co-morbidity include non-compliance to medication, relapse and hospital admission, an exposure to the criminal justice system, episodes of aggression, violence and

suicide. Health care professionals' attitudes to substance misuse and mis-users have a direct effect on the provision of care. A constructive professional attitude is essential for working with service users with co-morbidity, as persistence in the engagement process is the crucial element of effective working with such a client group (Richmond and Foster, 2003).

Baker, Richards and Campbell, (2005) suggest that, self-destructive behaviour such as substance misuse, often gives rise to moralistic and stereotyping attitudes within health care professionals. Such negative attitudes, may lead to punitive, rejecting responses and interaction characterised by suspicion, mistrust and avoidance by both the professional and service user (Baker, Richards and Campbell, 2005). This may hinder an effective therapeutic relationship. Besides, Howard and Chung (2000) discussed that those health care professionals who hold negative attitudes towards substance mis-users often overlook substance misuse and fail to initiate or refer for further treatment. On the other hand, Munro and Baker (2007) showed that contact with substance mis-users proved that these users are not untrustworthy, rude and violent. Munro and Baker (2007) went on to state that such individuals are unlikely to be so if treated with respect, honesty and dignity.

Van Boekel *et al.* (2003) conducted as systematic review on stigma among health professionals towards individuals with substance abuse disorders and its consequences for the delivery of care. The search was carried out using PsychINFO, Pubmed and Embase databases. Only studies published between the year 2000 till 2011 were considered and only those studies carried out in Western countries were included. Review articles, letters and communications were excluded from the search. The initial search yielded 1562 citations, but after screening and selection 28 studies were included in this review. Findings show that generally, health care professionals have a negative attitude towards clients with substance misuse. Nurses were reported to be unmotivated and reported low level of satisfaction when caring for such a client group. Van Boekel *et al.* (2003) add that professionals who had more work experience or contact with individuals with substance use disorders held more positive attitudes. Nurses reported more difficulties in caring for such clients than any other client group. Although this literature review provides a good insight on the attitudes of health care professionals it is not specific to nurses. No midwives were included in the 28 articles in the review carried out by Van Boekel *et al.* (2003).

A survey questionnaire, carried out by Williams (1999), focusing on attitudes of mental health professionals to mental health problems and substance misuse, was sent to 189 mental health professionals in Bristol, UK. The study examined attitudes of health professionals from different disciplines to dealing with patients who misuse drugs and alcohol and their view of the role these substances have in the causation of mental illness. Out of the 189 questionnaires sent, only 127 were returned, giving a response rate of 67%. Confidentiality was ensured to the participants and a covering letter was also sent with the questionnaire. From the sample population, the highest response from professionals were nurses (n=51), whilst the others ranged from doctors, psychologists and social workers. Response rate was adequate for such a survey, thus results may be reflective of the target population. There was no significant correlation between age or time of qualification or gender and attitude score. The presence of non-response to the study may introduce potential bias. Williams (1999) described that nurses had a high attitudinal score and viewed their role in the management of substance misuse as being important as opposed to other professional groups such as social workers and psychologists. Williams (1999) conclude that the majority of respondents highlighted the need for further training.

In a similar study carried out in London by Richmond and Foster (2003), the authors reviewed the attitudes of mental health professionals towards people with co-morbid mental health and substance misuse problems. A survey questionnaire was used and 103 usable questionnaires were returned, giving a response rate of 54%. Subjects were recruited using convenience sampling, following fulfilment of the inclusion criteria. The questionnaire, Substance Abuse Attitude Survey (SAAS), measures five factors, which are, non-stereotyping, permissiveness, non-moralism, treatment optimism and treatment intervention. The SAAS is an established attitude questionnaire aimed at eliciting moral attitudes from health professionals and has acceptable reliability and validity. The sample consisted of different professional groups, with a mean duration of experience in mental health of 10.7 years. Out of the 103 participants, 25 were nurses and 21 had some form of specialist substance use/dual diagnosis training and six had direct experience of working in drug and alcohol services.

Richmond and Foster (2003) illustrated that from the findings, mental health professionals obtained a satisfactory score for non-stereotyping and a borderline score for

permissiveness. Overall, these scores show that mental health professionals have an accepting and tolerant attitude toward substance mis-users and generally do not tend to make stereotypical assumptions about mental health users who misuse substances. Conversely, this study shows that nurses out of the other professional groups were less permissive, which may indicate that nurses may have a more negative attitude to substance mis-users. Since Richmond and Foster (2003) used convenience sampling it may have introduced the possibility of selection bias. Also since this study was carried out in London, the results may be atypical and only representative of that specific region, thus hindering generalisability to other regions. Another limitation of this study is the small sample of subjects, and the low response rate hinders generalisation of results as these may not be typical of the target population. Future studies should be longitudinal and also attempt to randomly select a larger sample as well as enhance a better response rate.

Both the study carried out by Williams (1999) and by Richmond and Foster (2003), highlighted the diversity of beliefs and views of roles that exist between different professionals. They also illustrated the importance to have evidence-based training of mental health professionals in the skills of accurately assessing co-morbid substance misuse problems and managing them accordingly. Also the authors outline the importance of attitude education because of the direct influence on the behaviour and the choices one makes when applying knowledge and skills. Thus, having more attitude-educated professionals may result in better quality of care.

The only relevant published Maltese study was conducted by Ghodse *et al.* (1986). This study investigated the attitudes of health care professionals towards patients who take overdoses. A total of 350 questionnaires were distributed. The sample included medical staff that had contact with drug overdose patients, health visitors, medical students during their psychiatric training year and nursing staff that also had contact with these patients. Nursing staff included psychiatric nurses and accident and emergency department staff. Nursing staff formed the largest occupational group (n=129). There is no reference to the distribution of the nursing sample, that is, how many are psychiatric nurses and how many work in the accident and emergency setting. Out of the 350 questionnaires distributed 323 were returned giving a response rate of 92%. The questionnaire used was the same as the one used by Ghodse (1978), which investigated the attitude of casualty staff and ambulance personnel towards patients who take drug overdose. Results show that there is

no significant difference between the health care professionals, although the nursing staff had higher negative attitudinal scores as opposed to other professionals. This could imply that nurses might hold more negative attitudes towards substance mis-users. This study provided very limited information regarding how this study was conducted. Although this was published over 25 years ago, it is the only published study that sheds light on the attitudes of nursing staff in a local situation. The study had a very high response rate (92%) and the results were also compared with a similar study carried out in the UK.

3.9 Attitudes of nurses towards people who self-harm.

It is often found in literature that self-harming patients presenting themselves at the accident and emergency departments, even if not for problems related to self-harm, are perceived negatively (Saunders *et al.,* 2011). Saunders *et al.* (2011) add that the attitudes held by clinical staff towards individuals who self-harm, together with the knowledge about self-harm, tend to have an influence in their clinical practice, affecting the experiences and outcomes for the patient. The World Health Organisation (2011) reports that an estimate of 53 males and 2 females commit suicide in Malta annually.

Emerson (2010), carried out a literature review focusing on five nursing studies, namely:

Authors	Date	Research Design	Location	Comments
Tay *et al.,*	2004	Quantitative Study	Singapore	Psychiatric Hospital
Liggings and Hatcher	2005	Qualitative Study	New Zealand	
McCann *et al.,*	2006	Quantitative	Australia	A&E Department
Patterson *et al.,*	2007	Quantitative	UK	General Nurses, Mental Health Nurses and Social Workers included in the study
Anderson and Standen	2007			Doctors and Nurses. Included A&E, Paediatric medicine and adolescent inpatient mental health services

Table 3.7. *Studies included in the literature review by Emerson (2010)*

In a critique of these five studies, Emerson (2010) identifies three themes. The first theme involves the exposure of nurses towards self-harm. It was found that the length of time on the nursing register correlates with a more positive attitude. Thus, one might assume that years of service or experience would have an influence on the nurses' attitudes. This finding was highlighted in the study carried out by Tay *et al.* (2004).

The second theme to emerge from the review by Emerson (2010), described the stigma associated with self-harm and how applying a label of mental illness to persons who self-

harm can have a negative impact on the delivery of care. Liggins and Hatcher (2005) together with Anderson and Standen (2007) describe that stigma can be destructive and infringe on the person's life. This would affect how they act and how they live their lives. It lowers a person's self-esteem and might in turn also lead to dangerous health issues. The third theme to emerge from the work of Emerson (2010) identifies the need for health professionals to receive up-to-date training. Emerson (2010) reviews the findings of Patterson, Whittington and Bogg (2007), suggesting that there is no clear separation between nurses having negative or positive attitudes towards individuals who self-harm. It also shows there are different extents of attitudes that can be altered depending on the circumstances that the nurse is currently facing.

In another review by McHale and Felton (2010), 19 papers are discussed, 13 of which originated from the UK. All participants in these reviewed studies were adults over 18 years of age. These studies included:

Authors	Date	Design	Sample	Setting	Location
Crawford *et al.,*	1998	Questionnaire and notes reviewed before and after educational interventions	Convenience sample of 52 nurses and 15 junior medics	A&E department	UK
Harris	2000	Qualitative study	Self-selected sample of six women		UK
Holdsworth *et al.,*	2001	Questionnaires and reflective diary	13 nurses	A&E, minor injuries and medical assessment units	UK
Hopkins	2002	Participant observation; semi-structured interviews and reflective journal	Purposive sample of four from two medical wards	Medical wards	UK
Jeffery & Warm	2002	Questionnaire	Opportunity sample of 96 including professionals and people who self-harmed		UK
McAllister *et al.,*	2002	Questionnaires	352 nurses	A&E department	Australia
Smith	2002	Unstructured Interviews and semi-structured interviews	3 self-selected service users; 9 nurses; 3 occupational therapists, 2 psychotherapists and 1 psychiatrist		UK
Warm *et al.,*	2002	Questionnaires	243 Self-selected service users		UK
Lindgren *et al.,*	2004	Interviews	9 self-selected females	Community settings	Sweden
MacKay & Barrowclough	2005		Convenience sample of 89 A&E nursing and medical staff	A & E department	UK
Friedman *et al.,*	2006	Focus groups and questionnaires	Focus groups six of eight people and questionnaires to 88 nurses and 29 doctors		UK
McCann *et al.,*	2007	Questionnaire	Convenience sample of 43 A&E nurses	A & E department	Australia
McCann *et al.,*	2007	Exploratory Study	Convenience sample of 43 registered nurses	Emergency Department	Australia
O'Donavon	2007	Semi-structured interviews	Convenience sample of 8 nurses	2 Inpatient settings	Ireland
Patterson *et al.,*	2007	Quasi-experimental study using questionnaires	Self-selecting sample of 69 healthcare professionals		UK
Patterson *et al.,*	2007	Quantitative Survey	Self-selected sample – 153 respondents attending post registration education		UK
Wilstrand *et al.,*	2007	Narrative interviews	Purposive sample of 6 psychiatric nurses	Inpatient psychiatric ward	Sweden
Hadfield *et al.,*	2009	Semi-structured interviews	5 qualified doctors	A&E department	UK
McAllister *et al.,*	2009	Qualitative interviews	Purposive sample of 29 nurses	A&E department	Australia

Table 3.8 *Studies included in the literature review by McHale and Felton (2010)*

It appears that in the studies reviewed by McHale and Felton (2010), there is a general agreement that nurses and health care professionals perceive individuals who self-harm negatively. Key factors contributing to this negativity include the necessity of more education and training on the subject, staff confidence and poor knowledge on self-harm. There is a general agreement within all the studies reviewed that education, more specifically the lack of it, is considered the primary rational for negative attitudes. Education is considered to promote quality of care through positive attitudes as this helps to better understand the presenting situation, in this case, self-harm (McHale and Felton, 2010). Of note are the findings of Patterson, Whittington and Bogg (2007) that mental health nurses were less likely to have negative attitudes compared to medical nurses. Several hypotheses are given to illustrate these results. Patterson, Whittington and Bogg (2007) feel that this might be due to the difference in the pre-registration education. McHale and Felton (2010) add that this might also be explained by the demand characteristics of the specialised area. Another suggestion might be due to the amount of contact with this specific client group. This places mental health nurses in a position to be more knowledgeable on the subject, due to their training, work in an environment that provides specific care to this client group thus being more exposed to self-harming individuals.

Although Emerson's (2010) review of the literature only focused on 5 studies as opposed by the 19 studies reviewed by McHale and Felton (2010) the conclusions are very similar. Both researchers have reviewed international studies. This provides the opportunity to compare results globally as well as consider any cultural influences.

In another systematic review on the attitudes and knowledge of clinical staff regarding people who self-harm, 73 studies were reviewed (Saunders *et al.,* (2011). These studies were published between 1971 and 2009. All studies were in the English Language and originated from various countries. The majority (36) originated from the UK. Of note is that a study included in this review originated from Malta (Ghodse *et al.,* 1986). Titles, abstracts, then followed by full text, were screened by two members of the research team independently. Quality ratings were given using a combination of the Critical Appraisal Skills Programme (CASP, 2002) and the Social Care Institute for Excellence's quality assessment tool (SCIE, 2006). Six common themes emerged from this review which include, general attitudes, relationship between staff characteristics and attitudes, influence

of characteristics of people who harm themselves on staff attitudes, knowledge and understanding of why people self-harm, effects of training on staff attitudes and knowledge and lastly suggestions for improving attitudes and services. Saunders *et al.* (2011) suggest that it is unclear whether the age of the staff influences attitudes but experience and the extent of exposure to individuals who self-harm appears to have a greater impact. They add that in a Psychiatric setting experience was found to be associated with improvements in attitude whilst this was seen as the complete opposite in the general hospital setting. This review also illustrates that the working environment might also play a key factor on the attitudes of nurses, as it was found that negative attitudes towards individuals who self-harm is associated with higher levels of burnout and low personal accomplishment. Although no studies compared different professions whilst controlling for gender, the authors describe that female staff had more positive attitudes than males (Anderson *et al.,* 2000; Ghodse, 1978; Samuelsson, Asberg and Gustavsson, 1997).

More negative attitudes were expressed towards individuals who repeatedly self-harm. This was reported in all three reviews (Emerson 2010; McHale and Felton, 2010; Saunders *et al.,* 2011). General hospital staff viewed self-harming behaviour as attention seeking behaviour whilst psychiatric staff were more interested in understanding why individuals resorted to self-harm. Of note is that McHale and Felton (2010) identify that general medical staff hold more negative attitudes than nurses. This might be due to the greater opportunities that nurses have to build a therapeutic relationship with the patients and also can spend more time with them. A limitation of these reviews (Emerson, 2010; McHale and Felton 2010; Saunders *et al.,* 2011), is that only studies carried out in the English language were considered, limiting the inclusion of non-westernised countries. Although, the inclusion of both qualitative and quantitative research designs allowed for the inclusion of a wide range of studies, this limits the ability to make detailed comparisons of findings beyond general themes.

3.10 Attitudes of Nurses towards individuals suffering from Schizophrenia and Major Depression

Nordt, Rössler and Lauber, (2006) conducted a survey on the attitudes of mental health professionals towards people suffering from schizophrenia and major depression. Professionals working at psychiatric facilities in the German part of Switzerland were

recruited for this study. The data were collected by computer-assisted telephone interviews. Various professionals consisting of 518 psychiatrists, 2250 nurses and 320 other professionals who had daily contact with patients were approached during sampling procedures. The response rate for this survey was 34.7%. The participation rate varied amongst professionals of which 30.4% of the respondents were nurses. The interview asked questions about the participant's work profession, stereotypes, restrictions, recognition of vignettes and also social distance. When asked to rate to what extent people with mental illness differed from the general public, Nord, Rössler and Lauber (2006) found that the mean value for the stereotype scale of all professional groups was in the middle but in all cases on the negative side. Nurses' mean value for negative stereotypes indicated that they ascribe more to negative and less to positive attributes for people with mental illness compared to other individuals.

Part of the interview assessed the willingness to restrict the individual rights of people who are mentally ill. Although nurses scored higher than other professionals, still there was less approval for legal restriction among all professionals. When asked to identify vignettes, psychiatrists, nurses and psychologists had high scores as regards to the schizophrenia vignette, but nurses struggled to recognise the description of the major depression vignette. All professional groups reacted with great social distance towards the person in the schizophrenia vignette as opposed to the depression vignette. These findings have to be viewed with caution as these may not reflect the target population due to such a low response rate. Also, since the tool used was designed for the general public, some of the professionals considered the question and answer categories to be imprecise. Due to the unequal participation of professional groups, the study had an unbalanced sample size. The study was conducted only in the German part of Switzerland, therefore conclusions may only be reflective of that area. The findings refer to attitudes that do not necessarily entail a corresponding behaviour in real life.

In a study carried out in Australia, Hugo (2001) investigated the attitudes of mental health professionals towards people who have experienced schizophrenia and depression. 266 mental health professionals were recruited consisting of 156 mental health nurses, 51 medical officers and psychiatrists and 59 allied health staff. The respondents were administered a questionnaire based on one of two vignettes describing a person with schizophrenia or depression. Attitudes were represented as beliefs about prognosis and

long-term outcomes in relation to the two vignettes. Hugo (2001) identified that out of the sample population, medical staff were the least optimistic whilst mental health nurses were the most optimistic about long-term outcomes. The author adds that the majority of mental health professionals based their attitudes on their own experience with people experiencing mental illness. As for prognosis there was no significant difference between the different groups of professionals, all reporting that without professional help the individual may not experience recovery and may also relapse. Similar to the study carried out by Nordt, Rössler and Lauber (2006), the relatively low number of health professionals sampled, limits the generalisation of the results. Low response rates may lead to bias because respondents are rarely a random subset of those whom the researchers have sampled (Polit and Beck, 2006). This reflects the importance of recruiting a big sample, as well as the need of high response rates so that findings may be indicative of the target population. Hugo (2001) identified that since staff based their attitudes on their personal experience, and this occurred more often when in the acute stage of their illness, staff may have developed a biased view of their client group. Therefore, this shows the importance of programmes which aim to foster more positive attitudes in mental health professionals.

Kukulu and Ergün (2007) conducted a questionnaire survey to shed light on the stigmatization by nurses against schizophrenia in Turkey. The questionnaire consisted of two sections, namely section 1 which included demographic data such as age, years worked, marital status, educational status and family characteristics. Section 2 dealt with questions to determine the psychiatric ward nurses' opinions about treatment, diagnosis, etiology of illness and social distance. The researcher prepared the questionnaire from existing literature. The study was conducted with 693 nurses working on psychiatric wards. 543 nurses agreed to participate, giving a response rate of 78.3%. The nurses' working environment ranged from University Hospitals, Psychiatric wards and training and research hospitals in Turkey. The questionnaires were all distributed by hand by the researcher to avoid any possibility of these being lost in the mail as well as to increase the completion rate due to personal contact with the participants. The completed questionnaires were collected by the researcher himself. Findings showed that nurses who work on psychiatric wards have stigmatizing approaches when they interact with such a client group as well as social distance. Findings showed that nurses evaluate people with schizophrenia as aggressive. Although this study (Kukulu and Ergün, 2007) includes a demographic section, no data were compared with these variables. The demographic

section served only to give a description of the sample population. Although the researcher has used available literature to compile his research tool, there is no evidence of the tool being tested for content, credibility, reliability or validity. Having the researcher distribute and collect the questionnaires might have increased response rate, but it could also have increased bias as participants who might have not participated, might have done so purely due to the fact that they were faced directly with the researcher. The study also mentions that participation was voluntary, and confidentiality and anonymity was guaranteed. All ethical approval was sought prior to the start of this study.

Hori *et al.* (2011) set out to investigate the attitudes towards schizophrenia in the general public, psychiatric staff, physicians and psychiatrists using a web-based survey in Japan. 445 participants were included in the study, classified into four groups. These groups consisted of 197 subjects from the general public, 100 psychiatric staff, 112 physicians and 36 psychiatrists. Psychiatric staff group consisted of 83 nurses, 16 pharmacologists, and one community health worker. The participants were all members of an online research panel. The questionnaire used in thus study was based on the 13-item questionnaire of Üçok *et al.* (2006). This was first translated in Japanese by two research psychiatrists then back translated into English by another Japanese researcher. The back translated English version of the questionnaire was sent to be approved by Professor Alp Üçok, the original author. Another 5 items were added to the questionnaire after referring to prior attitudinal studies. Questionnaire included a demographic section which asked the participants their gender, age, education, occupation/qualification, location of living, income of household, experience of mental illness, experience of schizophrenia via family members or close friends, years of psychiatric education and number of books read on the subject. Data were passed on to the researchers by a major internet research panel in Japan. Data were formatted in a spreadsheet, with no information that could lead to the identity of the participants.

Findings illustrate that stigma towards those experiencing schizophrenia was most common in the general population and physicians, to some extent by the psychiatric staff and less common in psychiatrists. Conversely findings revealed that both psychiatrists and psychiatric staff wish to keep a certain distance from individuals with schizophrenia. Although no statistical significance was seen in relation to age, it was found that males were more likely to underestimate the abilities of individuals with schizophrenia than

females. All four groups had the same degree of scepticism regarding the treatment of schizophrenia. Hori *et al.* (2011) acknowledge strengths and limitations in their work. They suggest that whilst the method used may be subject to certain sampling biases such as the so-called 'digital divide', it is a convenient method to use. They add that this method is more likely to provide anonymity and giving less response bias as opposed to conventional methods of data collection. The authors suggest that since the participants had daily access to the internet, they might have a higher level of knowledge than average, which might have an effect on their attitudes. Hori *et al.* (2011) add that the relative low number of psychiatrists that participated in this study may have resulted into type II errors. They add that gender distribution was not balanced between the four groups and also that the binary-scale response format does not allow expression but rather susceptible to the floor and ceiling effect. Finally, they conclude acknowledging that the findings obtained in Japan may not be extrapolated to different countries due to the cross-cultural differences of attitudes towards mental illness.

3.11 Attitudes of midwives towards Mental Health problems and psychiatric disorders in pregnancy and the puerperium

Cantwell and Cox (2006) highlight a number of psychiatric disorders that women can exhibit during pregnancy as well as after childbirth. These range from postnatal blues, adjustment disorders, anxiety, phobic and depressive disorders. Jones, Creedy and Gamble (2012) suggest that one in every five women might experience antenatal depression and the risk increases 6-fold for developing depression postpartum. Emotional distress during pregnancy and the post-partum contribute to negative outcomes both for the mother, her family and also children (Jones *et al.,* 2012). Cantwell and Cox, (2006) add that some expecting mothers may also suffer from pre-existing psychiatric disorders. This often gives rise to specific difficulties during the delivery of care. Such pre-existing psychiatric disorders may include schizophrenia, bipolar affective disorder, substance misuse disorders as well as personality disorders. Other psychiatric disorders which might arise in the puerperium period, which is the period between childbirth and the return of the uterus to its normal size (Cantwell and Smith 2006), include puerperal psychosis and postnatal depression (PND). Mivšek, Hundley and Kiger, (2008) add that postnatal depression is the most common complication of the puerperium and suicide is the leading cause of maternal death. Midwives play a critical role in the assessment of mental health and well-being, and

have the capacity to reduce suicide risk (Lau *et al.,* 2015). Literature mainly focuses on the level of knowledge towards mental health conditions, the importance of recognition and early intervention of nurses and midwives in relation to antenatal and postnatal depression (Stewart & Henshaw, 2002; Mivšek, Hundley and Kiger, 2008; Jomeen, Glover and Davies, 2009). Jones *et al.* (2012) argue that women have shown dissatisfaction with the provision of emotional care during labour and the post-partum. The perceived lack of emotional care might be associated with negative attitudes by midwives towards the provision of care to distressed women.

A literature search revealed a dearth in research in relation to midwives' attitudes towards mental illness with limited papers discussing mental health nurses' attitudes towards perinatal mental health. Of particular relevance to this study is the cross-sectional study carried out by Lau *et al.,* (2015) investigating the attitudes of midwives and maternal child health nurses towards suicide. The Confidential Enquiry into Maternal and Child Health (2004), found that mental illness is the leading cause of maternal death not related to obstetric deaths in the United Kingdom. The study carried out by Lau *et al.,* (2015) forms part of a larger study that investigated midwives and maternal child health nurses' confidence, ability as well as the attitudes towards assessing women for perinatal depression and suicidality. The study included three aims, the one relevant to this review was to identify the attitudes of midwives and maternal child health nurses towards suicidality using the Attitudes to Suicide Prevention Scale (Herron *et al.,* 2001). The sample was recruited using convenience sampling from three maternity settings and ten maternal child health nurse services in the south-eastern area of Melbourne in Australia. All statistical analyses were carried out using SPSS version 18 and all ethical approvals were obtained prior to the start of this study. A total of 95 midwives and 86 maternal child health nurses completed the survey. Participants were also asked some demographic information including gender, age and if they had any general nursing, psychiatric, maternal child health and or midwifery training. Results showed that midwives scored higher than maternal child health nurses, indicating that midwives have an overall more negative attitude towards suicide than maternal child health nurses. Since the sample population only included one male, no gender comparisons were carried out. Results showed no statistical significances on the attitude mean score when analysed by age groups, however younger participants scored slightly lower, indicating a more positive attitude towards suicide prevention. This contradicts the findings from a critical

interpretative review carried out by Talseth and Gilje (2011), who report that older nurses have more positive attitudes towards patients with suicidal intent and ideation. The authors add that nurses with a higher level of nursing education showed more positive attitudes in relation to individuals who attempted suicide (Talseth and Gilje, 2011). No significant differences were observed between midwives with a general nursing qualification and those with only a midwifery qualification, however those participants who had previous mental health nursing experience showed significant differences when compared with the groups that had no such experience. These findings have to been viewed with caution since it was only carried out in one health service, thus generalization of findings is limited. No response rate could be calculated as respondents were given a printed copy of the survey and also sent electronically thus participants could have replied twice. Another limitation of this study is selection bias as participants self-selected to be part of this study. Those professionals that declined participation might hold different attitudes and not reported in this study. Finally, this study was carried out in Australia thus findings might not reflect the attitudes of midwives in western countries.

Mivšek, Hundley and Kiger, (2008) conducted an exploratory study of the perceptions of Slovenian midwives and nurses towards postnatal depression. The authors highlight that although a questionnaire survey would be ideal to investigate such perceptions, they first wanted to gather views of Slovenian practitioners using a qualitative approach. Focus groups were employed and consisted of two groups, one group of 5 volunteers from the maternity hospital and the another 5 volunteers from the community services. All 10 participants were female. The authors give no information pertaining to which geographical part of Slovenia this study was conducted. Although the aims of this study were to explore perceptions of Slovenian midwives and nurses towards postnatal depression, findings only report the level of knowledge, the role in treatment and the perceived problems and possible solutions to manage postnatal depression. Of particular interest is that Mivšek, Hundley and Kiger, (2008) report that continuing contact with women with PND, could establish a trusting relationship and also influence behaviour, enabling them to better express negative feelings. The authors highlight that an important recommendation for further research is the investigation of how specific variables may affect attitudes. Mivšek, Hundley and Kiger state that,

"Another important lesson learned was that opinions regarding PND may be affected by participant's' education, age, working years and experience, and these data should be gathered as an essential part of the tool." (2008, p 325)

No other studies describe the attitudes of midwives towards mental illness. Therefore, this study tries to fill in the gap in research and investigate what attitudes do midwives hold towards mental illness, as well as critically analyse the variables which might give rise to such attitudes. The results will then be compared with those of Maltese nurses and identify if these professionals share the same attitudes towards mental illness.

3.12 Conclusion

The literature discussed and other articles used for further knowledge on the subject identify the attitudes of nurses and other health care professionals in relation to mental illness. Studies mention mixed attitudes of nurses towards mental illness, indifferent to the diagnosis. A common finding in the literature is that the higher the assumption of the association of danger to the mental illness, the higher the negative attitude of staff. It is important to note the importance that all these studies give to education and knowledge about mental illness, as education and knowledge may aide to reduce stigma. This is why all major anti-stigma campaigns are based on education. Nurses play a key role in such campaigns as, apart of being in a position to educate the general public about mental health, they are in direct contact with service users, thus by showing positive regard and positive attitudes they provide reassurance and also better quality of care. Therefore, to reduce stigma it is essential that health care providers have a positive attitude towards their clients, hence the most effective way to find out about the knowledge and attitudes of nurses towards individuals with mental illness is by asking them through a research study. It would appear that no similar studies were carried out locally, throughout this span of time. The only Maltese published research found was in relation to nursing attitudes focused on patients who take overdose (Ghodse *et al.,* 1986). The lack of such studies suggested the need to investigate the attitudes of nurses and midwives towards mental illness in Malta.

Chapter 4
Research Design

4.1 Introduction

This chapter outlines the design and method used to investigate the attitudes of Maltese nurses and midwives towards mental illness. Specific aims and objectives, theoretical perspectives, sampling methods and data collection procedures will also be discussed. The research instrument, ethical considerations, issues of reliability and validity as well as methodological rigor will also be outlined in this chapter.

The literature review highlighted that negative attitudes and stigma can have severe repercussions on care (Watson *et al.,* 2007; Thornicroft, 2008; Horsfall, Cleary, and Hunt, 2010). This is further confirmed by Chambers *et al.* (2010) who add that stigmatising attitudes held by mental health professionals affects adversely both quality of care as well as recovery rates of service users. Schafer, Wood, and Williams, (2011) outline that negative attitudes have severe implications on the lives of people with a mental illness. People with a mental illness sometimes internalise the stigma themselves, giving rise to low self-esteem, reduced self-efficacy as well as reduced prospects for recovery (Watson *et al.,* 2007). It is also evident that stigmatising attitudes are not uncommon among health professionals (Sadow, Ryder and Webster, 2002; Schafer, Wood, and Williams, 2011). Such attitudes may be increased if such professionals are less optimistic about the outcomes for people with long-term mental health problems (Horsfall, Cleary, and Hunt, 2010).

Nurses' attitudes towards, and understanding of, mental illness will ultimately shape therapeutic relationships and support patients with mental illness to recover easily (Liu, Gerdtz and Liu, 2011). Studies conflict in relation to nurses' attitudes towards mental illness, as some researchers report that nurses do have a positive attitude (Chambers *et al.,* 2010; McHale and Felton, 2010; Hori *et al.,* 2011; Märtensson, Jacobsson and Engström, 2014) whilst others report that nurses were found to have negative attitudes towards mental illness (Sadow, Ryder and Webster, 2002; Schafer, Wood, and Williams, 2011). Thus, this variation might be attributed to several variables, which this study aims to explore, compare and investigate.

4.2 Operational Definitions

The variables identified in literature as having an effect on nursing and midwifery attitudes towards mental illness include both demographic (Age and Gender) and work related variables (Grade, Nursing Education, Years in Nursing Service, Work Setting, Years in Mental Health Setting, Mental Health Work Setting and Contact with Mental Health Service users).

For the purpose of this study nurses working within the mental health field include all those nurses, irrespective of their professional grade, who are employed with the Maltese Department of Health and work within any unit/service of the Maltese Mental Health services. General nurses and midwives are defined as all those nurses irrespective of professional grade, who are employed with the Maltese Department of Health, who work in all services provided by the Government of Malta including mental health services, but not registered as Registered Mental Health Nurse (RMN) with the Malta Council for Midwives and Nurses. The operational definitions of the independent variables relevant to this research are explained in table 4.1 below.

Independent Variable	Operational Definition
Grade	All the nursing and midwifery grades working within the Maltese Governmental Health Sector. The various grades and their job description have already been outlined on pages 18-20.
Nursing Education	Refers to the different educational pathways that lead to a nursing or midwifery qualification recognised by the Maltese Council for Nurses and Midwives.
Years in Nursing Service	The number of years a nurse/midwife has worked within the Maltese Health Services. This group includes newly recruited nurses up to senior nurses with over 30 years of experience.
Work Setting	All the clinical settings that are available in Malta. Each work setting reflects the different specialisations and services offered within Malta's free public health services.
Years in Mental Health Setting	The number of years that participants have worked within the Maltese Mental Health Setting.
Mental Health Work Setting	The areas within the Mental Health Services in which the participants have or are still working.
Contact with Mental Health Service Users	The frequency of which the participants encounter individuals with mental health problems. This does not require the participants to care specifically in the mental health domain but also for any other condition coupled with a mental health related illnesses.

Table 4.1. *Operational Definitions of Independent variables.*

4.3 Research Design

Several research designs were considered in order to identify the most appropriate design to investigate the attitudes of Maltese nurses and midwives towards mental illness. These included Quantitative methods, mixed methods and a Delphi method. A Delphi method was not suitable to investigate the attitudes of Maltese nurses' and midwives' towards mental illness. Such a method relies on a panel of experts to give their judgment and forecast on likelihoods on the researched subject. This method does not give an exact picture in time of the phenomena being studied, results would be limited to those from the expert panel, resulting in limitations in the generalizability of the findings. Since this study aims to investigate attitudes, a qualitative research design could be indicated. Such a design would provide in depth and rich information, which is grounded in the individual's real-life experiences. Qualitative research is indicated to gain an understanding of the underlying reasons and give insight into the setting of a problem as well as uncover prevalent trends. However, a major limitation of such a design is that results are not conclusive and findings are not generalizable due to the small number of participants which are usually non-representative of the target population (Polit and Beck, 2006). This study aimed to sample the entire nursing and midwifery population of Malta, thus using a qualitative design would have proven impossible to carry out due to the large numbers of potential participants. A mixed-method design was also not suitable. Polit and Beck (2006), describe that in a mixed-method design both qualitative and quantitative data are integrated within the study, however the aim of this study was to investigate the attitudes of Maltese nurses and midwives working within state hospitals and facilities, and the variables that may contribute to such attitudes, rather than why such attitudes are so. Therefore, a quantitative research design was chosen in order to fulfil the aim and objectives set for the study. Generalisability of results was essential, as this study aimed to provide the first local data of what the Maltese nursing and midwifery attitudes to mental illness are. Generalisability of results would allow for comparison of results with international data. Having a high number of participants ensured generalisability, as the higher the recruitment rate, the more representative to the target population the sample will be. Since this study wanted to compare independent variables a quantitative design is most appropriate. Such a design is indicative in measuring the incidence of various views and opinions in the chosen population. In quantitative research, findings are conclusive and

also usually descriptive in nature (Polit and Beck, 2006), thus ideal to investigate the attitudes of nurses and midwives. A cross sectional survey design was utilised to conduct the research as cross sectional surveys are used to gather information on a population at a single point in time. Surveys obtain information regarding the prevalence, distribution, and interrelationships of variables within a population (Polit and Beck, 2006). Polit and Beck (2006) add that, surveys collect information on people's actions, knowledge, intentions, opinions, and attitudes. A survey approach is indicated for this study, as it wants to explore attitudes focusing on the situation with no attempt to manipulate variables (Cormack, 2000).

Survey data are based on self-reports. Self-reports require the respondents to answer questions posed by the researchers. Survey data can be collected in a number of ways including, telephone interviews, personal interviews and by distributing questionnaires. The latter is the most appropriate for this study as personal interviews would be impractical and time consuming when conducting research with large sample sizes. With personal interviews participants might not feel at ease, thus a self-report type questionnaire approach is more indicated in order to obtain intimate information such as attitudes towards mental health within the nursing and midwifery profession.

4.4 Research tool

It is important to have a valid and reliable research tool in order to provide robust evidence to enhance the understanding of the nurses' attitudes towards mental illness, so that, the skills can be developed to improve patient care and well-being (Morris *et al.,* 2012). The authors add that, without a scale that is truly valid for the investigation of nursing specific attitudes, it is difficult to get an accurate reflection of the nature and extent of this particular group of professionals' attitudes towards individuals with mental illness both in the community and inpatient settings.

In order to be able to identify a tool which would best fit in investigating the Maltese nurses' and midwives' attitudes to mental illness, a set of criteria had to be satisfied. These include that the tool:

- Had to be in the English Language. The chosen tool had to be read and understood by the participants. English is Malta's main language together with Maltese, thus a tool in English is understood by Maltese as well as foreign nurses/midwives that participated in the study. Having a tool in English would also avoid content validity issues if the tool had to be translated.

- Needed to have been previously validated. Having a previously validated tool gives more strength to the study as the questionnaire used has already undergone testing to identify if it measures what it was constructed for. Also the data obtained can be used to compare the effectiveness and validity of the tool.

- Needed to include a community focus. This study samples all the areas of nursing and midwifery, not just limited to inpatient care but includes also primary health clinics and community services, thus, it is imperative to utilise a tool which includes aspects of community care.

- Must have been used with some level of consistency to allow for possible comparisons of findings.

- Had to be used to investigate attitudes of nurses, in order to fulfil the aim and objectives of the study as well as lend itself to compare and replicate the findings

- Been previously used in European countries to allow for the comparison of nursing and midwifery attitudes towards mental illness within a similar cultural ideology.

4.4.1 Identifying the tool to best fit the study

An analysis of the various tools used in previous work, was undertaken to determine which was of relevance in researching the attitudes of Maltese nurses and midwives towards mental illness.

Morris *et al.* (2012) acknowledges the difficulties when identifying a valid tool for the investigation of nurses' attitudes towards mental illness. No reference in literature was found regarding specific tools that investigate attitudes of midwives towards mental illness. The study retrieved from literature exploring the attitudes towards severe perinatal mental illness (McConachie and Whitford, 2009) was based on a sample of mental health

nurses rather than midwives. This study used focus groups rather than a validated tool. In the only cross sectional study investigating attitudes of midwives towards suicide (Lau *et al.,* 2015), the Attitudes to Suicide Prevention (ASP) (Herron *et al.,* 2001) was used. The ASP scale is a 14 item questionnaire aimed to assess the attitudes towards suicide prevention, thus not indicative for this study.

Other various research tools which have been identified in the literature include the Attitudes to Mental Illness Questionnaire (AMIQ) by Luty *et al.* (2006), Substance Abuse Attitude Survey (SAAS) by Chappel, Veach and Krug (1985), the Attitudes towards Acute Mental Health (ATAMH-33) by Baker, Richards and Campbell, (2005) and the several modified versions of the Community Attitudes towards the Mentally Ill (CAMI) scale (Taylor and Dear, 1979; Wolff *et al.,* 1996a; Högberg *et al.,* 2008; Barney, Corser and White, 2010). Each of these research tools are discussed in more detail below. Of note is that none of the above research tools has been validated using a midwifery sample.

4.4.1.1 The Attitudes to Mental Illness Questionnaire (AMIQ)

The Attitudes to mental illness questionnaire (Luty *et al.,* 2006) is a 5 item, self-completion questionnaire adapted from the work of Cunningham, Sobell and Chow, (1993). The authors suggest that this tool has good psychometric properties that can be used in most situations. When validating the tool, 1079 participants completed the questionnaires. Factor analysis using principal component analysis with varimax rotation revealed that one component accounted for 80.2% of the variance that involved significant contributions from all five questions. Luty *et al.* (2006) add that this factor might be best described as 'stigmatisation'. Although three questions were based on other people's expectations of a patient's future and the other two questions assessed social distance, these factors could not be identified separately on factor analysis. The authors conclude that the results indicate excellent construct validity. Follow-up questionnaires were then sent to a sample of respondents. Pearson's correlation coefficient was 0.702 (n=256), indicating reasonable test-retest validity. The AMIQ (Luty *et al.,* 2006) asks respondents to read a short vignette describing a particular scenario, then answer five questions. The individual questions are scored on a 5-point Likert scale (maximum +2, minimum -2) with blank questions, 'neutral' and 'don't know' being scored 0. The scores for the five questions are added giving a total score for each vignette between +10 and -10. The AMIQ

scale outlines 7 different vignette scenarios. This tool was validated on a sample of the UK general public and to date has not been used to investigate attitudes of nurses or midwives towards mental illness. This violates the inclusion criteria making this tool not fit for this study.

4.4.1.2 The Substance Abuse Attitude Survey

The Substance Abuse Attitude Survey (SAAS) developed by Chappel, Veach and Krug (1985), is a 50-item scale that measures health professional's attitudes towards substance abuse. Each of the 50 items are scored on a 5 point Likert scale, from strongly agree to strongly disagree. The SAAS scale measures five attitude groups including, treatment intervention, treatment optimism, permissiveness, non-moralistic and non-stereotyping. Scores of 50 and above illustrate an optimal attitude to work within the specialised area of substance misuse. This measure was not indicated for this study as it has a specific substance misuse focus rather than a general view of mental illness. Also it did not include any community focus, thus not meeting the required criteria.

4.4.1.3 The Attitudes towards Acute Mental Health (ATAMH)

Baker, Richards and Campbell (2005) set out to develop, pilot and validate a tool to measure attitudes for use with nursing staff working in acute mental health care units. The measure included two types of question responses, that is, Likert scales and semantic differentials. Likert scale responses were coded from 1 to 7, and the scoring was reversed for negatively worded statements. A neutral mid-point was included to serve as a response for *neutral* and *do not know* replies. This natural mid-point reduced the chance of random error as it allowed respondents to express a *neutral* or *do not know* reply rather than not responding or responding on another response on the Likert scale. This also increasing reliability. For the semantic differentials, a unipolar scale ranging from 0-10 was used. The resulting questionnaire had 64 attitudinal questions comprising of 48 Likert scales and 16 semantic differentials. Following testing of the questionnaire, it was found that the distribution of the total score for the 64-question measure appeared to be normal with a mean of 314.1, Standard deviation of 26.2, of a total score of 496. Cronbach's alpha was 0.81. The overall Kaoser-Meyer-Olkin (KMO) measure of sample adequacy was 0.47, suggesting that this measure is unsuitable for factor analysis. Thus questions with

individual measures of sampling adequacy <0.6 were excluded chronologically, lowest first. This excluded 27 questions from the 64 item measure. The resulting overall KMO value increased to 0.73 from 0.47. Principal component analysis (PCA) with varimax rotation was applied first to the remaining 37 questions to identify the number of component factors. The first 11 component factors had eigenvalues of >1, accounting for 62% of the variance. Analysis of the questions within the components and examination of the scree plot, identified a five factor solution, accounting for 42% of the variance. Maximum likelihood extraction with varimax rotation with PAF with promax variation solution were also investigated, giving broadly similar solutions. Four questions with loadings of 0.32 were excluded from the final solution. This resulted in a 33 item scale, namely the Attitudes towards Acute Mental Health (ATAMH-33) distributed in five factors. This five factor solution accounted for 41 percent of the variance. The distribution of % variance for each factor is outlined in Table 4.2 below:

Factor	% Variance
1. Care or Control	% variance = 17.1% (after rotation)
2. Semantic differentials	% variance = 7.9%
3. Therapeutic perspective	% variance = 6.6%
4. Hard to help	% variance = 5.0%
5. Positive attitudes	% variance = 4.4%

Table 4.2. *Distribution of % variance for the ATAMH-33 scale*

The resulting scale, the ATAMH is a 33-item self-report attitude scale, combining 25 Likert response and eight semantic differentials. This scale has achieved good internal reliability with a Cronbach's alpha of 0.72. This scale has been used by several authors in several parts of the world including UK (Munro and Baker 2007), Palestine (Ahmead, Rahhal and Baker*, 2010*), Fiji (Foster *et al.,* 2008) and Jordan (Hamdan-Mansour & Wardam, 2009).

Authors	Date	Country	Sample Size	Methodology
Munro and Baker	2007	UK	140/251	Survey
Foster et al.,	2008	Fiji	71/72	Quantitative
Hamdan-Mansour & Wardam	2009	Jordan	92/105	Descriptive correlational
Ahmead et al.,	2010	Palestine	78/95	Survey

Table 4.3. *Studies using the ATAMH-33 scale*

Although used to measure nursing attitudes to mental illness in several countries including UK, Australia, Ireland, Canada, Holland and Fiji, it lacks a community focus as it is aimed to investigates the attitudes of nurses in an acute care setting.

4.4.2 The Research Instrument

The Community Attitudes towards the Mentally Ill (CAMI) is a 40-item questionnaire originally developed by Taylor *et al.* (1979). The authors developed this tool to measure the attitudes of the general population in Canada towards community mental health facilities. The CAMI tool is divided into four separate scales designed to measure attitudes towards the mentally ill. These four scales represent specific dimensions, that is, authoritarianism, benevolence, social restrictiveness, and community mental health ideology. Authoritarianism refers to a view of the mentally ill person as someone inferior who requires coercive handling. Benevolence corresponds to a paternalistic and sympathetic view of the mentally ill patient. Social restrictiveness refers to the belief that the mentally ill patients are a threat to society and should be avoided. Finally, Community mental health ideology concerns the acceptance of mental health services and mentally ill patients in the community. The 4 factor approach of the Taylor and Dear (1981) scale address the following themes:

	Factor 1 Authoritarianism	Factor 2 Benevolence	Factor 3 Social Restrictiveness	Factor 4 Community Mental Health Ideology
Themes	The need to hospitalize the mentally ill The difference between the mentally ill and normal people The importance of custodial care The cause of mental illness	The responsibility of society for the mentally ill The need for sympathetic, kindly attitudes Willingness to become personally involved Anti-custodial feelings	The dangerousness of the mentally ill Maintaining social distance Lack of responsibility The normality of the mentally ill	The therapeutic value of the community The impact of mental health facilities on residential neighbourhoods The danger to local residents posed by the mentally ill Acceptance of the principle of deinstitutionalized care

Table 4.4. *Themes addressed in the CAMI (Taylor and Dear, 1981) scale.*

The CAMI questionnaire is in parts a modification of two other questionnaires, namely, The Opinion about Mental Illness questionnaire (Cohen and Struening, 1962) and The Community Mental Health Ideology questionnaire (Baker and Schulberg, 1967). The 40 statements grouped according to their respective subgroups are represented in the following table.

Authoritarianism	Factor 1	Factor 2	Factor 3	Factor 4
One of the main causes of mental illness is a lack of self-discipline and will power	.51	-.2	-.24	.00
The best way to handle the mentally ill is to keep them behind locked doors	.48	-.18	-.26	.09
There is something about the mentally ill that makes it easy to tell them from normal people	.52	-.07	-.09	.12
As soon as a person shows signs of mental disturbance, he should be hospitalized	.55	-.06	.05	.24
Mental patients need the same kind of control and discipline as a young child	.51	-.13	-.05	.16
Mental illness is an illness like any other	.08	-0.10	-.22	.18
The mentally ill should not be treated as outcasts of society	.21	-.25	-.34	.22
Less emphasis should be placed on protecting the public from the mentally ill	.12	-.19	-.12	.34
Mental hospitals are an outdated means of treating the mentally ill	.03	-.05	-0.1	.47
Virtually anyone can become mentally ill	.19	-.11	-.33	.25

Benevolence	Factor 1	Factor 2	Factor 3	Factor 4
The mentally ill have for too long been the subject of ridicule	-.18	-.12	-.39	-.35
More tax money should be spent on the care and treatment of the mentally ill	.00	.21	.54	-.08
We need to adopt a far more tolerant attitude toward the mentally ill in our society	-.13	.21	-.51	.30
Our mental hospitals seem more like prisons than like places where the mentally ill can be cared for	-.08	.06	.10	-.43
We have a responsibility to provide the best possible care for the mentally ill	-.07	.12	.60	-.20
The mentally ill don't deserve our sympathy	-.25	.08	.41	.02
The mentally ill are a burden on society	-.41	.21	.25	.02
Increased spending on mental health services is a waste of tax dollars	-.28	.22	.51	.04
There are sufficient existing services for the mentally ill	-.32	.19	.34	-.13
It is best to avoid anyone who has mental problems	-.51	-.14	-.23	.16

Social restrictiveness	Factor 1	Factor 2	Factor 3	Factor 4
The mentally ill should not be given any responsibility	.51	-.14	-.23	.16
The mentally ill should be isolated from the rest of the community	.55	-.32	-.10	.21
A woman would be foolish to marry a man who has suffered from mental illness, even though he seems fully recovered	.52	-.24	-.11	.06
I would not want to live next door to someone who has been mentally ill	.54	-.46	-.16	.15
Anyone with a history of mental problems should be excluded from taking public office	.48	-.20	-.12	.17
The mentally ill should not be denied their individual rights	.23	-.15	-.22	.26
Mental patients should be encouraged to assume the responsibilities of normal life	.12	-.13	-.34	.30
No one has the right to exclude the mentally ill from their neighborhood	.15	-.39	-.23	.20
The mentally ill are far less of a danger than most people suppose	.26	-.22	-.14	.44
Most women who were once patients in a mental hospital can be trusted as babysitters	.34	-.20	-.04	.28

Community mental health ideology	Factor 1	Factor 2	Factor 3	Factor 4
Residents should accept the location of mental health facilities in their neighborhood to serve the needs of the local community	-.09	.65	.29	-.16
The best therapy for many mental patients is to be part of a normal community	-.21	.37	.23	-.30
As far as possible, mental health services should be provided through community based facilities	-.06	.33	.20	-.35
Locating mental health services in residential neighborhoods does not endanger local residents	-.21	.58	.16	-.29
Residents have nothing to fear from people coming into their neighborhood to obtain mental health services	-.20	.55	.17	-.23
Mental health facilities should be kept ot of residential neighborhoods	-.38	.67	.22	-.10
Local residents have good reason to resist the location of mental health services in their neighborhood	-.39	.59	.21	-.14
Having mental patients living within residential neighborhoods might be good therapy but the risks to residents are too great	-.52	.45	.12	-.15
It is frightening to think of people with mental problems living in residential neighborhoods	-.56	.44	.15	-.12
Locating mental health facilities in a residential area downgrades the neighborhood	-.37	.56	.22	-.06

Table 4.5. *Statements of the CAMI (Taylor and Dear, 1981) scale*

Each of the four dimensions in the CAMI scale is measured by 10 statements of which an equal number are worded positively and negatively. A Likert-type scale measures attitudes on a scale of five points, from "strongly agree" (1) to "strongly disagree" (5). Taylor and Dear (1981) tested the validity and reliability of the revised scales using the full Toronto data set (n=1090). The Toronto data set includes 1090 participants and is the original data set obtained when in 1979, Taylor and Dear developed the Community Attitudes towards the Mentally Ill (CAMI) scale in Toronto, Canada. They reported the alpha coefficient for each of the four scales, as follows:

Factor	Alpha Coefficients (α)
1. Authoritarianism	α = 0.68
2. Benevolence	α = 0.76
3. Social Restrictiveness	α = 0.80
4. Community mental health ideology	α = 0.88

Table 4.6. *Distribution of alpha coefficient for the CAMI (Taylor & Dear, 1981) scale*

The construct validity of the scales was assessed by testing their empirical reproducibility using factor analysis. Taylor and Dear's (1981) results showed a four factor orthogonal solution accounted for 42 percent of the variance.

The CAMI scale has been used by several authors to investigate the attitudes of health professionals towards mental illness. These include works carried out by Sevigny *et al.* (1999), Kingdon, Sharma and Hart (2004), Lauber *et al.* (2004) as well as Chambers *et al.* (2010). Other authors made use of modified versions of the questionnaire. These include, Dulac, Corin and Murphy (1988), Tefft, Segall and Trute (1988), Brockington *et al.* (1993), Cote, Ouellet and Caron (1993), Wolff *et al.,* (1996a), Högberg *et al.* (2008), and Barney, Corser and White (2010).

Table 4.7 below illustrates the sample size and methodology used in the studies using versions of the CAMI Scale.

Authors	Date	Country	Sample Size	Methodology
Taylor and Dear	1981	Canada	1090	Quantitative
Wolff *et al.,*	1996	UK	215	Quantitative
Sevigny *et al.,*	1999	China	100	Quantitative
Högberg *et al.,*	2008	Sweden	256/421	Quantitative
Lauber *et al.,*	2004	Switzerland	876	Quantitative
Kingdon *et al.,*	2004	UK	2813/6524	Quantitative
Barney *et al.,*	2010	USA	54/72	Quantitative
Chambers *et al.,*	2010	5 European Countries	813/1095	Quantitative

Table 4.7. *Studies using the CAMI scale*

Of note is that all the above studies spreading over three decades, employed a quantitative design, namely surveys. All these studies, apart from the one conducted by Barney, Corser and White, (2010) recruited a high number of participants. This further strengthens the decision of using a survey design to investigate the attitudes of Maltese nurses and midwives towards mental illness.

Wolff *et al.* (1996a) administered the CAMI scale (Taylor & Dear 1981) to assess the community attitudes to mental illness in UK. After conducting factor analysis and a scree plot, it was concluded that data could be adequately represented by extraction of three factors instead of four as in the original CAMI scale. The three factors extracted accounted for 37.3% of the total variance. The distribution of % variance for each subscale is outlined below:

Subscale	% Variance
1. Fear and Exclusion	% variance = 29.3%
2. Social Control	% variance = 4.8%
3. Goodwill	% variance = 3.3%

Table 4.8. Distribution of % variance for the CAMI (Wolff et al., 1996a) scale

Högberg *et al.* (2008) used the CAMI-S scale to investigate the attitudes towards mental illness in Sweden. The CAMI-S scale originates from Taylor and Dear (1981) CAMI scale, but since this was translated from English to Swedish, the authors refer to their scale as the CAMI-S. Högberg *et al.* (2008) used a 6-point Likert-type scale with anchors 'totally disagree' and 'totally agree' as opposed to a 5-point Likert scale of the original CAMI scale (Taylor and Dear, 1981) and Wolff *et al.* (1996a). Following statistical analysis, Högberg *et al.* (2008) concluded that 20 statements from the original 40, showed weak loading (less than 0.43), thus were excluded. Following this, a factor analysis was carried out on the remaining 20 items, which showed moderate to high loadings (0.43 – 0.64). The authors add that the factor analysis revealed that the data could be adequately represented by extraction of three factors. Högberg *et al.* (2008) identified and labelled these three themes as, Open-minded and pro-integration, fear and avoidance, and community mental health ideology. The first factor, Open-minded and pro-integration consisted of 9 statements, whilst the second factor, fear and avoidance consisted of 6 statements and third factor, community mental health ideology consisted of 5 statements. The Cronbach's alpha distribution of these three factors is outlined in the table below:

Factor	Cronbach's Alpha Coefficients
1. Open-minded and Pro-integration	α = 0.84
2. Fear and Avoidance	α = 0.77
3. Community Mental Health Ideology	α = 0.71

Table 4.9. *Distribution of alpha coefficient for the CAMI-S (Hogberg et al., 2008) scale*

Barney, Corser and White, (2010), suggest another solution similar to that proposed by Wolff *et al.* (1996a). The authors reversed scored selected items from the original 40-item CAMI scale (Taylor and Dear, 1981), so that higher scores reflected more negative attitudes towards those with mental illness. Barney, Corser and White, (2010) computed a score reflecting respondents' generalised negative attitudes towards those with mental illness. Cronbach's Alpha coefficient for revised 40-item scale was 0.90 with all items having an item-total correlation coefficient ranging from 0.04 to 0.66. The Cronbach's Alpha-If-Item-Deleted figures showed that each item contributed to the overall reliability of the scale.

Following factor analysis and scree plot, both Högberg *et al.* (2008) and Barney *et al.* (2010) concluded that data could be adequately represented by extraction of three factors instead of four as in the original CAMI scale. This also agrees with the work carried out by Wolff *et al.* (1996a). Barney, Corser and White (2010) report that the three factors accounted for 40% of the total scale variance, as opposed to Wolff *et al.* (1996a) 37.3% and 42% of the Original CAMI scale by Taylor and Dear (1981). Subscale 1, Fear and Exclusion consisted of 14 statements; Subscale 2, Lack of Good Will, consisted of 13 statements whilst Subscale 3, Social Control and Isolation consisted of 13 statements. The distribution of % variance for each factor is outlined below:

Subscale	% Variance
1. Fear and Exclusion	% variance = 22.6%
2. Lack of Good Will	% variance = 9.2%
3. Social Control and Isolation	% variance = 6.2%

Table 4.10. *Distribution of % variance for the CAMI (Barney, Corser and White, 2010) scale*

Each subscale had good internal consistency with Coefficient Alpha reliabilities of 0.87 for Subscale 1, 0.82 for Subscale 2 and 0.79 for Subscale 3.

The tools that satisfy the criteria outlined on pages 64-65, include the Attitudes towards Acute Mental Health (ATAMH) and several versions of the Community towards the

Mentally Ill (CAMI) scale. Of note is that the CAMI scale has been used in 8 different European countries, namely UK, Switzerland, Sweden, Italy, Finland, Portugal, Ireland and Lithuania as opposed to the ATAMH scale (Baker, Richards and Campbell, 2005) which has only been used in 1 country in Europe, namely UK. Having a tool which has been widely used in Europe would make it ideal when investigating attitudes in a European country to allow for comparison of findings.

Both the ATAMH and the CAMI scales achieved good internal reliability with score Cronbach's alpha of 0.72 for the ATAMH as opposed to a higher 0.90 for the modified CAMI by Barney, Corser and White (2010).

The ATAMH has not been used in a community setting and its primary aim is to investigate the attitudes in an acute care setting. This said, the CAMI tool has been designed to investigate the attitudes towards people living in the community, but, this tool has been used by many authors (Sevingy *et al.,* 1999; Lauber *et al.,* 2004; Chambers *et al.,* 2010) to investigate the attitudes of nurses in both inpatient and outpatient settings.

Considering that this study surveys the entire Maltese nursing and midwifery population, accounting for 2000 nurses working in different settings, including Medical, Surgical, Oncology, Paediatrics, Geriatrics, Orthopaedics, Psychiatry, Accident and Emergency, Community and Health Clinics, a tool, which has been used on a large sample should be used. The CAMI scale has been used to sample larger populations as opposed to the ATAMH scale, thus, the CAMI would be a preferred tool for this study.

Various CAMI tools have been identified in literature, including the original Taylor and Dear (1981) version, the CAMI scale by Wolff *et al.* (1996a), the scale by Högberg *et al.* (2008) and also the Barney, Corser and White (2010) modified version of the original CAMI scale by Taylor and Dear (1981) tool. Morris *et al.* (2012) carried out confirmatory factor analysis on various CAMI scales to identify which would be most suitable for investigating attitudes of European nurses using the data from the study carried out by Chambers *et al.* (2010). Morris *et al.* (2012) report that the Original CAMI scale by Taylor and Dear (1981) had low factor loadings below the recommended 0.5 cut off point. After removing poor factor loaded variables, this tool although improved, still produced an unacceptable fit. Morris *et al.* (2012) add that the Högberg *et al.* (2008) modified version

of the CAMI, that is, the CAMI-S, was found to be unidentified and indicating a poor model fit to the data.

Morris *et al,* (2012) also support the findings of previous authors (Wolff *et al.,* 1996a; Högberg *et al.,* 2008) that the original factor solution proposed by Taylor and Dear (1981) was deemed not to possess adequate construct validity, and a three factor solution would be more valid. The Barney, Corser and White (2010) modified version of the CAMI was used once on a sample of just 74 students following a psychology course in USA. This tool although derived from the original CAMI scale has never been validated on a nursing sample. No confirmatory factor analysis has been carried out on Barney, Corser and White (2011) CAMI modified version as opposed to the Wolff *et al.* (1996a) tool. Considering that the Barney, Corser and White (2011) version has been used on a relatively low sample population, never been used on a nursing sample and not in a European context, makes the Wolff *et al.* (1996a) version of the CAMI the most suitable tool for investigating the attitudes of Maltese nurses and midwives towards mental illness.

The Community Attitudes towards the Mentally Ill questionnaire (Wolff *et al.,* 1996a) (Appendix 1) was used as the data collection tool. Permission to use the tool was granted by Dr Geoffrey Wolff (Appendix 2). The Wolff *et al.* (1996a) CAMI scale is a 20-item questionnaire adapted from the original Community Attitudes towards the Mentally Ill developed by Taylor and Dear (1979). The decision to use this tool was made after careful review of available tools mentioned in literature and previously described.

After carrying out factor analysis and a scree plot on the Original CAMI scale (Taylor and Dear, 1981), Wolff *et al.* (1996a) suggested that data could be adequately represented by extractions of three subscales. These subscales accounted for 37.3% of the total variance. The distribution of % variance for each subscale is outlined in table 4.8 above.

When comparing the statements in the Wolff *et al.* (1996a) scale to the original Taylor and Dear (1981) scale, it can be noted that, Subscale 1, Fear and exclusion consists of 8 statements from the Community Mental health ideology factor and 3 statements from the Social restrictiveness factor (highlighted in red on page 70). Subscale 2, Social Control includes 5 statements from the Authoritarianism factor and 1 statement from the Social restrictiveness factor (highlighted in yellow on page 70). Subscale 3 of the Wolff et al.

(1996a) scale, described by the authors as Goodwill, involves 3 statements from the Benevolence factor of the original Taylor and Dear (1981) CAMI scale (highlighted in blue also on page 70).

Factor 1. Fear and Exclusion	Loading
Locating mental health services in residential neighbourhoods does not endanger local residents	0.75
Local residents have a good reason to resist the location of mental health services in their neighbourhood	-0.72
It is frightening to think of people with mental problems living in residential neighbourhoods	-0.70
Residents have nothing to fear from people coming into their neighbourhood to obtain mental health services	0.69
Having mental patients living within residential neighbourhoods might be good therapy, but the risks to residents are too great.	-0.66
Locating mental health facilities in a residential area downgrades the neighbourhood	-0.64
I would not want to live next door to someone who has been mentally ill	-0.58
Mental health facilities should be kept out of residential neighbourhoods	-0.58
Residents should accept the location of mental health facilities in their neighbourhood to serve the needs of the local community	0.54
No-one has the right to exclude the mentally ill from their neighbourhood	0.54
The mentally ill should be isolated from the rest of the community	-0.52
Factor 2. Social Control	
Mental patients need the same kind of control and discipline as a young child	0.65
One of the main causes of mental illness is a lack of self-discipline and will power	0.64
As soon as a person shows signs of mental disturbance, he or she should be hospitalized	0.61
Anyone with a history of mental problems should be excluded from taking public office	0.59
There is something about the mentally ill that makes it easy to tell them from normal people	0.52
The best way to handle the mentally ill is to keep them behind locked doors	0.50
Factor 3. Goodwill	
We have a responsibility to provide the best possible care for the mentally ill	0.53
We need to adopt a far more tolerant attitude to someone who has been mentally ill on our society	0.53
The mentally ill do not deserve our sympathy	-0.50

* The Fear and Exclusion subscale has an inverse scale

***Table 4.11.** Subgroups, statements and their loadings for Wolff et al., (1996a) scale*

Although Community mental health ideology is not a subscale in the Wolff *et al.,* (1996a) scale, the statements from this factor in the Taylor and Dear (1981) scale, are the major components of Subscale 1, Fear and Exclusion in the Wolff *et al.* (1996a) scale. Therefore, it can be argued that the Wolff *et al.* (1996a) scale does have a community focus as the statements which formulated the Community mental health ideology in the original CAMI scale are integrated in Subscale 1 of the Wolff *et al.* (1996a) scale. The Wolff *et al.* (1996a) scale, addresses the original CAMI themes as follows:

	Subscale 1 Fear and Exclusion	Subscale 2 Social Control	Subscale 3 Goodwill
Themes	The dangerousness of the mentally ill Maintaining social distance The therapeutic value of the community The impact of mental health facilities on residential neighbourhoods The danger to local residents posed by the mentally ill Acceptance of the principle of deinstitutionalized care The normality of the mentally ill	The need to hospitalize the mentally ill The difference between the mentally ill and normal people The importance of custodial care The cause of mental illness	The responsibility of society for the mentally ill The need for sympathetic, kindly attitudes Willingness to become personally involved Anti-custodial feelings Lack of responsibility

Table 4.12. *Themes addressed in the CAMI (Wolff et al., 1996) scale*

As previously outlined the CAMI scale has been used by several authors (Dulac, Corin and Murphy, 1988; Tefft, Segall and Trute, 1988; Sevigny *et al.*, 1999; Kingdon, Sharma and Hart, 2004; Lauber *et al.,* 2004; Chambers *et al.,* 2010) whilst other made use of modified versions of the questionnaire (Brockington *et al.,* 1993; Cote, Quellet and Caron, 1993; Wolff *et al.*, 1996a; Högberg *et al.,* 2008; Barney, Corser and White, 2010).

Several scales have been used in previous literature in an attempt to investigate attitudes of people, including health care professionals towards mental illness. Morris *et al.* (2012) describe that it is difficult to identify a valid tool for the investigation of nurses' attitudes towards mental illness. Literature has suggested two valid tools which can be used in investigating nurses' attitudes, that is, the Attitudes towards acute mental health scale (ATAMH-33) by Baker, Richards and Campbell (2005) and the Community Attitudes towards the Mentally Ill (Taylor and Dear, 1981). Several authors have made use of the CAMI scale and also suggested modifications to it. These include Wolff *et al.* (1996a). The 20-item scale CAMI version proposed by Wolff *et al.* (1996a) has been previously validated on a nursing population. It addresses the same themes as the 40-item CAMI scale by Taylor and Dear (1981), which has been used widely to investigate the attitudes of both health professionals and non-professionals toward mental illness alike. The Wolff *et al.* (1996a) scale consists of half the number of questions of the Taylor and Dear (1981) scale, shortening the time required to complete the questionnaire. This could potentially increase the likelihood of individuals completing the questionnaire, as they do not deem the scale lengthy.

Morris *et al.* (2012), in their study on the validity of the CAMI (Taylor and Dear, 1981) scale as an investigative tool to measure European nurses' attitudes towards mentally ill state that,

> *"The fact that multiple studies have arrived at multiple modifications of the CAMI scale raises questions around the validity of the original tool. As the CAMI scale was originally developed for use with people residing in the community in Canada, cultural and environmental sensitivities may have influenced our results." (2012, p. 468)*

Morris *et al.* (2012) add that,

> *"... the Wolff et al. (1996) version of the tool appears to be a more appropriate version of the CAMI scale for use in the investigation of these groups attitudes towards mental illness, including people with a mental illness." (2012, p. 468)*

This has prompted to research to use this scale to investigate the Maltese attitudes of nurses and midwives towards mental illness. This study adds to the existing data pertaining to the validation of the Wolff *et al.* (1996a) scale. In order to validate the CAMI tool, the statistical testing performed by Wolff *et al.* (1996a) was reproduced using the Maltese data set.

The Wolff *et al.* (1996a) CAMI has a high % variance, offers good internal validity and reliability, as well as, satisfies all the required criteria, making it the most appropriate scale to investigate the attitudes of Maltese nurses and midwives towards mental illness.

4.5 Access and Sampling

For the purpose of this study, the target population includes all registered nurses and midwives working within state owned hospitals and facilities. Every registered nurse and every registered midwife were asked to participate.

Polit and Beck (2006) suggest that sample size is a major issue in conducting and evaluating quantitative research. No simple equation exists to determine how large a

sample is needed, but quantitative researchers are generally advised to use the largest sample possible. Having the largest sample possible would reduce the variance of statistical estimates. Since the purpose of quantitative data is to estimate a population value, the larger the sample, the smaller the sampling error. Therefore, this study attempted to recruit every qualified nurse and midwife registered with the Malta Council for Midwives and Nurses and employed by the Maltese Department of Health. A letter asking if nurses/midwives wished to participate in this study accompanied the questionnaires distributed by the Nursing/Midwifery Officers. A total of 2000 nurses/midwifes were eligible to participate. Although sampling the entire target population reduces sampling bias, this cannot be eliminated, as individuals who decline to participate in the study will introduce non-response bias. The final sample was derived from the total number of respondents willing to participate.

In order to participate, nurses and midwives had to fulfil the inclusion/exclusion criteria.

Inclusion criteria:

- Nurses registered with The Malta Council for Midwives and Nurses.
- Nurses employed by the Maltese Department of Health.
- Midwives registered with The Malta Council for Midwives and Nurses.
- Midwives employed by the Maltese Department of Health.

Exclusion criteria:

- Members of staff not qualified as nurses.
- Members of staff not qualified as midwives.
- Nurses not registered with the Malta Council for Midwives and Nurses.
- Nurses not working within the Maltese Department of Health.
- Midwives not registered with the Malta Council for Midwives and Nurses.
- Midwives not working within the Maltese Department of Health.

4.6 Research Site

The research was conducted in all state-owned hospitals, departments, units and clinics employing nurses and midwives on the Maltese Islands. These are distributed as follows:

4.6.1 General Hospital in Malta

The general hospital is a state owned acute teaching hospital offering a full range of services. Is Malta's largest and main hospital and provides an extensive range of specialist service. It offers both in patient and outpatients facilities. The wards housed within the general hospital and sampled in this study are outlined below:

Inpatients Facilities			
Medical Ward 1	Cardiac Surgical Ward	Fairyland	Paediatric Day Care
Medical Ward 2	Cardiac Medical Ward	Wonderland	Infectious Disease Unit
Medical Ward 3	Obstetrics Ward 1	Disneyland	Medical Investigation Unit
Medical Ward 4	Obstetrics Ward 2	Rainbow Ward	Coronary Care Unit
Medical Ward 5	Obstetrics Ward 3	Urology Ward 1	Cardiac Intensive Care Unit
Medical Ward 6	Gynaecology Ward	Urology Ward 2	Neuro medical Ward
Surgical Ward 1	Orthopaedics Ward 1	ENT Ward	Central Delivery Suite
Surgical Ward 2	Orthopaedics Ward 2	ITU	Ophthalmology Ward
Surgical Ward 3	Orthopaedics Ward 3	Day Ward	Neuro Surgical Ward
Surgical Ward 4	Emergency Admission 1	POAC	Neonatal and Paediatric ITU
Surgical Ward 5	Emergency Admission 2	Dental Surgery	Burns and Plastic Surgery Unit
Discharge Unit	Accident and Emergency	Renal Unit	Operating Theaters
Outpatients Facilities			
Breast Care	Medical Outpatients 1	Cardiac Lab	Antinatal and Gynaecology
ENT outpatients	Medical Outpatients 2	Opthalmology	Breast Feeding walk in clinic
Parent craft	Medical Outpatients 3	Orthopaedics	Diabetes and Endocrine Unit
Genitourinary	Paediatrics Outpatients	Surgical	Pain management services
Pulmonary Function Lab			

***Table 4.13.** Sampled wards within the general hospital in Malta.*

4.6.2 Psychiatric Hospital

This state owned psychiatric hospital provides both inpatient and outpatient mental health services. It is the only psychiatric hospital in the country providing acute, long term, rehabilitative and community care as well as Malta's only forensic facility. The Psychiatric hospital includes the following wards:

Male Ward 1	Male Ward 2	Male Ward 3A	Male Ward 3B
Male Ward 7	Male Ward 8	Dual Diagnosis Unit	Secure Unit
Mixed Admission Ward	Female Ward 1	Female Ward 2	Female Ward 3A
Female Ward 3B	Female Ward 7	Female Ward 8	Half Way House
Young People Unit 1	Juvenile Ward	Community Services	Child guidance Unit
Young People Unit 2	LTDU Unit	Psychiatric Unit	Forensic Unit
Psychiatric Outpatients			

Table 4.14. Sampled wards within the psychiatric hospital.

4.6.3 Primary Health Centres/Clinics

The Primary Health Centres/Clinics are the hub of the primary health care services provided by the Government. Besides the general practitioner and nursing services, various specialised health services are provided. These include immunisation, speech therapy, Antenatal and Postnatal clinics, Well-Baby and Paediatric Clinics, Diabetes clinics, Orthopaedic clinics and Wound clinics. Malta's Primary Health Centres/Clinics and services include:

Rabat Clinic	Mosta Clinic	Floriana Clinic	Qormi Clinic
Cospicua Clinic	Gzira Clinic	B'Kara Clinic	Paola Clinic
National Immunisation Unit Floriana		School Nurse services	Well-baby clinic
Gynaecology Services			

Table 4.15. Sampled wards within the primary health centres/clinics.

4.6.4 Elderly Homes (Community Residential Homes)

Elderly Homes are state owned homes providing residential care to the elderly and persons with disability, who can no longer live in their own homes. Several homes are available in the county and these include:

Mtarfa Home	Mosta Home	Mellieha Home	Msida Home
Floriana Home			

Table 4.16. Sampled wards within state owned Elderly homes.

4.6.5 Oncology and Dermatology Hospital

This was a specialised hospital for oncology and dermatology during the time of this study. The hospital provided both inpatient and outpatient facilities for both oncology and dermatology services. However, in 2015 a new Oncology centre was opened, and all

oncology services have been transferred to this new facility. The previous hospital is now used solely as a dermatology inpatient and outpatient facility. The oncology and dermatology hospital had the following wards/units and all were sampled in this study.

Oncology Day Ward	Female Oncology Ward 4	Palliative Care Unit	Oncology Ward 2
Oncology Outpatients	Dermatology Outpatients	Dermatology Ward 1	

Table 4.17. Sampled wards within the oncology and dermatology hospital.

4.6.6 Long Term Care facility

This facility is a hybrid between a nursing home and a hospital. A holistic approach to care is applied in order to assist in the physical, psychological, social and spiritual wellbeing of each resident. The wards/units available at this facility and included in this study are:

Serenity Ward 1	Mother Theresa 1	St Frances 1	Pope John Paul 1
Serenity Ward 2	Mother Theresa 2	St Frances 2	Pope John Paul 2
Serenity Ward 3	Mother Theresa 3	St Frances 3	Pope John Paul 3
Loreto Ward	Fatima Ward	St Frances 4	Pope John Paul 4
Lourdes Ward	St Joseph Ward 1	St Joseph Ward 2	St Joseph Ward 3
St Joseph Ward 4	St Joseph Ward 5	St Joseph Ward 6	St Joseph Ward 7
St Joseph Ward 8	St Joseph Ward 9	St Joseph Ward 10	Ruzar Briffa 1
Ruzar Briffa 2	Ruzar Briffa 3	Ruzar Briffa 4	Ruzar Briffa 5
Activity Centre	Day Clinic	NSU	Nursing speciality unit

Table 4.18. Sampled wards within the long term care facility.

4.6.7 Rehabilitation Hospital

This rehabilitation hospital is a centre delivering specialised care and rehabilitation. The hospital mainly caters for elderly persons requiring rehabilitation following conditions such as stroke, post fractures and other specific rehabilitative needs and hosts the following wards and services:

Rehabilitation Ward 1	Rehabilitation Ward 2	Rehabilitation Ward 3	Rehabilitation Ward 4
Rehabilitation Ward 5	Rehabilitation Ward 6	Rehabilitation Ward 7	Rehabilitation Ward 8
Rehabilitation Ward 9	Day Hospital/MOP		

Table 4.19. Sampled wards within the rehabilitation hospital.

4.6.8 General Hospital in Gozo

This hospital is also a state owned general hospital situated on the island of Gozo, Malta's sister island. This hospital provides all the health requirements for the Gozitan population. Services provided at this hospital include medical and surgical services, emergency services as well as a short and long term psychiatric unit. An outpatient unit is also available. All the wards and services sampled in this study are outlined below:

Accident and Emergency	Male General Ward	Female General Ward	Long Stay Unit
Maternity/ Gynaecology	Paediatric Ward	Operating Theaters	Short Stay Unit
Residenza Sant Anna	Outpatients Unit	CCU/ITU/Renal unit	Male Geriatric Ward
Victoria Health Centre			

Table 4.20. *Sampled wards within the general hospital in Gozo.*

4.7 Data Collection

The questionnaires were distributed by the researcher to the Nursing Officers/Midwifery Officers or the Officers in charge of the ward/unit of all state owned Hospitals and medical/nursing services staffed by nurses and midwives. Permission from the Manager of Nursing Service of each Hospital/department was obtained in writing, before recruiting the Nursing Officers to assist in the study (Appendix 3). Nursing Officers/Midwifery Officers distributed the questionnaires to their staff as potential participants, and once completed the questionnaire was placed back in a sealed envelope available at the Nursing and Midwifery Officer or the Officer in charge. The Nursing or Midwifery Officers or the Officer in charge of each ward/unit was contacted beforehand and asked if he/she was willing to assist in the data collection process. A letter explaining the purpose of the study and what was required from the Nursing officer/ Officer in charge was given (Appendix 4). Nursing Midwifery Officers/Officers in charge ensured that participation was strictly voluntary and no pressure was exerted on nurses/midwives to enrol in the study. Consent in writing was given by those Officers willing to assist in the data collection process.

The purpose of the study and instructions were explained to each potential participant with a covering letter (Appendix 5) that accompanies each questionnaire. Potential participants had the right to decline participation in the study; completion of the questionnaire gave their implied consent. In order to safeguard anonymity participants were informed not to

write names, markings or other data, which could lead to their identification. Incomplete questionnaires or those traceable to their respondents were considered void.

4.8 Pilot Study

A pilot study is a small-scale version of the study conducted before undergoing the large-scale study, in an attempt to identify issues with time, research design and its adequacy. As a survey design was used, the questionnaire could not be tested using nurses or midwives, as this would not preserve the entire nursing/midwifery population for the actual study. Therefore, the pilot study was conducted by sampling Higher Specialist Trainees in Psychiatry that worked in a state owned psychiatric hospital in Malta. Such a cohort was chosen for the pilot study, so not to tarnish the nursing and midwifery population and also because of their knowledge and expertise within the mental health field. The objectives of this pilot study were to investigate if the questionnaire was understandable, could be completed within the estimated time frame of around 10 to 15 minutes and provide constructive feedback in relation to issues with the questionnaire (that were not clearly understandable). Eight individual Higher Specialist Trainees in Psychiatry were presented with the questionnaire and were asked to read the accompanying instructions. They were asked to keep an estimate of the time it took them to complete the questionnaire. On completion of the questionnaire the researcher met with each participant and discussed his or her experience of filling the questionnaire. Everyone reported that 10 to 15 minutes was adequate time to complete the questionnaire and also that the instructions were easy to follow. A common comment was that, due to them being doctors, they could not complete most of the demographic part of the questionnaire, as that was specifically designed for nurses and midwives. No changes to were carried out to the methods after conducting the pilot study. Also, no attempt to analyse the data was made at the pilot stage as the researcher was only interested in the attitudes of nurses and midwives.

4.9 Data Analysis

Data were analysed using statistical software, IBM SPSS version 21 and Microsoft Excel for Mac 2011 version 4.1. A 95% confidence interval was used in order to allow for a

comfortable degree of uncertainty rather than a stricter 99% confidence interval. Significance value was considered at p≤0.05.

4.9.1 Descriptive Analyses

Each demographic variable was analysed using descriptive analyses, namely Frequency Distributions. Frequency distributions were important so to identify the number of times each score on a single variable occurs. The frequency and percentage distribution are outlined in a table and the results are illustrated graphically as a bar chart.

4.9.2 Factor Analysis

Factor analysis was used to investigate the relationships among the 20 variables that make up the CAMI scale (Wolff *et al.,* 1996a). The Wolff *et al.* (1996a) scale suggests three constructs, namely Fear and Exclusion, Social Control and Goodwill. Factor analyses was used in order to identify different constructs or else confirm these same constructs of the original Wolff *et al.* (1996a) scale. Varimax rotation was used as this creates a solution in which factors are uncorrelated with each other. Abdi and Williams, (2010), describe that in Varimax rotation, the actual coordinate system is not altered, as it's the orthogonal basis that is being rotated to align with the coordinates. The same authors add that Varimax rotation maximizes the sum of the variance of the squared correlations between variables and factors (Abdi and Williams, 2010). Leech, Barrett and Morgan (2011) suggest that Varimax rotation is used to simplify the expression of a specific sub-space in terms of only a few major items. Principal component analyses produce a condensed base sub-space with many non-zero weights that make the output hard to interpret. Wolff *et al.* (1996a) used Varimax rotation, thus the same rotation was replicated in this study so that results can be compared to the results of the factor analyses obtained by Wolff *et al.* (1996a). Cronbach's coefficient alpha test was carried out to investigate the internal consistency/reliability of the scale.

A scree plot was produced to illustrate the eigenvalues associated with the factors in descending order against the number of factors (constructs/number of factors). A scree plot

always displays a downward curve. The point where the curve levels off indicates the number of constructs (factors) that should be generated by the analysis.

The Kaiser-Meyer-Olkin (KMO) measure was used to identify if items are predicted by each factor. The KMO test is used to identify how suitable the data is for Factor Analysis, by measuring sampling adequacy for each variable in the model and also for the complete model. This statistical test measures the proportion of variance amongst variables that might be common variance. The lower the proportion the more suitable the data is for Factor Analysis. Kaiser (1974) recommends accepting values greater than 0.5. Values between 0.5 to 0.7 are considered mediocre, values between 0.7 and 0.8 are considered good, whilst those values between 0.8 and 0.9 are considered great. Any value above 0.9 are considered as superb

The Bartlett test of Sphericity was carried out to identify if the variables are correlated significantly ($p<0.05$) to provide a reasonable basis for the factor analyses. This test compares the observed correlation matrix to the identity matrix by checking if there is a certain redundancy between the variables that can be summarize with a few number of factors. If the variables are perfectly correlated, only one factor is sufficient. If they are orthogonal, more factors are required.

4.9.3 Analyses by variables

Each dependent variable was analysed individually against the subscales, *Fear and Exclusion*, *Social Control*, *Goodwill,* and the *Total Attitudinal Score*. Box Plots were used to illustrate the distribution and median of the sample population per subscale, and similarities and differences within the sample.

The box plots are followed by a bar graph representing the distribution of *Fear and Exclusion*, *Social Control*, *Goodwill* and *Total Attitudinal Score* for each group within the independent variable.

The Mean and Confidence interval for each group in the independent variable was calculated using SPSS and Excel and represented both in a table and as a dot plot with

error bars. This represents the mean of the groups within the independent variable, and is used to visualise any differences between the groups.

A Mann-Whiteny U test was carried out to examine differences between the independent variable Gender. The Mann-Whitney U test is a non-parametric test used to assess for significant differences in a scale or ordinal dependent variable by a single dichotomous independent variable. It is the non-parametric equivalent of the independent samples t-test. The Mann Whitney U test does not assume any properties regarding the distribution of the dependent variable in the analysis, making this test the appropriate analysis to use when analyzing dependent variables on an ordinal scale. The Mann-Whitney U-test is also the mathematical basis for the Kruskal Wallis H test. The Mann Whitney U test is also called Mann–Whitney–Wilcoxon, Wilcoxon rank-sum test, Wilcoxon–Mann–Whitney test, or Wilcoxon two-sample test. The U-test does not compare mean scores but median scores of two samples. Thus, it is much more robust against outliers and heavy tail distributions. Because the Mann-Whitney U-test is a non-parametric test, it does not require a special distribution of the dependent variable in the analysis. Therefore, it is an appropriate test to compare groups when the dependent variable is not normally distributed and at least of ordinal scale. For the test of significance of the Mann-Whitney U-test, it is assumed that with a large sample size, the distribution of the U-value approximates a normal distribution. The U-value calculated with the sample can be compared against the normal distribution to calculate the confidence level. The U-value represents the number of times observations in one sample precede observations in the other sample in ranking.

Conversely the Kruskal-Wallis H test was conducted in order to examine the differences between variables with three or more groups, namely, Grade, Age, Nursing Education, Years in Nursing Service, Work Setting, Years in Mental Health Setting, Mental Health Work Setting and Contact with Mental Health Service Users. The Kruskal-Wallis H test is a nonparametric method used for testing whether samples originate from the same distribution. It is used for comparing two or more independent samples of equal or different sample sizes. It extends the Mann-Whitney U test when there are more than two groups. The parametric equivalent of the Kruskal-Wallis test is the one-way ANOVA. Both tests assess for significant differences on a continuous dependent variable by a categorical independent variable (with two or more groups). In the ANOVA, it is assumed that the dependent variable is normally distributed and there is approximately equal

variance on the scores across groups. However, when using the Kruskal-Wallis Test, such assumptions are not required. Therefore, the Kruskal-Wallis test can be used for both continuous and ordinal-level dependent variables. The Kruskal-Wallis test does not identify where this stochastic dominance occurs or for how many pairs of groups stochastic dominance obtains. Therefore, in order to analyse the specific sample pairs for stochastic dominance in post hoc testing the Mann Whitney U test was used. Results for Post Hoc analyses are presented as p values.

For the independent variables *Age*, *Years in Nursing Service* and *Years in Mental Health Work Setting*, the Spearman rank correlation test was used to assess the relationship between the variable, such as *Age*, and each subscale, *Fear and Exclusion*, *Social Control*, *Goodwill* and *Total Attitudinal Score*. Spearman's correlation coefficient is a statistical test that measures the strength and direction of association between two ranked variables. Similar to the Pearson correlation test, the Spearman test has a value between +1 and −1. The closer the correlation coefficient (r_s) value is to +1/-1 the stronger the relationship. The direction of the association is denoted by the positive (+) or a negative (-) sign of the r_s value. If r_s is positive, it means that as one variable gets larger the other gets larger. If r is negative it means that as one gets larger, the other gets smaller also known as an "inverse" correlation. This test is a non-parametric test as it does not require a normal distribution, however the Pearson test cannot be used in this analyses as data for variables Age, Years in Nursing Service, Years in Mental Health Setting and Contact with Mental Health Service Users is ordinal. This justifies the use of the Spearman rank correlation test as opposed to the parametric Pearson correlation test.

To conclude the data analyses, a regression was carried out to identify significant predictors contributing to the primary dependent variable, that is, Total Attitude Score.

4.10 Ethical Considerations

The study was conducted only after review and approval by the University of Malta Research Ethics Committee and all the entities governing data collection at the research sites (Appendix 6).

A covering letter (Appendix 5) accompanied the questionnaire explaining the purpose of the study and the potential participants' rights. No harm was intended nor was done to the potential participants. Anonymity was guaranteed as Nursing/Midwifery Officers handled the distribution and collection of questionnaires, thus the researcher had no direct contact with the participants. To ensure confidentiality, all information provided was documented in a way as to not reveal the identity of the participants. No one except the researcher had access to the completed questionnaire. Participants were asked not to write their name or identify themselves in any way on the questionnaires. In order to respect the respondents' autonomy, respondents were free to decide whether to answer the questionnaire or not. Besides, whoever was not willing to take part in the study was free not to return the questionnaire. All uncompleted questionnaires or those with any identifiable data that could disclose the identity of the participants were considered invalid. Disposal of the questionnaires will be carried out according to the Joint Faculty of Kingston University and St Georges University of London protocol.

Since the study was conducted in Malta, ethical approval had to be sought locally from the University of Malta Research Ethics Committee. Following approval of the research study, distribution of the questionnaires and data collection commenced.

4.11 Conclusion

This chapter outlined the design and data collection method adopted, to explore, compare and critically analyse the attitudes of Maltese Nurses and Midwives towards mental illness and also identify the various variables that influence those attitudes. A quantitative research design was the most indicative as it allowed conclusive results and large population sampling. A cross sectional survey was used in order to collect information at a single point in time, as is, with no attempt to manipulate variables. Following an extensive literature search the most indicative measure for this study was the CAMI scale (Wolff *et al.,* 1996a). The CAMI scale (Wolff *et al.,* 1996a) is a 20 item self-reporting questionnaire that measures the attitudes towards mental illness. This tool is in English, has already been validated and includes a community focus. The CAMI scale (Wolff *et al.,* 1996a) has also been used within European countries to investigate the attitudes of nurses towards mental illness, thus satisfying all the predefined criteria. No tools have been identified in literature

that investigate the attitudes of midwives towards mental illness, however the Wolff *et al.* (1996a) CAMI scale can be used for such purposes as it fulfils the inclusion criteria set for the study. The target population included all registered nurses and midwives working within all the state owned hospitals, community clinics and residential homes. A total of 2000 nurses and midwives were eligible to participate in this study. After the necessary Ethical approvals from University of Malta Ethics Committee, and all the entities governing data collection at the research sites, the Nursing Midwifery Officers/Officers in charge of the Wards/clinics distributed the questionnaires. Participation was strictly voluntarily. Following data collection, data analyses were conducted. The study findings are presented in the following chapter.

Chapter 5
Data Analyses

5.1 Introduction

This chapter reports the study findings. Data analyses were carried out using IBM SPSS ver. 21. As outlined in the research design and methods chapter, the target population included all nurses and midwives working within the Maltese Health Services. Every nurse and midwife registered with the Maltese Council of Midwives and Nurses was asked to participate. Out of the 2000 questionnaires distributed, 1483 valid questioners were returned, giving a response rate of 74.15%.

The Data Analyses Chapter is divided into several sections in order to simplify as much as possible the analyses carried out. These sections include margin of error, descriptive analyses, factor analyses, analyses by variables and regression. The contents and brief explanation of each section is outlined in the guidelines below.

5.2 Guidelines to the Chapter

5.2.1 Introduction

A brief introduction to the chapter

5.2.2 Margin of Error

The study's margin of error is described in this section.

5.2.3 Descriptive Analyses

This section illustrates the frequency distribution of the sample population according to the variables. Data is represented in both tabular and graphic format. Descriptive text follows and concludes each variable.

5.2.4 Factor Analyses

A factor analysis was carried out within the sample population. Also the results are compared to the original factor analyses carried out by Wolf *et al.* (1996a).

5.2.5 Analyses by variables

For the Analyses by Variables section each variable will be presented in the order as it appears in the questionnaire. Each Variable will include the following:

5.2.5.1 Box Plots

Box plots illustrating the distribution and median of the sample population per each subscale. The subscales, Fear and Exclusion, Social Control and Goodwill and Total Attitudinall Score will be analysed individually in relation to each variable. Each Box plot will be accompanied by descriptive text.

5.2.5.2 Distribution Graph

The box plots are followed by a bar graph representing the distribution of the sample population. The graph also includes all 4 subscales mentioned above compared to each variable being analysed.

5.2.5.3 Means and Confidence Interval Plot

The bar graph is than followed by a means and confidence interval table and graphic illustration. The mean and confidence intervals are charted and help the researcher visualise if there is any differences between the groups. An explanatory text is followed after each means plot.

5.2.5.4 Statistical Test

Finally, each variable ends with an appropriate statistical test to investigate if there are any significant differences between the subscales and the different subgroups in the variables. Several tests have been used in order to investigate the relationship within the variables and subscales s. These have been already outlined in the Chapter 4 (page 84) and include:

Spearman's Correlation Test

Mann-Whiteny *U* Test

Kruskal-Wallis H Test

The test most appropriate to investigate variances between subscales and variables was chosen depending on the type of variable and also on the number of groups within that particular variable. Each test is followed by a summary of the results. The lower the mean rank for Subscales Fear and Exclusion and Social Control indicate a higher positive attitude whilst the higher the mean rank for Goodwill and Total Attitudinal Score indicate

a positive attitude. Results for Kruskal-Wallis H test and Mann-Whiteny U test analyses are presented as p values, with significance level equal or below 0.05.

5.2.6 Regression

This section tries to identify the contribution each variable has on explaining the variation on the positive attitude score.

5.3 Margin of Error

A sample of 1483, nurses (n=1400) and midwives (n=83) selected from a total population of 2000, guarantees a maximum margin of 1.29% assuming a 95% degree of confidence.

Margin of Error $= z\sigma_{\bar{p}}$

For a 95% degree of confidence, $z = 1.96$

σ_p is the standard error (Standard deviation of the sampling distribution of proportion), which is given by:

$$\sigma_p = \sqrt{\frac{p(1-p)}{n}\left(\frac{N-n}{N-1}\right)}$$

σ_p is maximized when $p = 0.5$.

When the sample size $n = 1483$ and population size is $N = 2000$, the maximum value of the standard error σ_p is:

$$\sigma_p = \sqrt{\frac{p(1-p)}{n}\left(\frac{N-n}{N-1}\right)} = \sqrt{\frac{(0.5)(0.5)}{1483}\left(\frac{2000-1483}{2000-1}\right)} = 0.00658$$

Maximum margin of error $= z\sigma_{\bar{p}} = (1.96)(0.00658) = 0.0129 = 1.29\%$

5.4 Descriptive Analyses

Participants were asked to indicate their grade, gender, age, nursing education, years in nursing service and their work setting, the number of years in Mental Health and which areas of mental health they have worked as well as the frequency of contact that participants have with mental health service users. The frequency distribution of the population according to these variables is presented in tabular format. The tabular format presents the frequency number (N), which is the exact number of participants in that subgroup and the valid percentage, which accounts for the percentage of that particular subgroup in relation to the entire sample population.

Demographic Variables	N	%	Subgroups	N	%	Subgroups
Gender	533	35.9	Male	950	64.1	Female
Age	214	14.4	20 yrs – 25yrs	212	14.3	26 yrs – 30 yrs
	156	10.5	31 yrs – 35 yrs	131	8.8	36 yrs – 40 yrs
	190	12.8	41 yrs – 45 yrs	252	17.0	46 yrs – 50 yrs
	161	10.9	51 yrs – 55 yrs	136	9.2	56 yrs – 60 yrs
	31	2.1	61 yrs +			

Table 5.1. *Distribution of sample population by demographic variable Gender and Age.*

The above table illustrates the frequency distributions of the population in relation to the demographic variables and its subgroups. The population consisted of 533 males and 950 females. The number of female participants in nearly double that of males, reflecting the gender distribution within the Maltese nursing and midwifery workforce. The most populated subgroup is within the age group of 46 to 50 years of age (n=252). The sample population distribution is uniform within the different age groups apart from that of 61 years and over. However, this is expected, as the retirement age at the time of the study was 61 years, thus only few nurses decide to continue work past their retirement age.

Table 5.2 below reports the frequency distribution of the study sample according to the various work related variables, which include grade, nursing education, years in nursing service, work setting, years in mental health setting, mental health work setting and contact with mental health service users.

Work Related Variables	N	%	Subgroups	N	%	Subgroups
Grade	12	0.8	Departmental Nursing Officer or higher	115	7.8	Nursing Officer
	153	10.3	Deputy Nursing Officer	944	63.7	Staff Nurse
	39	2.6	Registered Mental Health Nurse	9	0.6	Midwifery Officer
	137	9.2	Enrolled Nurse	74	5.0	Midwife
Nursing Education	30	2.0	Masters in Health Service Management	0	0	PhD
	7	0.5	Masters in Mental Health Nursing	302	20.4	BSc in Nursing
	8	0.5	Masters in Midwifery Studies	364	24.5	Diploma in Nursing
	45	3.0	BSc in Midwifery Studies	22	1.5	CNP Course
	43	2.9	BSc in Mental Health Nursing	108	7.3	Pupil Nurse Course
	8	0.5	Diploma in Mental Health Nursing	258	17.4	Conversion Course
	17	1.1	Traditional Midwifery Course	204	13.8	Student Nurse Course
	20	1.3	Diploma in Midwifery Studies	15	1.0	Other
Years in Nursing Service	306	20.6	Less than 5 yrs	222	15.0	6 to 10 yrs
	191	12.9	11 to 15 yrs	224	15.1	16 to 20 yrs
	166	11.2	21 to 25 yrs	214	14.4	26 to 30 yrs
	132	8.9	31 to 35 yrs	28	1.9	36 yrs +
Work Setting	301	13.9	Medical	337	15.5	Surgical
	117	5.4	Accident and Emergency	90	4.2	Orthopaedics
	92	4.2	Oncology	310	14.3	Geriatrics
	86	4.0	Outpatients	102	4.7	Paediatrics
	243	11.2	Mental Health	51	2.4	Community
	68	3.1	Rehabilitation	29	1.3	Dermatology
	113	5.2	Primary Health/ Clinics	98	4.5	Theatres
	131	6.0	Gynaecology and Maternity			
Years in Mental Health Setting	1146	77.3	None	173	11.7	<1 to 5 yrs
	55	3.7	6 to 10 yrs	35	2.4	11 to 15 yrs
	20	1.3	16 to 20 yrs	22	1.5	21 to 25 yrs
	18	1.2	26 to 30 yrs	8	0.5	31 to 35 yrs
	6	0.4	36 yrs +			
Mental Health Work Setting	115	7.2	Acute	64	4.0	Rehabilitation
	111	7.0	Old Age Psychiatry	62	3.9	Chronic
	32	2.0	Learning Disabilities	37	2.3	Community
	27	1.7	Child and Adolescent	32	2.0	Substance Misuse
	1116	69.9	None			
Contact with Mental Health Service Users	1066	71.9	None	186	12.5	Daily
	67	4.5	Weekly	41	2.8	Twice Weekly
	26	1.8	Every fortnight	97	6.5	Once a month

Table 5.2. *Distribution of sample population by work related variables.*

Although the mostly populated group within the Grade variable is that of Nurses (n=944), it is important to highlight that a high response is also noted from Departmental Nursing Officers or higher (n=12), Nursing officers (n=115) and Deputy Nursing officers (n=153), Midwifery Officer (n=9) and Midwives (n=74). This is because their respective entire subgroup population is relatively small, thus the response rate for these subgroups is high. The distribution for nursing education shows that Diploma in Nursing studies (n=364) followed by BSc in Nursing studies (n=302) and Conversion Course (n=258) are the most densely populated subgroups. Of note is that other groups such as BSc in Mental Health Nursing (n=43) and BSc in Midwifery studies (n=45) although the response the might seem low, are highly reflective of the entire Maltese workforce. The most populated subgroup within the years in nursing service variable is that of Less than 5 years nursing service (n=306). The other subgroups all have similar population numbers. The least populated subgroup is that of nurses/midwives with 36 or more years of nursing service.

This also reflects the population age and retirement age when this study was conducted. The distribution of the population according to the clinical work setting document the current work setting as well as any other settings that the population might have worked in before. This accounts for the total frequency number of 2168 as opposed to the sample size of 1483. Although frequency numbers are different all subgroups are representative of their work settings, as not all services have the same staffing levels. The most noted settings locally are Medical (n=301), Surgical (n=337), Geriatrics (n=310) and Mental Health (n=243), which are also reflected in the distribution above. Out of the entire sample population (n=1483), 337 respondents work within a mental health setting. This number is very reflective of the nursing cohort working within the Maltese mental health setting, considering that as an estimate around 450 qualified nurses work within such setting. The distribution of the population according to the areas they have worked within the mental health field illustrates that the majority of the population (n=1116) have never worked within a mental health setting. On the other hand, the highest distribution within a mental health field is noted within the acute setting. Of note is that the total frequency number does not match the sample population, which is 1483. This is due to the fact participants may have worked in more than one psychiatric/mental health setting during the course of their nursing careers. The population distribution according to the time spent with mental health service users shows that the majority of the respondents (n=1066) claim to have no contact with mental health service users.

5.5 Factor Analyses

The Community Attitudes to Mental Illness (Wolff *et al.,* 1996a), originates from the Community Attitudes toward the Mentally Ill by Taylor and Dear (1981). The CAMI scale (Taylor and Dear, 1981) is a 40-item scale, composed of 4 factors, mainly Authoritarianism, Benevolence, Social Restrictiveness and Community Mental Health Ideology.

After carrying out factor analyses and a scree plot on the CAMI scale (Taylor and Dear, 1981)*,* Wolff *et al.* (1996a) suggested that data could be adequately represented by extractions of three factors. These factors accounted for 37.3% of the total variance.

The distribution of % variance for each subscale and their cumulative % variance is outlined below:

Subscales	% Variance	
	Wolf et al., (1996)	*Present Study*
1. Fear and Exclusion	29.3 %	19.28 %
2. Social Control	4.8 %	10.45 %
3. Goodwill	3.3 %	6.81 %
Total % Variance	37.3%	36.5%

Table 5.3. *Comparison of % variance for the CAMI (Wolff et al., 1996a) scale and current study.*

The % variance in this study also produced a very similar result compared to the work of Wolff *et al.* (1996a) with a difference in total variance percentage of less than 1%.

The Cronbach's Alpha scores in this study are outlined in table 5.4 below. Cronbach's Alpha measures internal consistency and reliability of each subscale. Unfortunately, no Cronbach's Alpha scores have been published for the work carried out by Wolff *et al.* (1996a), thus no comparison could be carried out, however both subscales Fear and Exclusion and Social Control report a Cronbach Alpha score of 0.87 and 0.69 respectively. Score of 0.7 or higher are considered acceptable. The score of subscale Goodwill is 0.51. This might be due to the ambivalence of one of the items within this subscale as outlined in the factor analysis.

Subscales	No. of Items	Cronbach's Alpha
1. Fear and Exclusion	11	.866
2. Social Control	6	.687
3. Goodwill	3	.501
Total	20	.810

Table 5.4. *Cronbach's Alpha scores.*

Principle component analysis (PCS) was carried out in order to mathematically derive the best factor solution by identifying the least number of factors that provides the same information as would a larger set of factors. Two main conditions are necessary to conduct PCA, a large sample size as this provides a more reliable factor solution and that there is a relationship between the variables. Both these conditions are meet in this study, with a large sample size of 1483 participants and also that there is a relationship between the variables. Table 5.5 below explains the % of Variance for the 20 components.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.918	29.589	29.589	5.918	29.589	29.589	4.551	22.755	22.755
2	1.716	8.582	38.171	1.716	8.582	38.171	2.588	12.939	35.694
3	1.489	7.446	45.617	1.489	7.446	45.617	1.985	9.923	45.617
4	.991	4.956	50.573						
5	.979	4.897	55.470						
6	.883	4.417	59.888						
7	.819	4.094	63.982						
8	.766	3.832	67.814						
9	.704	3.520	71.335						
10	.691	3.455	74.790						
11	.637	3.187	77.977						
12	.602	3.010	80.987						
13	.554	2.771	83.757						
14	.543	2.717	86.474						
15	.529	2.643	89.118						
16	.468	2.340	91.458						
17	.460	2.298	93.756						
18	.444	2.219	95.975						
19	.432	2.159	98.133						
20	.373	1.867	100.000						

Extraction Method: Principal Component Analysis.
Table 5.5. *Total Variance results following Principal Component Analysis.*

The Eigenvalues in table 5.5 above illustrate the variance in terms of a numerical value that each factor is worth. The Cumulative % shows the first three factors account for 45.6% of variance. Factor 1 explains 29.5% of the variance.

A Scree plot and factor analysis was carried out in order to investigate if the Community Attitudes to Mental illness (Wolff *et al.,* 1996a) produced the same correlated variables in the current study, thus confirming the suggestions proposed by Wolff *et al.* (1996a).
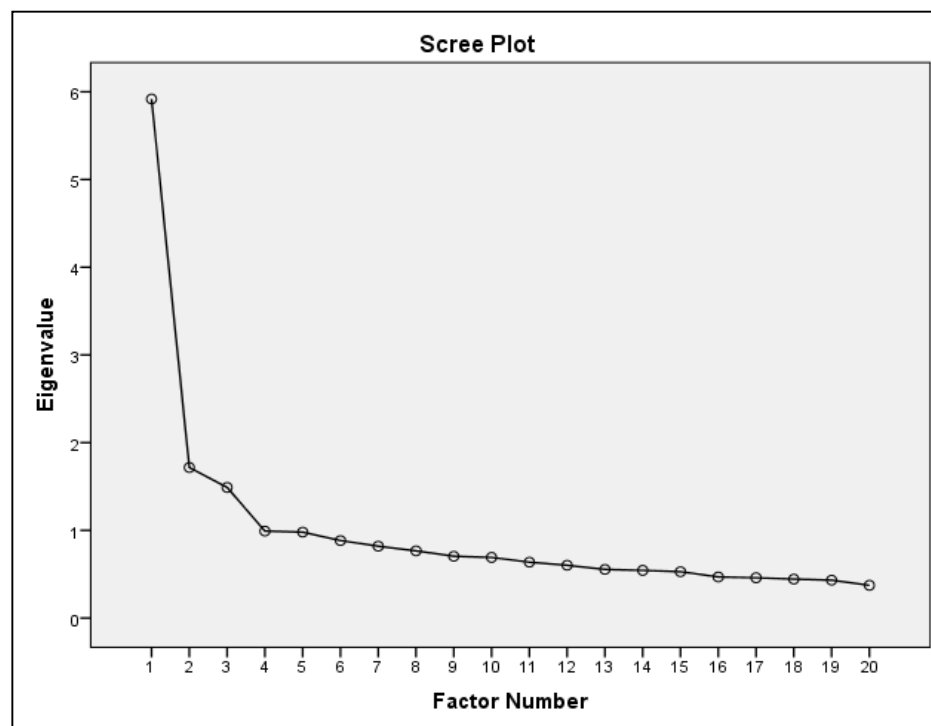

Figure 5.1. *Scree plot.*

The Scree plot outlined in figure 5.1, shows that after the third component the difference between the eigenvalues decline with values less than 1.0, supporting a three factor solution. This clearly illustrates that within the Maltese nursing and midwifery population, the 20 item CAMI scale (Wolff *et al.,* 1996a) also produced three distinctive factors. This agrees with the findings of Wolff *et al.* (1996a). Each individual factor loading for the 20 items in the scale is reproduced in the table below. All the loadings for each individual factor is outlined, with the highest loading highlighted. This loading corresponds to the factor correlation in the work carried out by Wolff *et al.* (1996a), expect statement 20 which has loadings in both Subscale 2- *Social Control* and Subscale – *Goodwill.* Factor analysis was carried out using maximum likelihood extraction method with Varimax rotation.

Rotated Factor Matrix[a]

CAMI Statements (Wolf *et al.,* 1996a)	Factor		
	1	2	3
Locating mental health services in residential neighbourhoods does not endanger local residents	**-.507**	-.097	.137
Local residents have a good reason to resist the location of mental health services in their neighbourhood	**.519**	.239	-.056
It is frightening to think of people with mental problems living in residential neighbourhoods	**.613**	.301	-.054
Residents have nothing to fear from people coming into their neighbourhood to obtain mental health services	**-.610**	-.050	.114
Having mental patients living within residential neighbourhoods might be good therapy, but the risks to residents are too great	**.562**	.306	.030
Locating mental health facilities in a residential area downgrades the neighbourhood	**.517**	.153	-.021
I would not want to live next door to someone who had been mentally ill	**.613**	.344	-.021
Mental health facilities should be kept out of residential neighbourhoods	**.671**	.277	-.100
Residents should accept the location of mental health facilities in their neighbourhood to serve the needs of the local community	**-.634**	.043	.194
No-one has the right to exclude the mentally ill from their neighbourhood	**-.567**	-.119	.292
The mentally ill should be isolated from the rest of the community	**.454**	.352	-.234
Mental patients need the same kind of control and discipline as a young child	.040	**.442**	-.052
One of the main causes of mental illness is a lack of self-discipline and will power	.138	**.431**	-.051
As soon as a person shows signs of mental disturbance, he or she should be hospitalized	.208	**.558**	-.070
Anyone with a history of mental problems should be excluded from taking public office	.265	**.473**	-.085
There is something about the mentally ill that makes it easy to tell them from normal people	.164	**.498**	-.051
The best way to handle the mentally ill is to keep them behind locked doors	.165	**.482**	-.319
We have a responsibility to provide the best possible care for the mentally ill	-.125	-.078	**.728**
We need to adopt a far more tolerant attitude to someone who has been mentally ill on our society	-.194	-.160	**.663**
The mentally ill do not deserve our sympathy	.016	**.223**	**-.208**

Extraction Method: Maximum Likelihood.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 5 iterations.
Table 5.6. *Rotated Factor Matrix following factor analyses from the current data.*

The factor analysis output confirms a three-factor approach, with factor loadings clearly illustrate in which factor the 20 items correlate the most appropriate, thus forming part of that corresponding factor. Of particular note is statement 20, that is, "The mentally ill do not deserve our sympathy". In the original factor loadings of Wolf *et al.* (1996a) statement 20 had a factor loading of -.50 under Subscale 3, Goodwill. Factor loadings following factor analysis have produced a different result. A split loading between Subscale 2, Social Control (loading of .223) and Subscale 3, Goodwill (loading of -.208) is observed. This is the only deviation observed from the factor analysis carried out by Wolf *et al.* (1996a) factor and that carried out in this work.

A comparison of the item loadings obtained by Wolf *et al.* (1996a) and those obtained in this work are outlined in the table below.

	Comparison	
CAMI Questions (Wolf *et al.,* 1996a)	Present Study	Wolf et al. (1996a)
Locating mental health services in residential neighbourhoods does not endanger local residents	-.51	.75
Local residents have a good reason to resist the location of mental health services in their neighbourhood	.52	-.72
It is frightening to think of people with mental problems living in residential neighbourhoods	.61	-.70
Residents have nothing to fear from people coming into their neighbourhood to obtain mental health services	-.61	.69
Having mental patients living within residential neighbourhoods might be good therapy, but the risks to residents are too great	.56	-.66
Locating mental health facilities in a residential area downgrades the neighbourhood	.52	-.64
I would not want to live next door to someone who had been mentally ill	.61	-.58
Mental health facilities should be kept out of residential neighbourhoods	.67	-.58
Residents should accept the location of mental health facilities in their neighbourhood to serve the needs of the local community	-.63	.54
No-one has the right to exclude the mentally ill from their neighbourhood	-.57	.54
The mentally ill should be isolated from the rest of the community	.45	-.52
Mental patients need the same kind of control and discipline as a young child	.44	.65
One of the main causes of mental illness is a lack of self-discipline and will power	.43	.64
As soon as a person shows signs of mental disturbance, he or she should be hospitalized	.56	.61
Anyone with a history of mental problems should be excluded from taking public office	.47	.59
There is something about the mentally ill that makes it easy to tell them from normal people	.50	.52
The best way to handle the mentally ill is to keep them behind locked doors	.48	.50
We have a responsibility to provide the best possible care for the mentally ill	.73	.53
We need to adopt a far more tolerant attitude to someone who has been mentally ill on our society	.66	.53
The mentally ill do not deserve our sympathy	-.21	-.50

Table 5.7. *Comparison of the item loadings obtained by Wolf et al. (1996a) and this study*

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity is outlined in the table below. The KMO measure is a statistical test that indicates the proportion of variance in the variables that might be caused by underlying factors.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.907
Bartlett's Test of Sphericity	Approx. Chi-Square	8247.117
	df	190
	Sig.	p<0.001

Table 5.8. *Kaiser-Meyer-Olkin and Bartlett's Test.*

The KMO result of 0.907 in table 5.14 indicates that the patterns of correlations are compact, thus factor analysis provides distinct and reliable factors. Kaiser (1974) recommends accepting values greater than 0.5. Values between 0.5 to 0.7 are considered mediocre, values between 0.7 and 0.8 are considered good, whilst those values between 0.8 and 0.9 are considered great. Any value above 0.9 are considered as superb (Hutcheson and Sofromiou, 1999). For this data the KMO value is 0.907, which is considered as superb. Therefore, this result provides a high level of confidence that factor analysis is appropriate for this data.

The Bartlett's Test of Sphericity tests the hypothesis that the correlation matric is an identify matrix. This would indicate that the variables are unrelated and therefore unsuitable for struction detection. Significant values of 0.05 or lower indicate that a factor analysis may be useful with the data. The Bartlett's Test of Sphericity tests reported in table 5.14 above, indicates a highly significant value (p<0.001), thus confirming that factor analysis is appropriate.

5.6 Response to the CAMI Questionnaire

The table below illustrates the distribution of the population's response (n=1483) (including the percentage value) to each individual statement that makes up the CAMI scale (Wolf *et al.,* 1996a). Results illustrate the distribution over the 5-point Likert scale ranging from Strongly Disagree to Strongly Agree. The Median, Mean and Standard Deviation for the 20 items are also presented.

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Median	Mean	S.D
Locating mental health services in residential neighbourhoods does not endanger local residents	19 (1.3%)	118 (8.0%)	273 (18.4%)	753 (50.8%)	320 (21.6%)	3	3.17	0.898
Local residents have a good reason to resist the location of mental health services in their neighbourhood	233 (15.7%)	640 (43.2%)	304 (20.5%)	273 (18.4%)	33 (2.2%)	1	1.48	1.033
It is frightening to think of people with mental problems living in residential neighbourhoods	258 (17.4%)	761 (51.3%)	274 (18.5%)	152 (10.2%)	38 (2.6%)	1	1.29	0.959
Residents have nothing to fear from people coming into their neighbourhood to obtain mental health services	20 (1.30%)	133 (9.0%)	230 (15.5%)	774 (52.5%)	326 (22.0%)	3	3.16	0.912
Having mental patients living within residential neighbourhoods might be good therapy, but the risks to residents are too great.	142 (9.6%)	659 (44.4%)	357 (24.1%)	276 (18.6%)	49 (3.3%)	1	1.62	1.000
Locating mental health facilities in a residential area downgrades the neighbourhood	257 (17.3%)	667 (45.0%)	265 (17.9%)	227 (15.3%)	67 (4.5%)	1	1.45	1.082
I would not want to live next door to someone who has been mentally ill	280 (18.9%)	658 (44.4%)	337 (22.7%)	151 (10.2%)	57 (3.8%)	1	1.36	1.021
Mental health facilities should be kept out of residential neighbourhoods	321 (21.6%)	772 (52.1%)	226 (15.2%)	123 (8.3%)	41 (2.8%)	1	1.18	0.957
Residents should accept the location of mental health facilities in their neighbourhood to serve the needs of the local community	269 (1.1%)	89 (6.0%)	293 (19.8%)	815 (55.0%)	269 (18.1%)	3	3.17	0.833
No-one has the right to exclude the mentally ill from their neighbourhood	22 (1.5%)	69 (4.7%)	129 (8.7%)	742 (50.0%)	521 (35.1%)	3	3.87	0.862
The mentally ill should be isolated from the rest of the community	661 (44.6%)	650 (43.8%)	110 (7.4%)	34 (2.3%)	28 (1.9%)	1	0.73	0.842
Mental patients need the same kind of control and discipline as a young child	192 (12.9%)	556 (37.5%)	374 (25.2%)	290 (19.6%)	71 (4.8%)	1	1.66	1.079
One of the main causes of mental illness is a lack of self-discipline and will power	331 (22.3%)	570 (38.4%)	272 (18.3%)	247 (16.7%)	63 (4.2%)	1	1.42	1.131
As soon as a person shows signs of mental disturbance, he or she should be hospitalized	395 (26.6%)	781 (52.7%)	138 (9.3%)	124 (8.4%)	45 (3.0%)	1	1.08	0.980
Anyone with a history of mental problems should be excluded from taking public office	365 (24.6%)	729 (49.2%)	255 (17.2%)	98 (6.6%)	36 (2.4%)	1	1.13	0.940
There is something about the mentally ill that makes it easy to tell them from normal people	207 (14.0%)	597 (40.3%)	339 (22.9%)	310 (20.9%)	30 (2.0%)	1	1.57	1.032
The best way to handle the mentally ill is to keep them behind locked doors	901 (60.8%)	492 (33.2%)	55 (3.7%)	13 (0.9%)	22 (1.5%)	0	0.49	0.745
We have a responsibility to provide the best possible care for the mentally ill	13 (0.9%)	11 (0.7%)	29 (2.0%)	440 (29.7%)	990 (66.8%)	4	3.61	0.654
We need to adopt a far more tolerant attitude to someone who has been mentally ill on our society	13 (0.9%)	12 (0.8%)	72 (4.9%)	604 (40.7%)	782 (52.7%)	4	3.44	0.705
The mentally ill do not deserve our sympathy	819 (55.2%)	409 (27.6%)	131 (8.8%)	96 (6.5%)	28 (1.9%)	0	0.28	0.996

Table 5.9. *Response to individual statements including Median, Mean and SD score.*
* Statements highlighted in orange denote an inverted scale

5.7 Grade

Subscale 1 – Fear and Exclusion compared to Nursing Grades
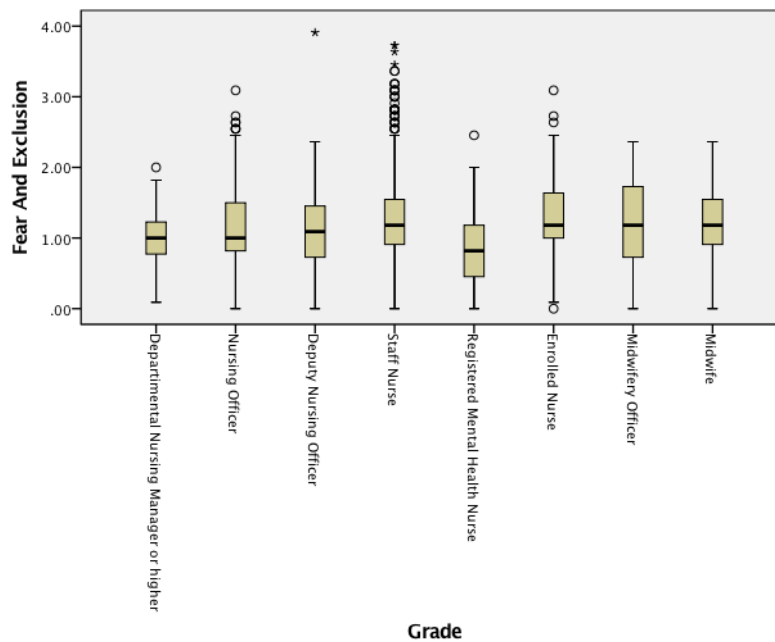
Figure 5.2. *Boxplot illustrating frequency distribution for Subscale 1 and Nursing Grades.*

The above boxplot illustrates that there is a marked difference in the "Registered Mental Health Nurses" group. Although group distributions are varied the median is very similar in the rest of the groups.

Only one outlier is noted at the lower end of the distribution for denoting of Enrolled nurses for Subscale Fear and Exclusion. Conversely, outliers above the distribution are noted reported for subgroups Departmental Nursing Managers of Higher, Nursing Officers, Registered Mental Health Nurses and Enrolled Nurses. The highest level of outliers is seen in the Staff Nurses group, which is expected as it's the largest subgroup within the grade variable. Extreme outliers, which are outliers that have a value of more than 3 box lengths from either hinge are noticeable both in Deputy Nursing officer subgroup and in the Staff Nurse subgroup. This indicates that the outliers above the upper end indicate higher values in relation to the participants median score towards fear and exclusion. No outliers are reported for the subgroups Midwives and Midwifery Officers.

Subscale 2 – Social Control compared to Nursing Grades
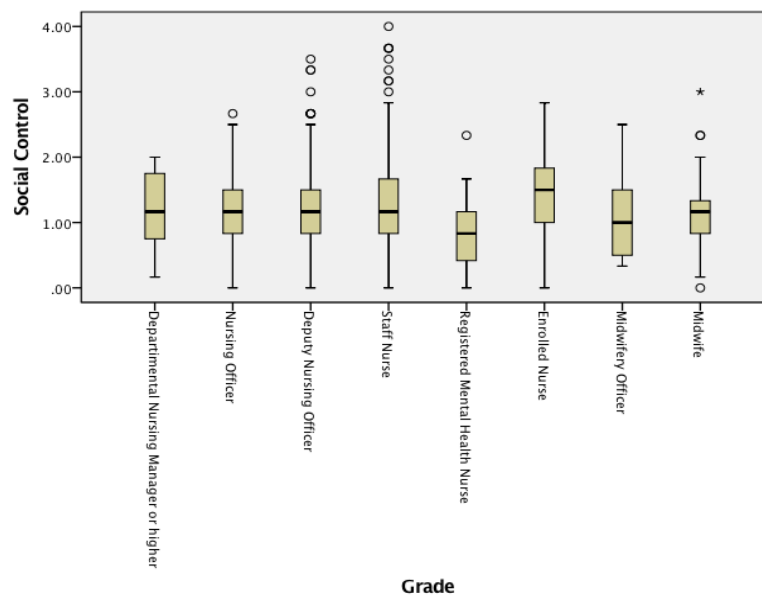
Figure 5.3. *Boxplot illustrating frequency distribution for Subscale 2 and Nursing Grades.*

The boxplot illustrates that there is again a marked difference in the "Registered Mental Health Nurses" and in the "Enrolled Nurses" group. Medians are again similar in the rest of the groups. Very few outliers can be observed for subscale Goodwill, with only one value at the lower end for midwifery subgroup. Outliers at the upper end of the distribution are noted for subgroups Nursing Officer, Deputy Nursing Officer, Staff Nurses, Registered Mental Health Nurses and Midwives

Subscale 3 – Goodwill compared to Nursing Grades
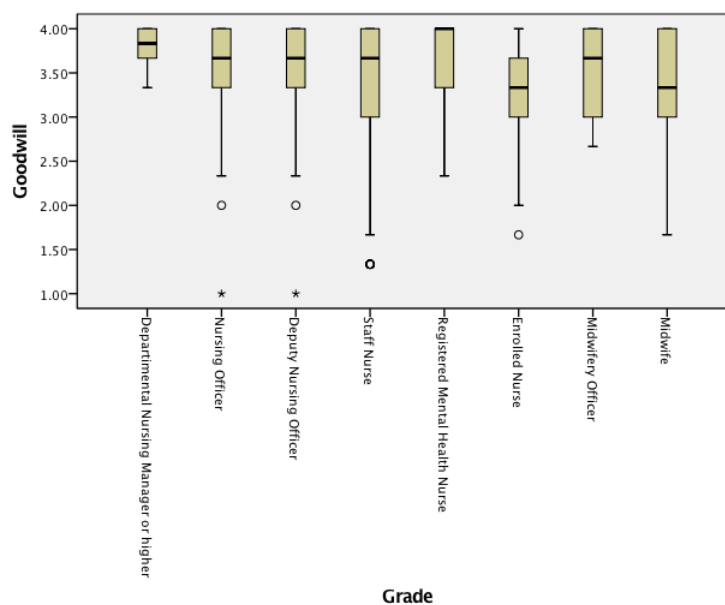
Figure 5.4. *Boxplot illustrating frequency distribution for Subscale 3 and Nursing Grades.*

Although sample distribution is similar across all groups, the group "Departmental Nursing Manager or higher" have the most agreement within the group. The median for the "Registered Mental Health Nursing" group is the most positive while that of the "Enrolled Nurses" and "Midwives" is the lowest.

Only lower end outliers are reported for subscale Social Control when data was analysed by grade. This indicates that the outliers scored lower than the sample distribution.

Total Attitudinal Score compared to Nurse's Grades
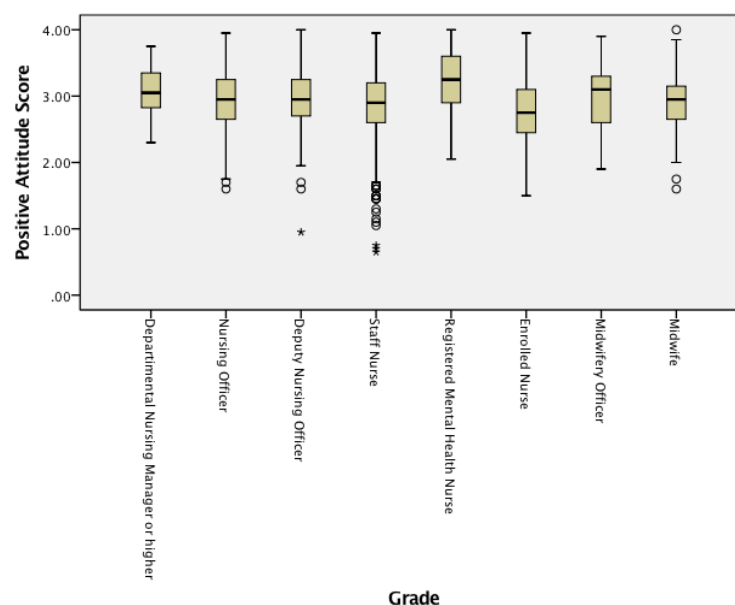
Figure 5.5. *Boxplot illustrating frequency distribution for Total Attitudinal Score and Nursing Grades.*

The boxplot representing the Total Attitudinal Score illustrates that the "Registered Mental Health Nurses" group have a high Median compared to the rest of the group. Participants in each group all share a similar view about attitudes towards mental illness.

Outliers for Total Attitudinal score denote that certain patricians hold less positive attitudinal scores than the rest of the distribution since they are at the lower end of the distribution. Most outliers are within the staff nurse subgroup which is the biggest represented group, thus such result maybe expected.
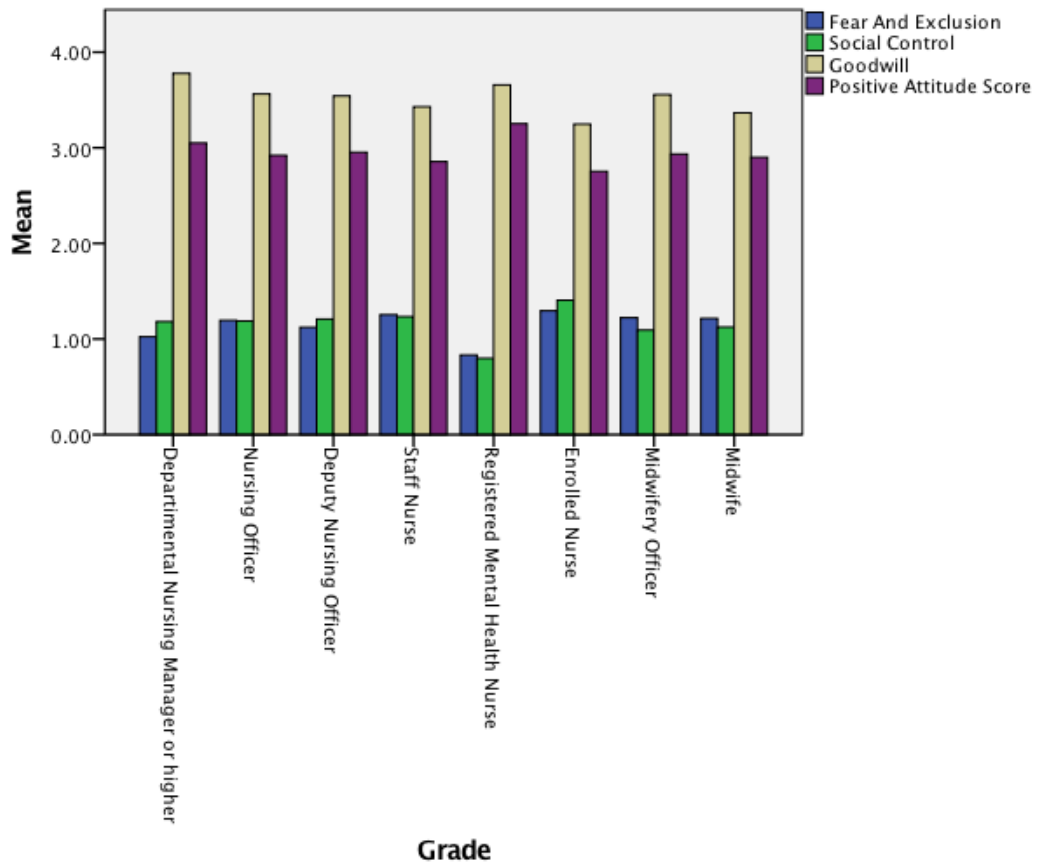
Figure 5.6. Graph illustrating sample distribution by Subscales according to Nursing Grades.

Mean and its confidence Interval across Grade

Series	Grade	Mean	SE	Lower CI	Upper CI
1	Departmental Nursing Manager or higher	3.05	0.13012	2.7949648	3.3050352
2	Nursing Officer	2.92	0.04539	2.8310356	3.0089644
3	Deputy Nursing Officer	2.9513	0.03901	2.8748404	3.0277596
4	Staff Nurse	2.8538	0.01621	2.8220284	2.8855716
5	Registered Mental Health Nurse	3.2513	0.06979	3.1145116	3.3880884
6	Enrolled Nurse	2.754	0.04021	2.6747885	2.8324123
7	Midwifery Officer	2.9333	0.22407	2.4941228	3.3724772
8	Midwife	2.8993	0.05188	2.7976152	3.0009848

Table 5.10. *Mean and Confidence Interval across Grade.*
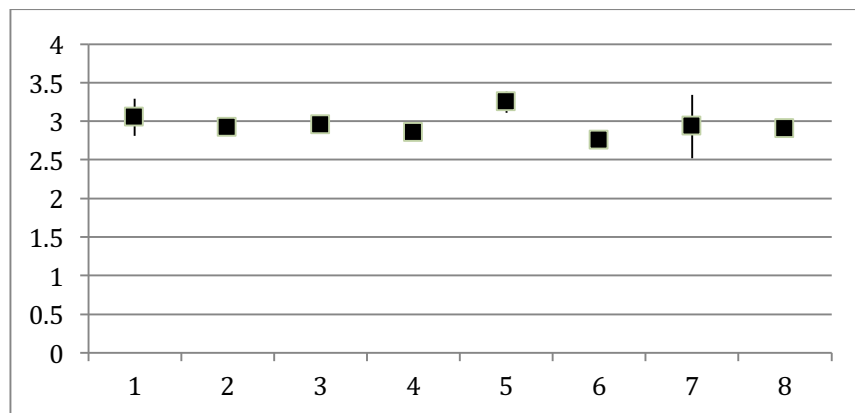
Figure 5.7. Plot comparing Mean and Confidence interval (95%) across Nurses' Grade.

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The above plot compares the Mean and its confidence interval (95%) across Nurses' Grade. Significant differences can be noted between Registered Mental Health Nurses against Nursing Officer, Deputy Nursing Officer, Staff Nurse and Midwife groups, as the interval bars do not overlap.

Subscale	Grade	N	Mean Rank	df	Chi-square	P-value
Fear And Exclusion	Departmental Nursing Manager or higher	12	601.08	7	27.876	<0.001
	Nursing Officer	115	697.28			
	Deputy Nursing Officer	153	680.10			
	Staff Nurse	944	762.28			
	Registered Mental Health Nurse	39	458.13			
	Enrolled Nurse	137	803.11			
	Midwifery Officer	9	737.89			
	Midwife	74	740.54			
	Total	1483				
Social Control	Departmental Nursing Manager or higher	12	730.63	7	39.408	<0.001
	Nursing Officer	115	727.52			
	Deputy Nursing Officer	153	713.16			
	Staff Nurse	944	745.33			
	Registered Mental Health Nurse	39	449.79			
	Enrolled Nurse	137	894.09			
	Midwifery Officer	9	619.89			
	Midwife	74	670.78			
	Total	1483				
Goodwill	Departmental Nursing Manager or higher	12	991.92	7	38.899	<0.001
	Nursing Officer	115	829.86			
	Deputy Nursing Officer	153	811.24			
	Staff Nurse	944	734.99			
	Registered Mental Health Nurse	39	915.29			
	Enrolled Nurse	137	601.15			
	Midwifery Officer	9	822.33			
	Midwife	74	670.90			
	Total	1483				
Positive Attitude Score	Departmental Nursing Manager or higher	12	883.42	7	41.808	<0.001
	Nursing Officer	115	789.17			
	Deputy Nursing Officer	153	805.16			
	Staff Nurse	944	727.19			
	Registered Mental Health Nurse	39	1064.37			
	Enrolled Nurse	137	615.06			
	Midwifery Officer	9	826.22			
	Midwife	74	758.99			
	Total	1483				

Table 5.11. One-Way ANOVA comparing Professional Grade and Attitudes.

Kruskal-Wallis H Test was conducted to compare the effects of Nursing Grades on the attitudes towards mental illness. There is a significant effect of Nursing Grade on Fear and Exclusion [H(7)=27.876, p<0.001]; Social Control [H(7)=39.408, p<0.001]; Goodwill [H(7)=38.899, p<0.001] and Positive Attitude Score [H(7)=41.808, p<0.001]. Between group comparisons using the Mann-Whitney *U* Test indicated significant difference in the following:

Subscale 1 – Fear and Exclusion

Registered Mental Health Nurse (RMN) and Nursing Officers (p=0.002); RMN and Staff Nurse (p<0.001); RMN and Enrolled Nurse (p<0.001); RMN and Midwife (p=0.001).

Subscale 2 – Social Control

Staff Nurse and Enrolled Nurse (p<0.001); Registered Mental Health Nurse and Nursing Officer (p<0.001); RMN and Deputy Nursing Officer (p<0.001); RMN and Staff Nurse (p<0.001); RMN and Enrolled Nurse (p<0.001); Midwife and Enrolled Nurse (p<0.001).

Subscale 3 – Goodwill

Enrolled Nurse (EN) and Departmental Nursing Manager of higher (p=0.003); EN and Nursing Officer (p<0.001); EN and Deputy Nursing Officer (p<0.001); EN and Staff Nurse (p<0.001); EN and Registered Mental Health Nurse (p<0.001).

Positive Attitude Score

Deputy Nursing Officer and Enrolled Nurse (p<0.001); Registered Mental Health Nurse [RMN] and Nursing Officer (p<0.001); RMN and Deputy Nursing Officer (p<0.001); RMN and Staff Nurse (p<0.001); RMN and Enrolled Nurse (p<0.001) and finally RMN and Midwife (p<0.001).

These results indicate that Registered Mental Health Nurses differ significantly in the attitudes towards mental illness. Also of note is that Enrolled Nurses also differ considerably from all other grades as regards to Goodwill.

5.8 Gender

Subscale 1 – Fear and Exclusion compared to Gender of nurses
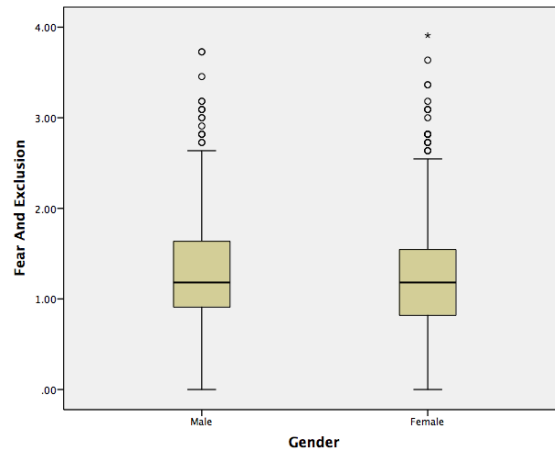
Figure 5.8. *Boxplot illustrating frequency distribution for Subscale 1 and Gender.*

Similar distribution and identical media value are observed within the two groups. This indicates no significant differences between the "Male" and "Female Nurses" groups. Similar top end distributed outliers are reported in both males and female subgroups for subscale Fear and exclusion. This indicates a similar distribution between male and female nurses.

Subscale 2 – Social Control compared to Gender of nurses
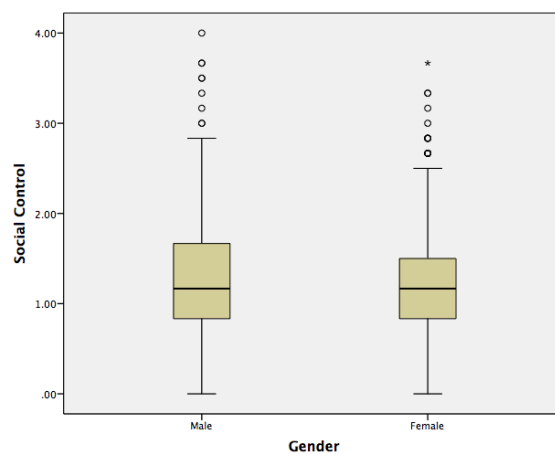
Figure 5.9. *Boxplot illustrating frequency distribution for subscale 2 and Gender.*

Although "Male Nurses" have a more varied opinion as regards to Social Control the medians are exactly the same for both groups. This shows no differences between the two groups. Although male outliers extend further than those reported for the female subgroup for subscale Social Control a similar distribution is still observed.

Subscale 3 – Goodwill compared to Gender of nurses
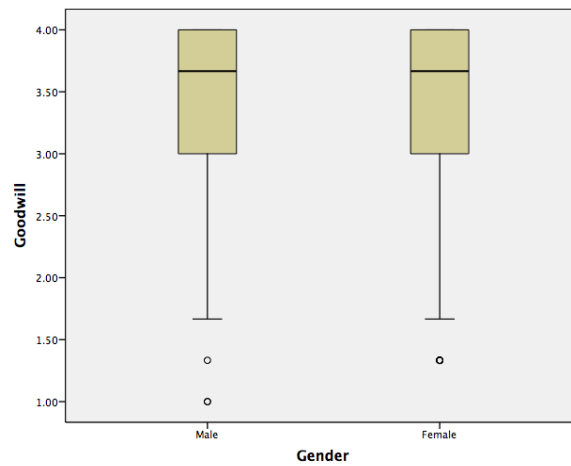
Figure 5.10. *Boxplot illustrating frequency distribution for Subscale 3 and Gender.*

The boxplot above illustrates an identical distribution and median between the two groups. This indicates no significant differences between groups. Only 3 outliers, 2 males and 1 female are observed for the subscale Goodwill. These outliers are at the lower end of the distribution indicating a low score for goodwill.

Total Attitudinal Score compared to Gender of nurses
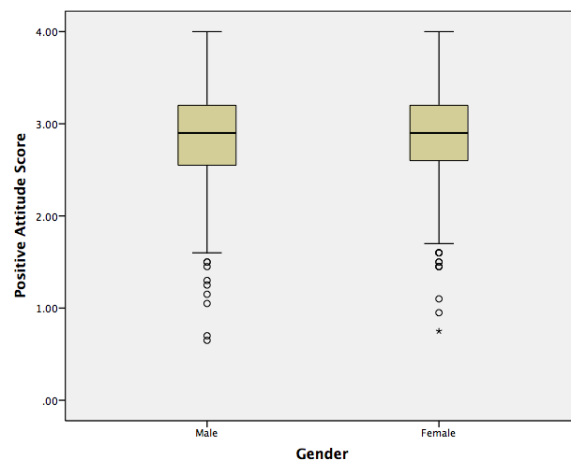
Figure 5.11. *Boxplot illustrating frequency distribution for Total Attitudinal Score and Gender.*

Similar distribution and identical media value are observed within the two groups. This indicates no significant differences between the Male and Female Nurses. Similar lower end distributed outliers are reported in both males and female subgroups for Total Attitudinal score. This indicates a similar distribution between male and female nurses.
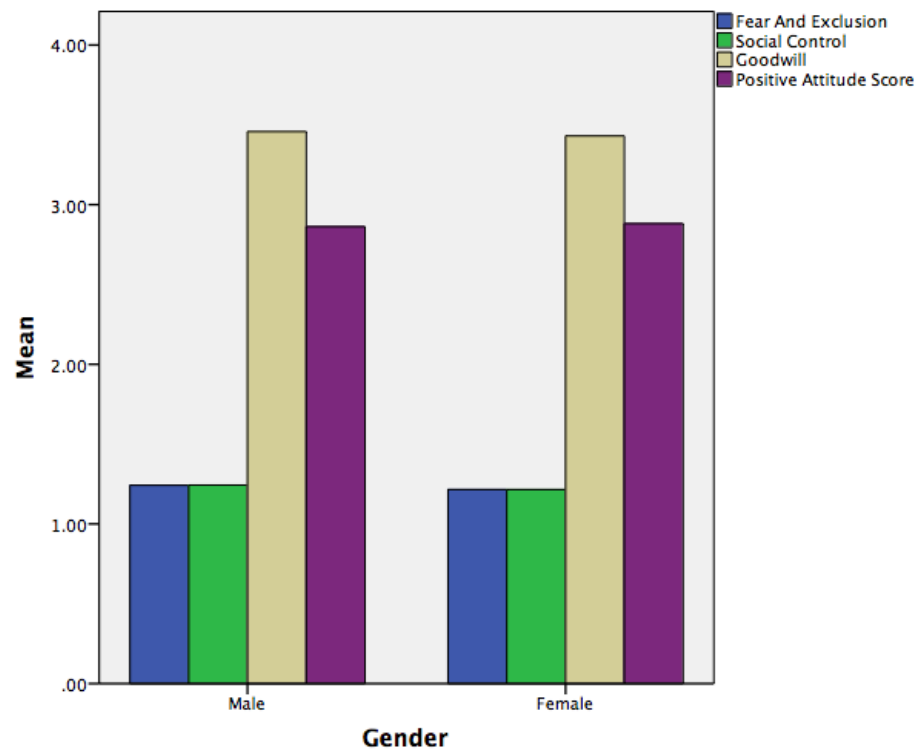
Figure 5.12. *Graph illustrating sample distribution by Subscale according to Gender.*

Mean and its confidence Interval across Gender

Series	Gender				
		Mean	SE	Lower CI	Upper CI
1	Males	2.8624	0.02271	2.8178884	2.9069116
2	Females	2.8814	0.01552	2.8509808	2.9118192

Table 5.12. *Mean and Confidence Interval across Gender.*
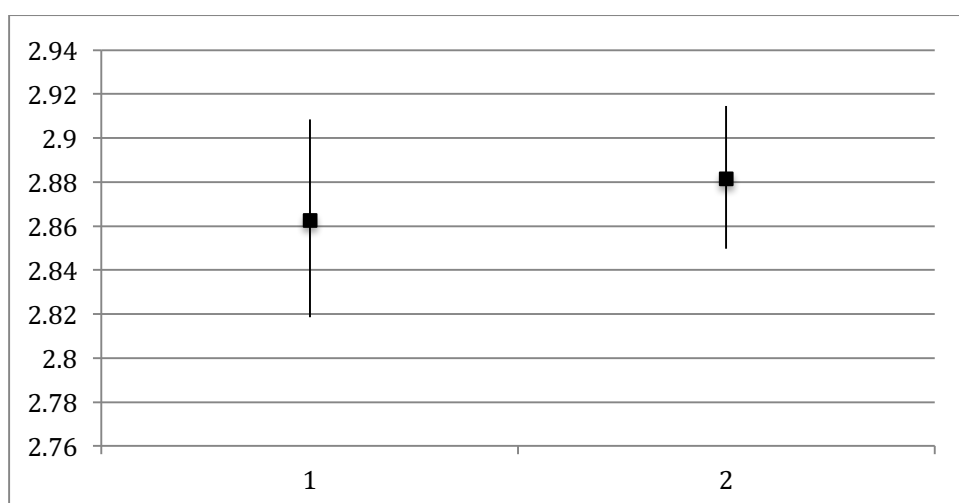
Figure 5.13. *Plot comparing Mean and Confidence interval (95%) across Nurses' Gender.*

The above plot compares the Mean and its confidence interval (95%) across Gender, Males (1) and Females(2). While the means are slightly different, the differences are not significant because all the interval bars easily overlap.

Mann-Whitney Test

					Ranks
	Gender	N	Mean Rank	Sum of Ranks	P-value
Fear And Exclusion	Male	533	749.26	399357.00	.624
	Female	950	737.93	701029.00	
	Total	1483			
Social Control	Male	533	748.39	398890.00	.666
	Female	950	738.42	701496.00	
	Total	1483			
Goodwill	Male	533	760.37	405276.50	.203
	Female	950	731.69	695109.50	
	Total	1483			
Positive Attitude Score	Male	533	734.97	391740.00	.636
	Female	950	745.94	708646.00	
	Total	1483			

Test Statistics[a]

	Fear And Exclusion	Social Control	Goodwill	Positive Attitude Score
Mann-Whitney U	249304.000	249771.000	243384.500	249429.000
Wilcoxon W	701029.000	701496.000	695109.500	391740.000
Z	-.490	-.432	-1.273	-.474
Asymp. Sig. (2-tailed)	.624	.666	.203	.636

a. Grouping Variable: Gender

Table 5.13. *Mann-Whitney Test comparing gender and subscales*

The Mann-Whitney Test reveals no significant differences between males and females when analysed by subscales Fear and Exclusion (*U*=249304, p=0.624), Social Control (*U*=249771, p=0.666), Goodwill (*U*=243385.5, p=0.203), and Positive Attitude Score (*U*=249429, p=0.636).

5.9 Age

Subscale 1 – Fear and Exclusion compared to Nurse's Age
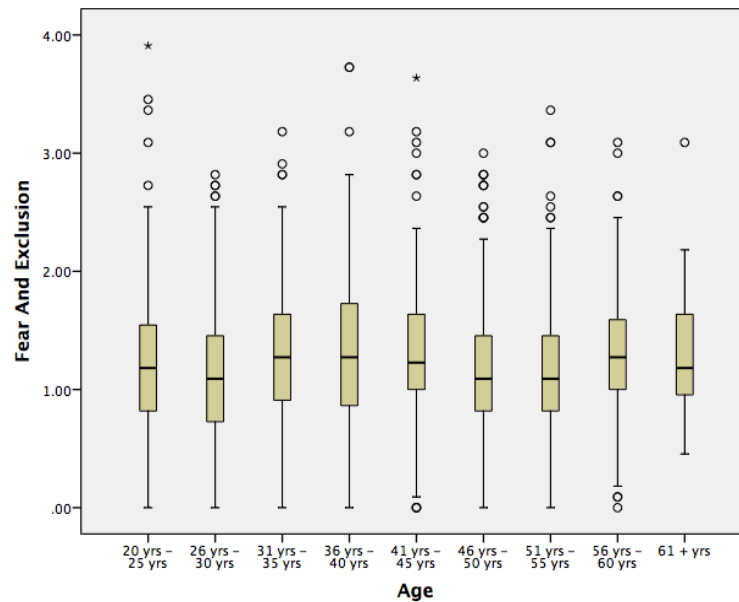
Figure 5.14. *Boxplot illustrating frequency distribution for Subscale 1 and Nurse's Age.*

Similar group distribution and median values are observed within the different Age groups. Top end outliers can be noted in all age subgroups for subscale fear and exclusion, whilst only three low end outliers, one age subgroup 41-45 years and two in the age subgroup 56-60 years.

Subscale 2 – Social Control compared to Nurse's Age
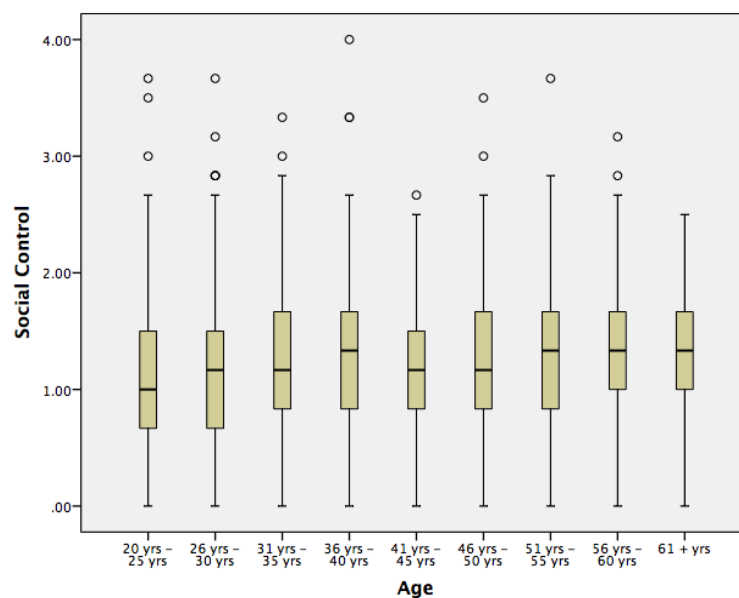
Figure 5.15. *Boxplot illustrating frequency distribution for Subscale 2 and Nurse's Age.*

The group 20 to 25 years of age shows a lower median value than the rest of the groups. Group opinions are very similar across all groups.

Top end outliers can be noted in all age subgroups expect for those ages 61 and over for the Social control subscale. No low end outliers are reported.

Subscale 3 – Goodwill compared to Nurse's Age
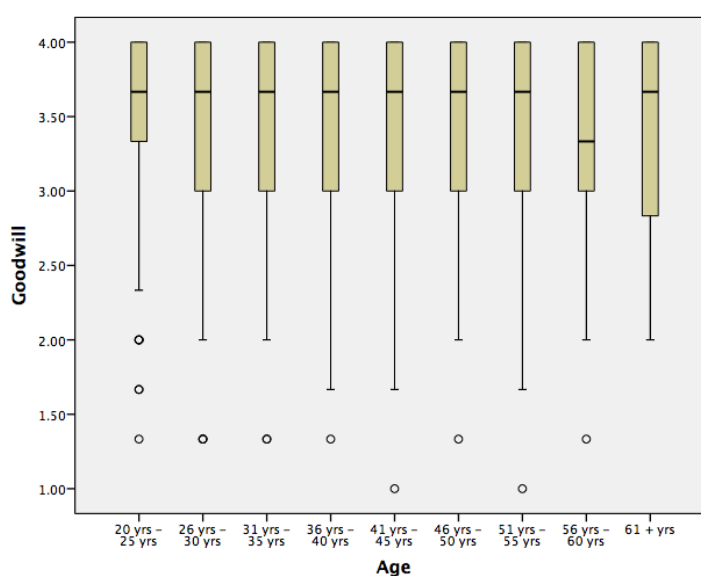
Figure 5.16. *Boxplot illustrating frequency distribution for Subscale 3 and Nurse's Age.*

The group 56 to 60 years of age show a lower median value than the rest of the groups, indicating differences between this group and the rest. Also of note is that the group 20 to 25 years share similar opinions for Goodwill as the remaining subgroups.

Only lower end outliers are reported for the age subgroups for subscale Goodwill. Of note is that no outliers for the subgroup aged 61 and over.

Total Attitudinal Score compared to Nurse's Age
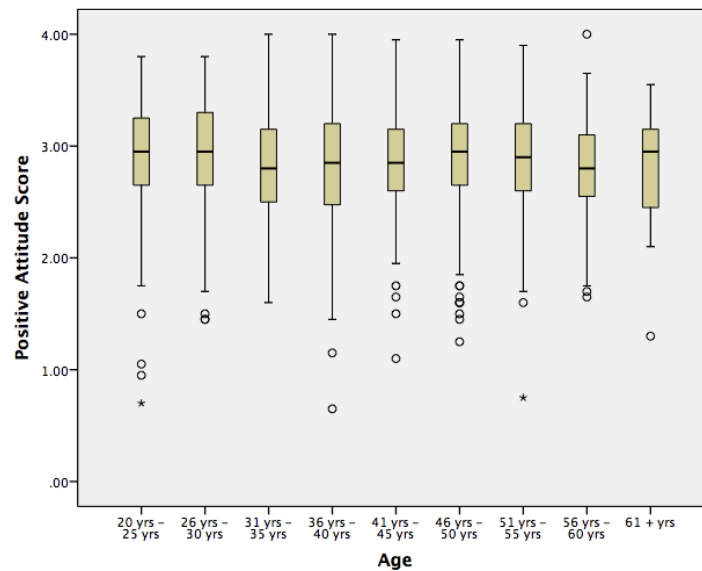
Figure 5.17. *Boxplot illustrating frequency distribution for Total Attitudinal Score and Nurse's Age.*

The above box plot illustrates that all Age groups have a high median value, with similar distributions. Of note is that groups 41 to 45 years and 56 to 60 years have the lowest medians. No outliers are reported in the subgroup aged 31 to 35 years for Total Attitudinal score, however low end outliers can be observed in the rest of the subgroups with only one top end outlier reported for the age group 56-60 years old.
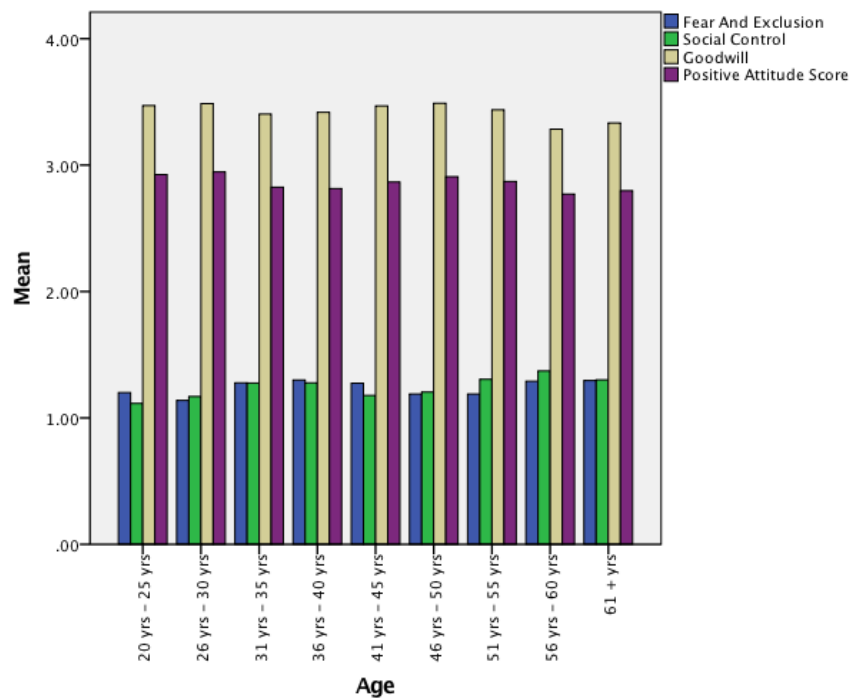
Figure 5.18. *Graph illustrating sample distribution by Subscales according to Age.*

Mean and its confidence Interval according to Age

Series	Age	Mean	SE	Lower CI	Upper CI
		Mean	SE	Lower CI	Upper CI
1	20 yrs - 25 yrs	2.9255	0.03386	2.8591344	2.9918656
2	26 yrs - 30 yrs	2.9462	0.03365	2.880246	3.012154
3	31 yrs - 35 yrs	2.825	0.04049	2.7456396	2.9043604
4	36 yrs - 40 yrs	2.8145	0.04914	2.7181856	2.9108144
5	41 yrs - 45 yrs	2.8658	0.333	2.21312	3.51848
6	46 yrs - 50 yrs	2.9077	0.03157	2.8458228	2.9695772
7	51 yrs - 55 yrs	2.8699	0.0391	2.793264	2.946536
8	56 yrs - 60 yrs	2.7713	0.0381	2.696624	2.845976
9	61 + yrs	2.7968	0.08469	2.6308076	2.9627924

Table 5.14. *Mean and Confidence Interval according to Age.*
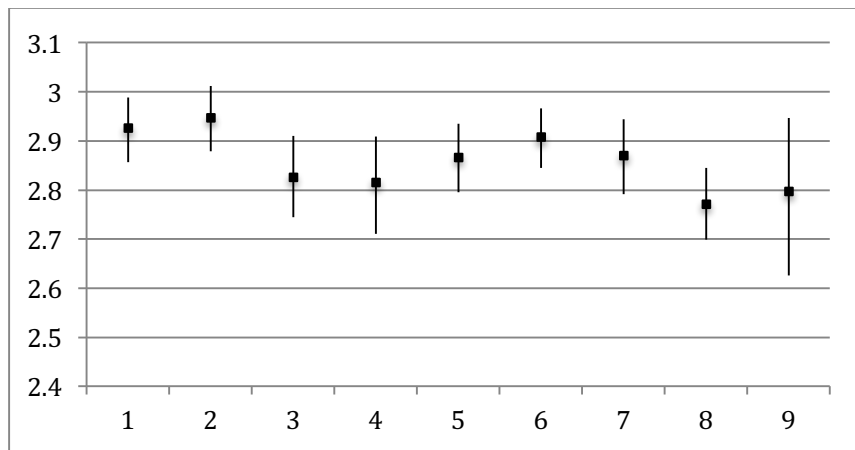
Figure 5.19. *Plot comparing Mean and Confidence interval (95%) across Nurses' Age.*

This plot compares the population distribution according to Age. While the means seem to be different, the differences are probably not significant because all the interval bars easily overlap.

	Age	Fear And Exclusion	Social Control	Goodwill	Positive Attitude Score
Spearman's rho Age Correlation Coefficient	1.000	.028	.110	-.062	-.069
P-value	.	.285	<.001	.018	.008
N	1483	1483	1483	1483	1483

Table 5.15. *Correlation between Age and subscales.*

The Spearman correlation test in Table 5.15 describes the strength and direction of the monotonic relationship between the demographic variable Age and each subscale, Fear and Exclusion, Social Control, Goodwill and Positive Attitude. A significant positive correlation was identified between "Age" and "Social Control", r (1481)= .110, p<.001, whilst significant negative correlations were identified between "Age" and "Goodwill", r (1481)= -.062, p=.018 and 'Positive Attitude', r (1481)= -.069, p=.008. No significant association was obtained by age and "Fear and Exclusion" r(1481) = .028, p = .285, two-tailed.

Subscales	Age	N	Mean Rank	df	Chi-square	P-value
Fear And Exclusion	20 yrs - 25 yrs	214	723.36	8	16.355	.038
	26 yrs - 30 yrs	212	677.85			
	31 yrs - 35 yrs	156	792.71			
	36 yrs - 40 yrs	131	786.35			
	41 yrs - 45 yrs	190	784.15			
	46 yrs - 50 yrs	252	711.21			
	51 yrs - 55 yrs	161	704.19			
	56 yrs - 60 yrs	136	804.58			
	61 + yrs	31	780.55			
	Total	1483				
Social Control	20 yrs - 25 yrs	214	656.23	8	26.830	.001
	26 yrs - 30 yrs	212	694.01			
	31 yrs - 35 yrs	156	780.20			
	36 yrs - 40 yrs	131	753.90			
	41 yrs - 45 yrs	190	724.53			
	46 yrs - 50 yrs	252	731.13			
	51 yrs - 55 yrs	161	799.44			
	56 yrs - 60 yrs	136	857.31			
	61 + yrs	31	810.97			
	Total	1483				
Goodwill	20 yrs - 25 yrs	214	765.10	8	16.611	.034
	26 yrs - 30 yrs	212	790.08			
	31 yrs - 35 yrs	156	709.11			
	36 yrs - 40 yrs	131	735.03			
	41 yrs - 45 yrs	190	760.57			
	46 yrs - 50 yrs	252	765.57			
	51 yrs - 55 yrs	161	735.73			
	56 yrs - 60 yrs	136	629.37			
	61 + yrs	31	670.00			
	Total	1483				
Positive Attitude Score	20 yrs - 25 yrs	214	794.36	8	23.838	.002
	26 yrs - 30 yrs	212	810.20			
	31 yrs - 35 yrs	156	686.00			
	36 yrs - 40 yrs	131	702.20			
	41 yrs - 45 yrs	190	714.49			
	46 yrs - 50 yrs	252	777.35			
	51 yrs - 55 yrs	161	746.67			
	56 yrs - 60 yrs	136	635.23			
	61 + yrs	31	689.60			
	Total	1483				

Table 5.16. *Kruskal-Wallis H test comparing Age and Attitudes*

Kruskal-Wallis H Test was conducted to compare the effects of Age on the attitudes towards mental illness. There is a significant effect of Age on Fear and Exclusion [H(8)=16.355, p=0.038]; Social Control [H(8)=26.830, p=0.001]; Goodwill [H(8)=16.611, p=0.034] and Positive Attitude Score [H(8)=23.838, p=0.002]. Between group comparisons using the Mann-Whitney *U* Test indicated significant difference in the following:

Subscale 1 – Fear and Exclusion

Age group 26-30 years showed a significant difference to the Age group 31-35 years (p=0.013), 36 to 40 years (p=0.034), 41 to 45 years (p=0.015) and to Age group 56 to

60 years (p=0.007). Significant differences were also observed between Age group 46 to 50 years and 56 to 60 years (p=0.032) and between Age group 51 to 55 years and 56 to 60 years (p=0.033).

Subscale 2 – Social Control

Age group 20 to 25 years showed a significant difference to the Age groups 31 to 35 years (p=0.009), 36 to 40 years (p=0.048), 51 to 55 years (p=0.001), 56 to 60 years (p<0.001) and 61 years and over (p=0.044).

Age group 26 to 30 years showed a significant difference to the Age groups 51 to 55 years (p=0.017) and 56 to 60 years (p=0.001).

Age group 56-60 years showed a significant difference to the Age group 20 to 25 years (p<0.001), 26-30 years (p=0.001), 36 to 60 years (0.050), 41 to 45 years (p=0.004), and to Age group 46 to 50 years (p=0.007).

Subscale 3 – Goodwill

Age group 56-60 years showed a significant difference to the Age group 20 to 25 years (p=0.003), 26-30 years (p=0.001), 36 to 40 years (p=0.044), 41 to 45 years (p=0.005), 46 to 50 years (p=0.002) and to Age group 51 to 55 years (p=0.026).

Positive Attitude Score

Age group 26-30 years showed a significant difference to the Age group 36 to 40 years (p=0.030) whilst Age group 31-35 years showed a significant difference to the Age group 20 to 25 years (p=0.016) and Age group 26-30 years (p=0.009).

Age group 41-45 years showed a significant difference to the Age group 20 to 25 years (p=0.050), 26-30 years (p=0.027), and Age group 46 to 50 years (p=0.034).

Age group 56-60 years showed a significant difference to the Age group 20 to 25 years (p=0.001), 26-30 years (p<0.001), 46 to 50 years (p=0.002) and Age group 51 to 55

These results indicate that Age group 56 to 60 years differ statistically than other age groups.

5.10 Nursing Education

Subscale 1 – Fear and Exclusion compared to Nurse's level Education
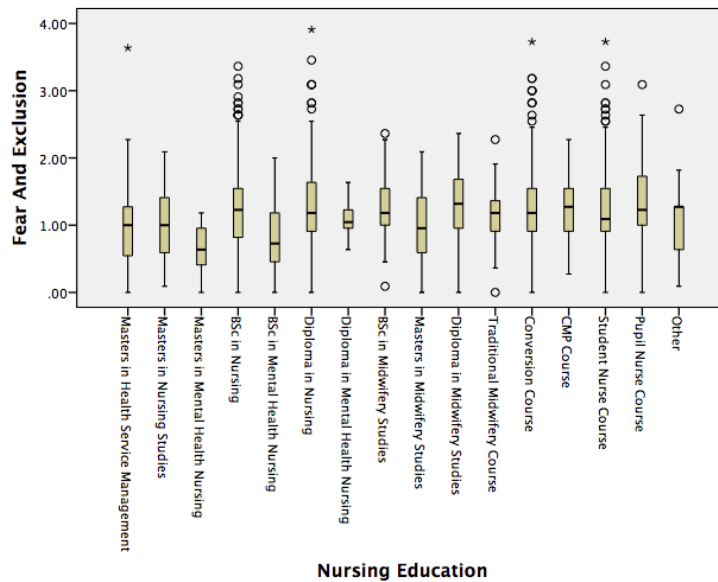
Figure 5.20. *Boxplot illustrating frequency distribution for Subscale 1 and Nursing Education.*

The box plot for Fear and Exclusion compared to Nurse's level of education indicates significant differences between the Masters in Mental Health Nursing group and the BSc in Mental Health Nursing group when compared to the rest of the groups. The majority of the top end outliers are observed in subgroups BSc in Nursing, Diploma in Nursing, Conversion course and Student Nurse course. Only two low end outliers are noted in subgroups BSc Midwifery studies and Traditional midwifery course.

Subscale 2 – Social Control compared to Nurse's level of Education
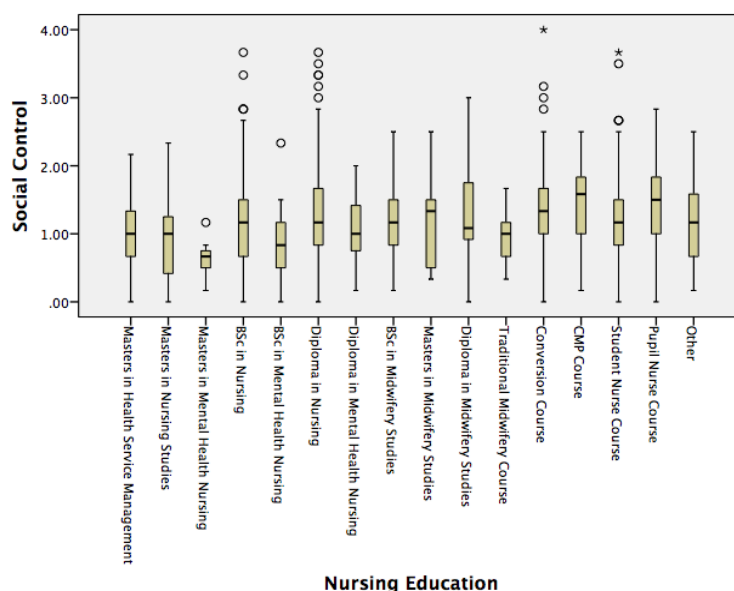
Figure 5.21. *Boxplot illustrating frequency distribution for Subscale 2 and Nursing Education.*

The above boxplot indicates a significant difference between the Masters in Mental Health Nursing group and the other groups.

A handful of top end outliers are observed, with the majority (n=5) within the in the Diploma in Nursing subgroup. No low end outliers are reported.

Subscale 3 – Goodwill compared to Nurse's level of Education
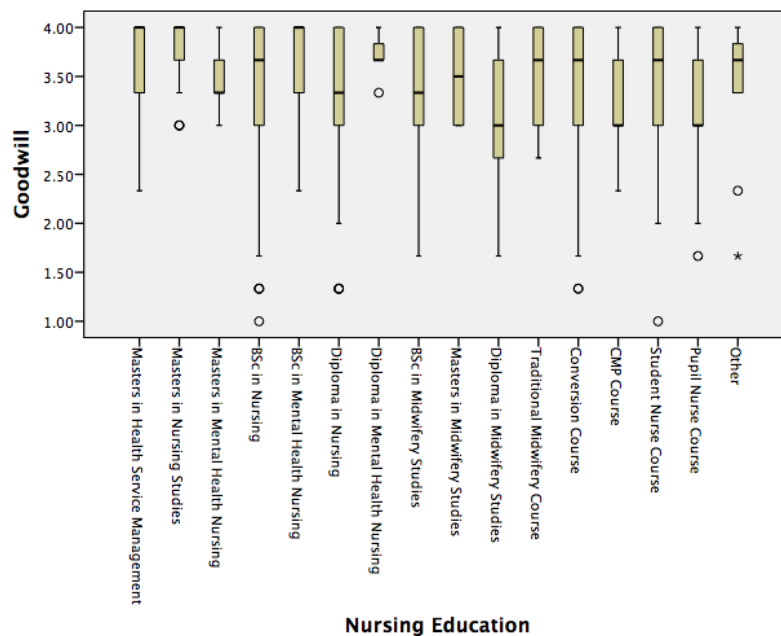
Figure 5.22. *Boxplot illustrating frequency distribution for Subscale 3 and Nursing Education.*

The different median scores and group distributions show that there is a marked difference between the groups in relation to their attitudes to the Goodwill factor.

Only 10 outliers are reported, all in the low end of the distribution, spread amongst the different education subgroups.

Total Attitudinal Score compared to Nurse's level of Education
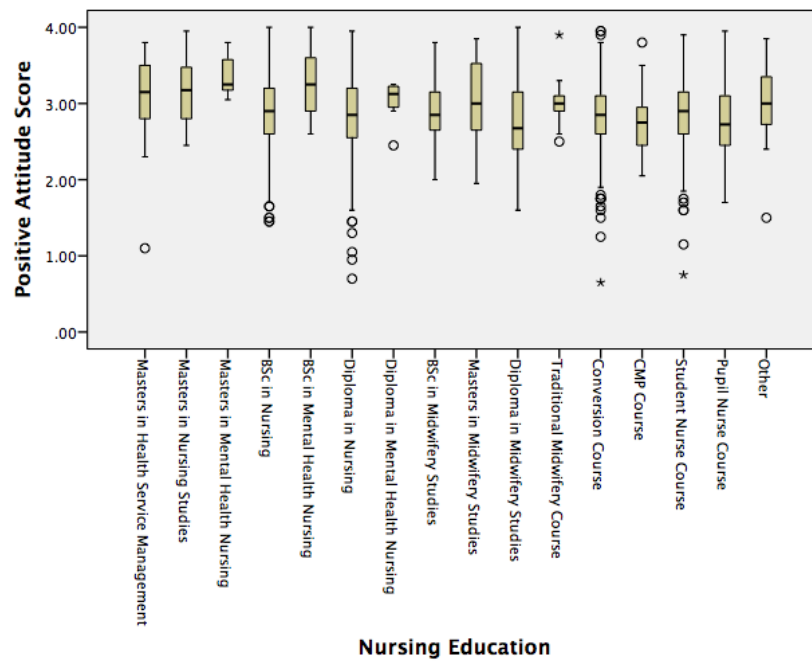
Figure 5.23. *Boxplot illustrating frequency distribution for Total Attitudinal Score and Nursing Education.*

Similarly, the above boxplot shows a scattered distribution with high median value for the Master in Mental Health group and a low median value for the Diploma in Midwifery studies group

Several outliers can be noted at both ends of the distribution. Of note are the low end outliers in both Diploma in Nursing, Conversion course and Student Nurse course subgroups. A small concentration of top end outliers are also reported within the Conversion course subgroup.
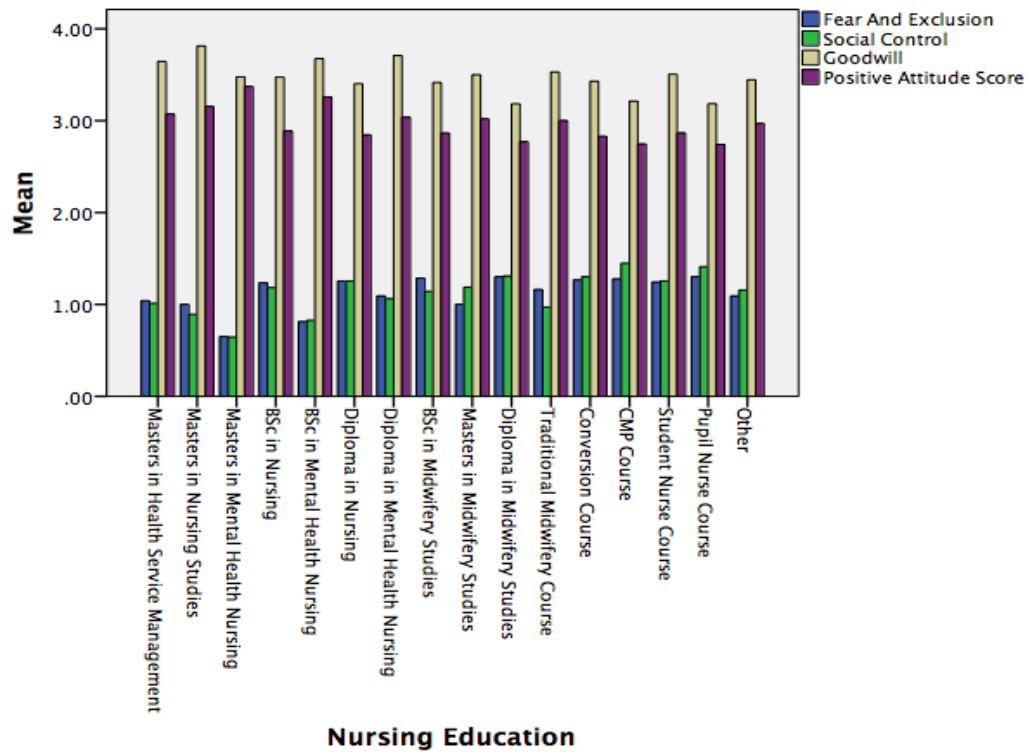
Figure 5.24. *Graph illustrating sample distribution by Subscales according to Nursing Education.*

Mean and its confidence Interval according to Nursing Education

Series	Nursing Education	Mean	SE	Lower CI	Upper CI
1	Masters in Health Service Management	3.0717	0.10547	2.8649788	3.2784212
2	Masters in Nursing Studies	3.1547	0.6914	1.799556	4.509844
3	Masters in Mental Health Nursing	3.3724	0.06914	3.2368856	3.5079144
4	BSc in Nursing	2.8874	0.02905	2.830462	2.944338
5	BSc in Mental Health Nursing	3.257	0.0594	3.140576	3.373424
6	Diploma in Nursing	2.8441	0.02659	2.7919836	2.8962164
7	Diploma in Mental Health Nursing	3.0375	0.09437	2.8525348	3.2224652
8	BSc in Midwifery Studies	2.8633	0.06303	2.7397612	2.9868388
9	Masters in Midwifery Studies	3.0188	0.21997	2.5876588	3.4499412
10	Diploma in Midwifery Studies	2.77	0.12919	2.5167876	3.0232124
11	Traditional Midwifery Course	3	0.07917	2.8448268	3.1551732
12	Conversion Course	2.8283	0.03015	2.769206	2.887394
13	CNP course	2.7455	0.10091	2.5477164	2.9432836
14	Student Nurse Course	2.8662	0.03308	2.8013632	2.9310368
15	Pupil Nurse Course	2.7398	0.04396	2.6536384	2.8259616
16	Other	2.97	0.14726	2.6813704	3.2586296

Table 5.17. *Mean and Confidence Interval according to Nursing Education.*
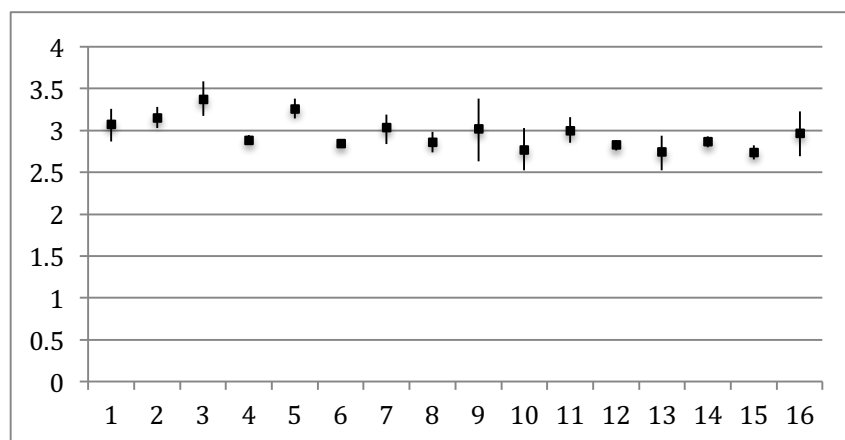
Figure 5.25. *Plot comparing Mean and Confidence interval (95%) across Nursing Education.*

The above plot compares the Mean and its confidence interval (95%) across Nurses' Education. Significant differences can be noted between groups, Masters in Mental Health Nursing and also BSc in Mental Health Nursing against the majority of the other groups, as the interval bars do not overlap.

Subscale 1	Level of Education	N	Mean Rank	df	Chi-square	P-value
Fear And Exclusion	Masters in Health Service Management	30	578.92	15	44.678	<0.001
	Masters in Nursing Studies	32	595.41			
	Masters in Mental Health Nursing	7	322.71			
	BSc in Nursing	302	748.91			
	BSc in Mental Health Nursing	43	447.06			
	Diploma in Nursing	364	764.80			
	Diploma in Mental Health Nursing	8	643.44			
	BSc in Midwifery Studies	45	794.56			
	Masters in Midwifery Studies	8	592.19			
	Diploma in Midwifery Studies	20	824.28			
	Traditional Midwifery Course	17	710.09			
	Conversion Course	258	774.06			
	CNP Course	22	796.18			
	Student Nurse Course	204	733.82			
	Pupil Nurse Course	108	807.84			
	Other	15	637.37			
	Total	1483				

Table 5.18. *Kruskal-Wallis H test comparing Fear and Exclusion and Level of Nursing Education.*

Subscale 2	Level of Education	N	Mean Rank	df	Chi-square	P-value
Social Control	Masters in Health Service Management	30	611.48	15	66.788	<0.001
	Masters in Nursing Studies	32	519.89			
	Masters in Mental Health Nursing	7	295.00			
	BSc in Nursing	302	708.72			
	BSc in Mental Health Nursing	43	468.57			
	Diploma in Nursing	364	750.57			
	Diploma in Mental Health Nursing	8	627.31			
	BSc in Midwifery Studies	45	689.72			
	Masters in Midwifery Studies	8	718.19			
	Diploma in Midwifery Studies	20	764.63			
	Traditional Midwifery Course	17	553.26			
	Conversion Course	258	800.22			
	CNP Course	22	918.30			
	Student Nurse Course	204	762.60			
	Pupil Nurse Course	108	896.14			
	Other	15	696.03			
	Total	1483				

Table 5.19. *Kruskal-Wallis H test comparing Fear and Exclusion and Level of Nursing Education.*

Subscale 3	Level of Education	N	Mean Rank	df	Chi-square	P-value
Goodwill	Masters in Health Service Management	30	905.67	15	69.635	<0.001
	Masters in Nursing Studies	32	1045.25			
	Masters in Mental Health Nursing	7	724.36			
	BSc in Nursing	302	774.79			
	BSc in Mental Health Nursing	43	924.86			
	Diploma in Nursing	364	714.97			
	Diploma in Mental Health Nursing	8	904.50			
	BSc in Midwifery Studies	45	700.40			
	Masters in Midwifery Studies	8	759.19			
	Diploma in Midwifery Studies	20	550.38			
	Traditional Midwifery Course	17	792.62			
	Conversion Course	258	725.59			
	CNP Course	22	545.70			
	Student Nurse Course	204	788.76			
	Pupil Nurse Course	108	553.36			
	Other	15	766.77			
	Total	1483				

Table 5.20. *Kruskal-Wallis H test comparing Fear and Exclusion and Level of Nursing Education.*

Positive Attitude	Level of Education	N	Mean Rank	df	Chi-square	P-value
Positive Attitude Score	Masters in Health Service Management	30	941.60	15	72.333	<0.001
	Masters in Nursing Studies	32	975.39			
	Masters in Mental Health Nursing	7	1207.36			
	BSc in Nursing	302	755.51			
	BSc in Mental Health Nursing	43	1067.62			
	Diploma in Nursing	364	718.37			
	Diploma in Mental Health Nursing	8	922.38			
	BSc in Midwifery Studies	45	725.42			
	Masters in Midwifery Studies	8	858.31			
	Diploma in Midwifery Studies	20	639.83			
	Traditional Midwifery Course	17	839.26			
	Conversion Course	258	695.95			
	CNP Course	22	596.61			
	Student Nurse Course	204	747.72			
	Pupil Nurse Course	108	603.50			
	Other	15	837.87			
	Total	1483				

Table 5.21. *Kruskal-Wallis H test comparing Positive Attitude and Level of Nursing Education.*

Kruskal-Wallis H Test was conducted to compare the effects of Education on the attitudes towards mental illness. There is a significant effect of Education on Fear and Exclusion [$H(15)=44.678$, $p<0.001$]; Social Control [$H(15)=66.788$, $p<0.001$]; Goodwill [$H(15)=69.635$, $p<0.001$] and Positive Attitude Score [$H(15)=72.333$, $p<0.001$]. Between group comparisons using the Mann-Whitney *U* Test indicated significant difference in the following:

Subscale 1 – Fear and Exclusion

The group BSc in Mental Health Nursing showed significant differences between Nurses with education level of BSc in Nursing studies ($p<0.001$); Diploma in Nursing

studies (p<0.001); BSc in Midwifery Studies (p<0.001); Conversion Course (p<0.001); Student Nurse Course (p<0.001) and also with the group of Pupil Nurse Course (p<0.001).

Subscale 2 – Social Control

The group Masters in Nursing studies showed significant differences when compared to the group with education level of Conversion Course (p<0.001) and with that of Pupil Nurse Course (p<0.001).

Nurses with a level of Education at BSc in Mental Health Nursing showed significant statistical differences between those at a level of BSc in Nursing Studies (p=0.001); Diploma in Nursing Studies (p<0.001); Conversion Course (p<0.001); CNP course (p<0.001); Student Nurse Course (p<0.001) and Pupil Nurse Course (p<0.001).

Subscale 3 – Goodwill

The group with a Masters in Nursing Studies differed significantly when compared to other groups in relation to Goodwill. Significant differences were observed with nurses with a level of education at Diploma in Nursing (p<0.001); Diploma in Midwifery Studies (p<0.001); Conversion Course (p<0.001) and Pupil Nurse Course (p<0.001).

Pupil Nurse Course also differed significantly when compared to other groups, namely BSc in Nursing Studies (p<0.001); BSc in Mental Health Nursing (p<0.001); Diploma in Nursing Studies (p<0.001); Conversion Course (p<0.001) and Student Nurse course (p<0.001).

Positive Attitude Score

When comparing the groups according to Level of Education with the positive attitude score several significances were noted. These include nurses with a Masters in Nursing Studies differed to those with Diploma in Nursing studies (p=0.001); Conversion Course (p<0.001) and with the group of Pupil Nurse Course (p<0.001).

Those nurses with a BSc in Mental Health Nursing showed significant statistical differences with other groups, namely, BSc in Nursing Studies (p<0.001); Diploma in Nursing Studies (p<0.001); BSc in Midwifery Studies (p<0.001); Diploma in Midwifery

Studies (p=0.001); Conversion Course (p<0.001), CNP course (p<0.001); Student Nurse Course (p<0.001) and Pupil Nurse Course (p<0.001).

These findings show that those nurses with BSc in Mental Health Nursing differ considerably from other groups as well as those nurses who continued their studies and graduated with a Masters in Nursing also showed significant differences when compared to other nurses with lower level of education.

5.11 Years in Service

Subscale 1 – Fear and Exclusion compared to Nurse's years in service
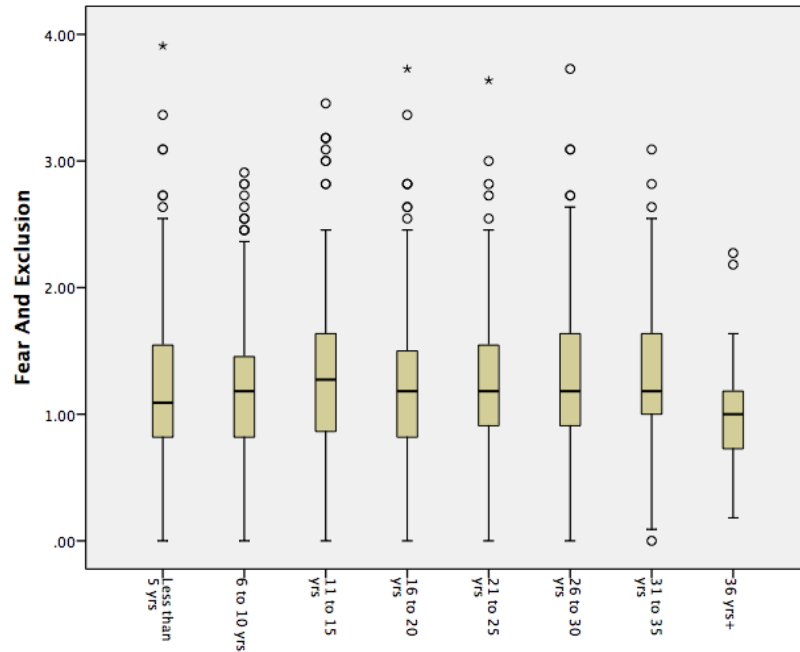
Figure 5.26. *Boxplot illustrating frequency distribution for Subscale 1 and Years in Service.*

The above box plot shows similar group distribution and median values. Whilst only one low end outlier is reported in subgroup 31 to 35 years in nursing service, all subgroups include tope end outliers. The majority of these top end outlies are found in subgroups less than 5 years and 6 to 10 years of nursing service.

Subscale 2 – Social Control compared to Nurse's years in service
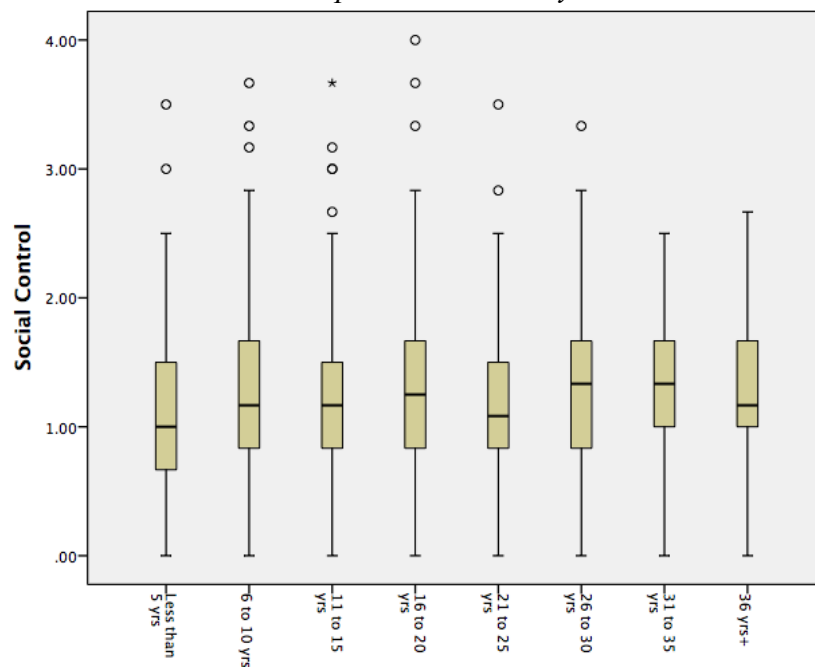
Figure 5.27. *Boxplot illustrating frequency distribution for Subscale 2 and Years in Service.*

The above box plot shows similar group distribution. The lowest median value is observed for the "Less than 5 years in service" group. Outliers are reported at the top end of the distribution, with subgroups 31 to 36 years and over of nursing service reporting no outliers.

Subscale 3 – Goodwill compared to Nurse's years in service
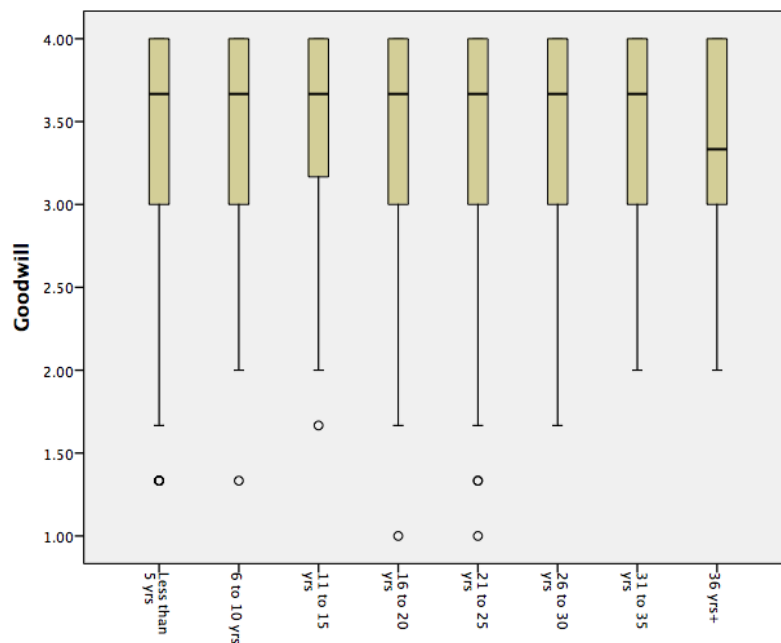
Figure 5.28. *Boxplot illustrating frequency distribution for Subscale 3 and Years in Service.*

The above box plot for Nurse's years in service compared to Goodwill show similar group distribution but a very low median values for the "36 years and over" group.

Only 6 outliers are reported, all within the low end of the distribution. Two out of the 6 outliers are within the 21 to 25 years in service subgroup.

Total Attitudinal Score compared to Nurse's years in service
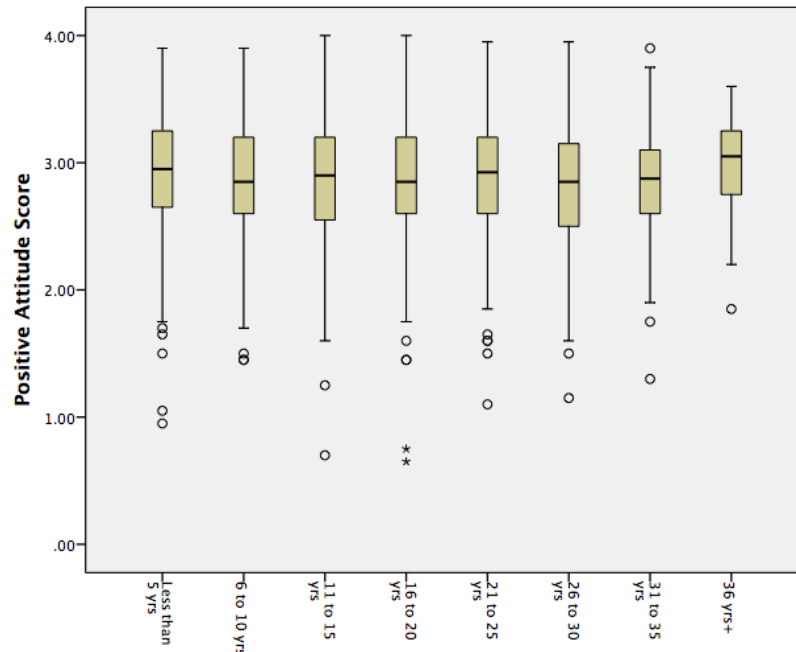
Figure 5.29. *Boxplot illustrating frequency distribution for Total Attitudinal Score and Years in Service.*

This box plot shows similar group and median distribution. The highest median value is observed for the "36 years and over" group.

Whilst only top low end outlier is reported in subgroup 31 to 35 years in nursing service, all subgroups include tope end outliers. The majority of these low end outlies are reported in subgroups less than 5 years of nursing service.
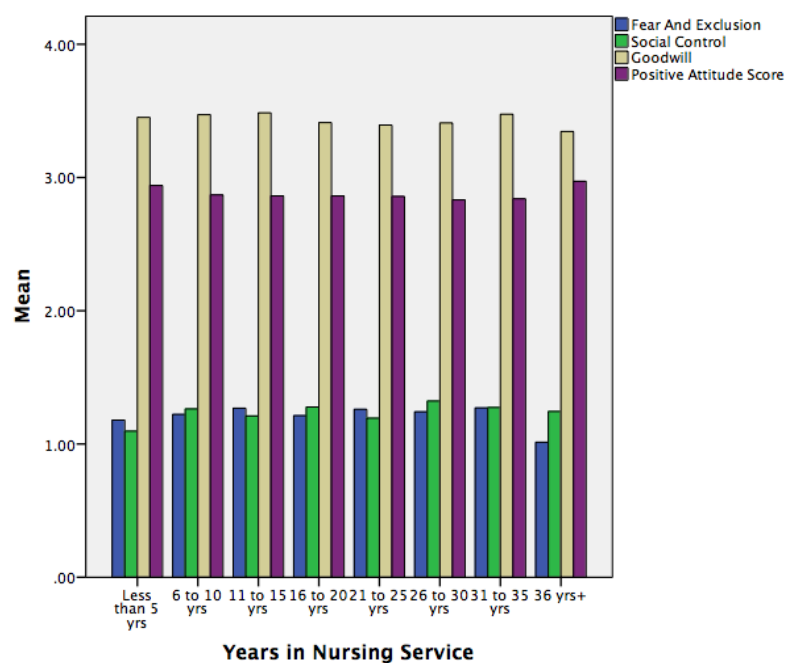
Figure 5.30. *Graph illustrating sample distribution by Subscales according to Years in Nursing Service.*

Mean and its confidence Interval according to Years in Nursing Service

Series	Years in Nursing Service	Mean	SE	Lower CI	Upper CI
1	Less than 5 years	2.9402	0.02728	2.8867312	2.9936688
2	6 to 10 years	2.8696	0.03335	2.804234	2.934966
3	11 to 15 years	2.862	0.03905	2.785462	2.938538
4	16 to 20 years	2.8616	0.03382	2.7953128	2.9278872
5	21 to 25 years	2.8578	0.0403	2.778812	2.936788
6	26 to 30 years	2.832	0.03386	2.7656344	2.8983656
7	31 to 35 years	2.8402	0.0373	2.767092	2.913308
8	36 years and over	2.9714	0.07375	2.82685	3.11595

Table 5.22. *Mean and Confidence Interval according to Years in Nursing Service.*
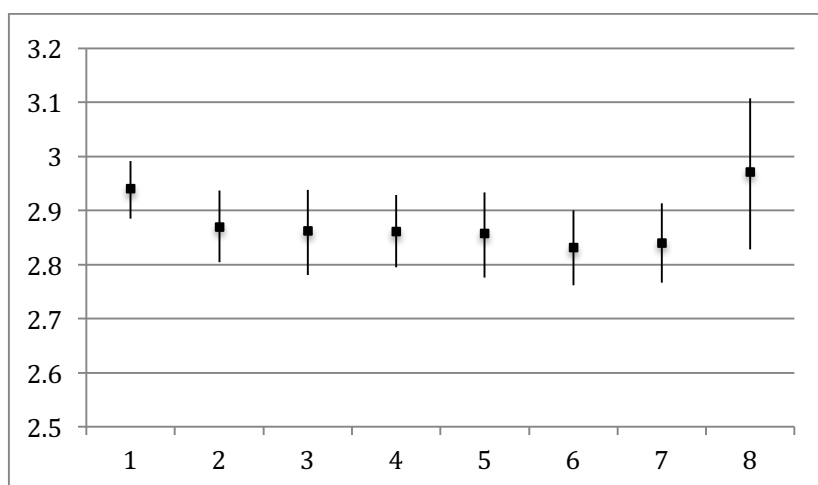
Figure 5.31. *Plot comparing Mean and Confidence interval (95%) across Years in Nursing Service.*

This plot compares the Mean and its confidence interval (95%) across Years in Nursing Service. While the means are slightly different, the differences are probably not significant because all the interval bars easily overlap.

			Years in Nursing Service	Fear And Exclusion	Social Control	Goodwill	Positive Attitude Score
Spearman's rho	Years in Nursing Service	Correlation Coefficient	1.000	.024	.103	-.042	-.059
		P-value	.	.351	<.001	.106	.022
		N	1483	1483	1483	1483	1483

Table 5.23. *Correlation between Years in Nursing Service and Factors.*

The Spearman correlation test in Table 5.23 describes the strength and direction of the monotonic relationship between the demographic variable Years in Nursing Service and the subscales, Fear and Exclusion, Social Control, Goodwill and Positive Attitude. The correlation between "Years in Nursing Service" and "Social Control" shows a statistical significant positive relationship, $r(1481) = .103$, p =<.001, two-tailed. Conversely a statistical significant negative correlation relationship is observed between "Years in Nursing Service" and "Positive Attitude Score", $r(1481) = -.059$, p = .022.

Subscale	Years in Nursing Service	N	Mean Rank	df	Chi-square	P-value
Fear And Exclusion	Less than 5 yrs	306	710.00	7	8.880	.261
	6 to 10 yrs	222	746.06			
	11 to 15 yrs	191	768.17			
	16 to 20 yrs	224	731.55			
	21 to 25 yrs	166	765.71			
	26 to 30 yrs	214	752.43			
	31 to 35 yrs	132	779.46			
	36 yrs+	28	567.79			
	Total	1483				
Social Control	Less than 5 yrs	306	653.16	7	24.457	.001
	6 to 10 yrs	222	760.01			
	11 to 15 yrs	191	726.58			
	16 to 20 yrs	224	767.56			
	21 to 25 yrs	166	718.01			
	26 to 30 yrs	214	818.06			
	31 to 35 yrs	132	798.71			
	36 yrs+	28	764.43			
	Total	1483				
Goodwill	Less than 5 yrs	306	763.11	7	5.840	.559
	6 to 10 yrs	222	763.84			
	11 to 15 yrs	191	767.47			
	16 to 20 yrs	224	711.70			
	21 to 25 yrs	166	733.70			
	26 to 30 yrs	214	705.96			
	31 to 35 yrs	132	754.25			
	36 yrs+	28	673.73			
	Total	1483				
Positive Attitude Score	Less than 5 yrs	306	802.39	7	11.513	.118
	6 to 10 yrs	222	732.30			
	11 to 15 yrs	191	731.98			
	16 to 20 yrs	224	733.77			
	21 to 25 yrs	166	736.72			
	26 to 30 yrs	214	696.00			
	31 to 35 yrs	132	705.92			
	36 yrs+	28	846.95			
	Total	1483				

Table 5.24. *Kruskal-Wallis H test comparing Years in Nursing service and Attitudes*

Kruskal-Wallis H Test was conducted to compare the effects of Years in Nursing Service on the attitudes towards mental illness. There is a significant effect of Years in Nursing Service on Social Control [H(7)=24.457, p=0.001]. No other significant effect was noted for the other subscales (Fear and Exclusion p=0.261; Goodwill p=0.559 and Positive Attitudes Score p=0.118). Between group comparisons using the Mann-Whitney *U* Test indicated significant difference in the following:

Subscale 2 – Social Control

Nurses grouped in the category Less than 5 years in Nursing Service differed significantly to those with 6 to 10 years of service (p=0.007); 16 to 20 years of service (p=0.002) and with those with 26 to 30 years in service (p<0.001).

These results indicate that only those with less than 5 years working experience showed a significant difference in relation to the Social Control Factor only. No other significant differences were noted between groups and factors.

5.12 Work Setting

Subscale 1 – Fear and Exclusion compared to Work setting

Figure 5.32. *Boxplot illustrating frequency distribution for Subscale 1 and Work Setting.*

Similar median values are observed within the groups, however of note is the low median value for the individuals working within "Dermatology" and "Mental Health".

Several top end outliers are noted. However, the increase in number of outliers compared to the other variables is expected since respondents could chose more than one setting, reflective or their movement within the health system. The population is 1483 however the number of responses to the varied work setting increased to 2168. Outliers account for 1.8% of the population responses. Of note is that no outliers are reported for the Dermatology, Community, Gynaecology and Maternity subgroup.

Subscale 2 – Social Control compared to Work Setting
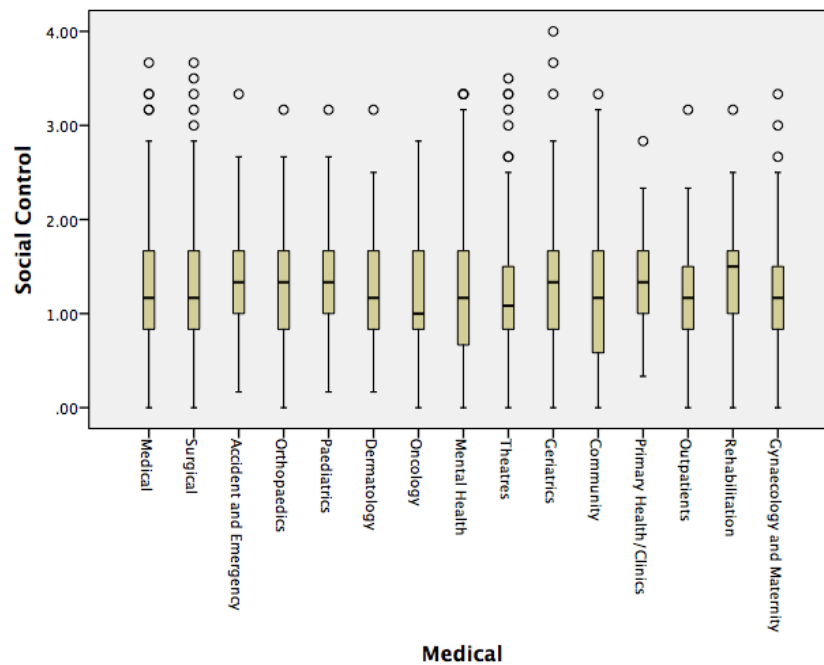
Figure 5.33. *Boxplot illustrating frequency distribution for Subscale 2 and Work Setting.*

Population distribution is similar across all groups. "Rehabilitation" group has the highest median value, whilst the lowest value is that for the "Oncology" work-setting group.

No low end outliers are reported for work setting for the subscale Social Control. Top end outliers account for 1.3% of the population's response. Only the Oncology subgroup reports no outliers. The most outliers are noticeable in the subgroups of nurses working within a Surgical and Theatres setting.

Subscale 3 – Goodwill compared to Work Setting
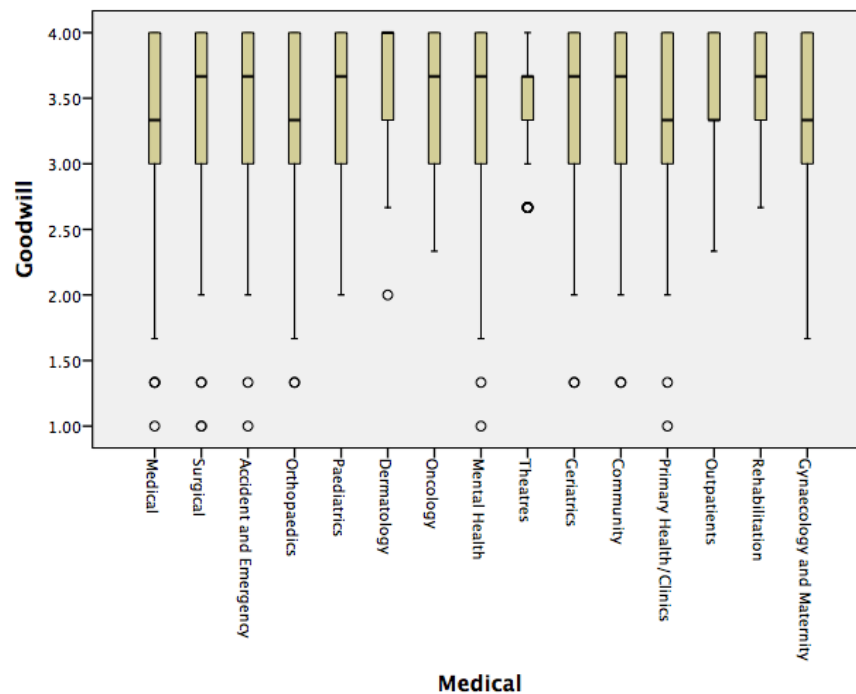
Figure 5.34. *Boxplot illustrating frequency distribution for Subscale 3 and Work Setting.*

Similar distributions can be noted for groups working in the "Medical", "Surgical", "Accident and Emergency", "Orthopaedics", "Paediatrics", "Oncology", "Mental Health", "Geriatrics", "Community", "Primary Health Care" and "Gynaecology and Maternity" settings. The highest Median value is observed in the "Dermatology" group.

Only a handful of outliers are noted, all at the low end of the distribution. The total percentage of outliers accounts for 0.7% of the sample population. No outliers are reported for the subgroups working within Paediatrics, Oncology, Outpatients, Rehabilitation, Gynaecology and Maternity.

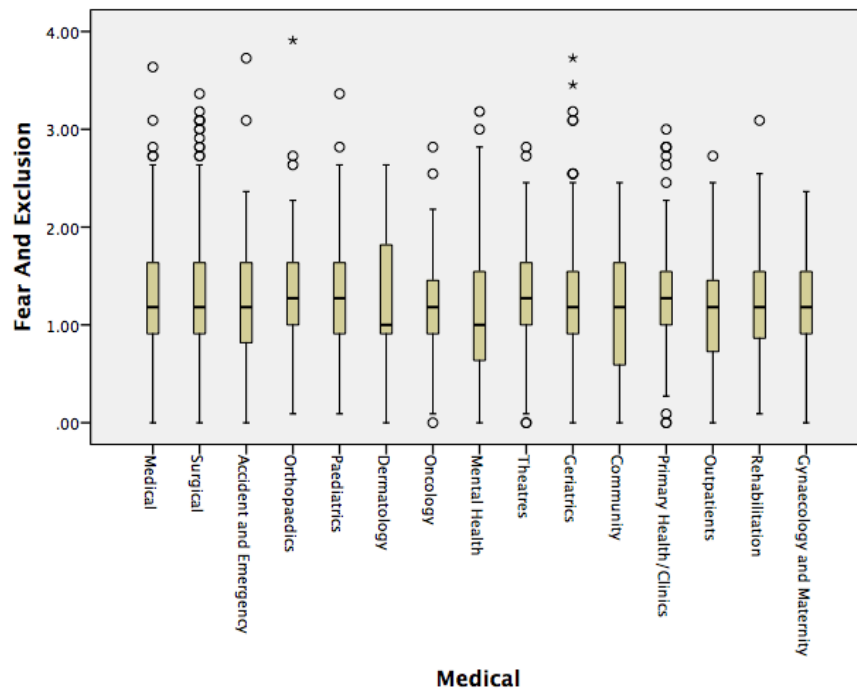*Total Attitudinal Score compared to Work Setting*
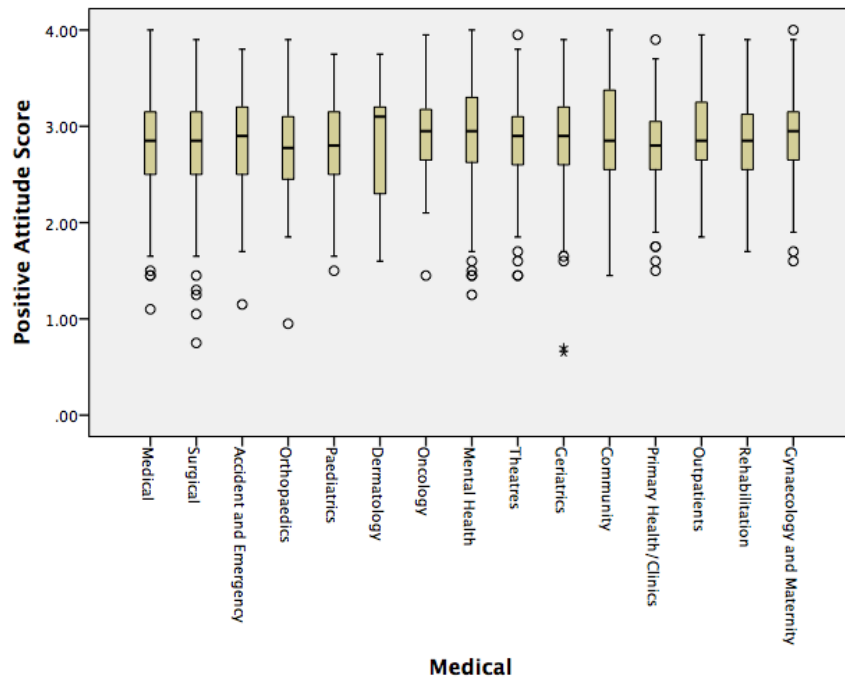
Figure 5.35. *Boxplot illustrating frequency distribution for Total Attitudinal Score and Work Setting.*

Similar median values are observed within the groups, however of note is the high median value for the individuals working within "Dermatology".

Outlier account for 1.4% of the population. Such percentage is expected with a big sample response (n=2168). Both top and low end outliers can be observed within the subgroups except for Dermatology, Community, Outpatients, Rehabilitation, Gynaecology and Maternity.
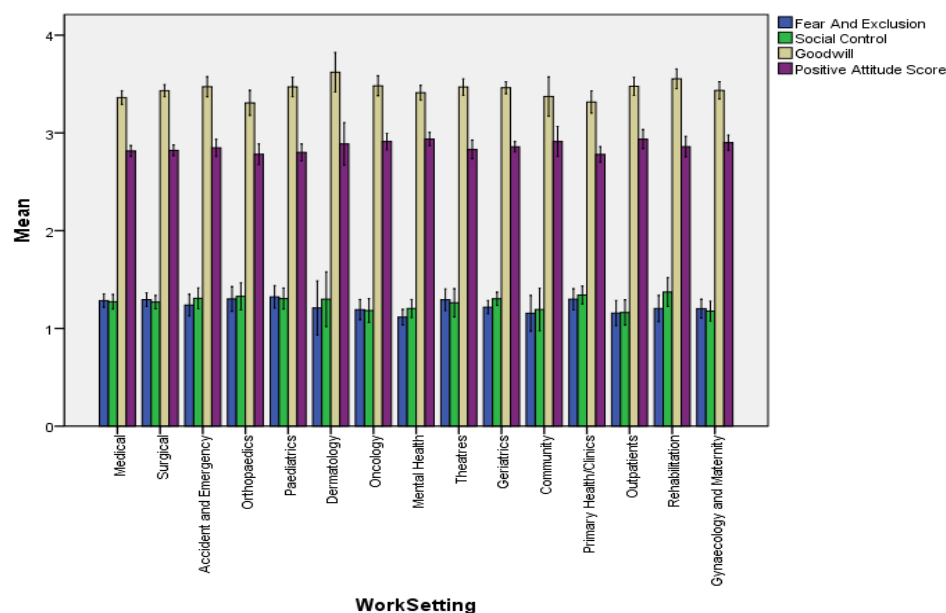
Figure 5.36. Graph illustrating sample distribution by Subscales according to Work Setting.

Mean and its confidence Interval according to Work Setting

Series	Work Setting				
		Mean	SE	Lower CI	Upper CI
1	Medical	2.8159	0.02912	2.7588248	2.8729752
2	Surgical	2.8214	0.02818	2.7661672	2.8766328
3	Accident and Emergency	2.8474	0.4505	1.96442	3.73038
4	Orthopaedics	2.7817	0.05341	2.6770164	2.8863836
5	Paediatrics	2.8015	0.04375	2.71575	2.88725
6	Dermatology	2.8879	0.10646	2.6792384	3.0965616
7	Oncology	2.912	0.04245	2.828798	2.995202
8	Mental Health	2.9372	0.03489	2.8688156	3.0055844
9	Theatres	2.8306	0.04838	2.7357752	2.9254248
10	Geriatrics	2.8587	0.0273	2.805192	2.912208
11	Community	2.9127	0.07644	2.7628776	3.0625224
12	Primary Health/Clinics	2.7805	0.04043	2.7012572	2.8597428
13	Outpatients	2.9366	0.04974	2.8391096	3.0340904
14	Rehabilitation	2.8596	0.05266	2.7563864	2.9628136
15	Gynaecology and Maternity	2.9008	0.03915	2.824066	2.977534

Table 5.25. Mean and Confidence Interval according to Work Setting.

Figure 5.37. Plot comparing Mean and Confidence interval (95%) according to Work Setting.

The above plot compares the Mean and its confidence interval (95%) across Work Setting. Significant differences can be noted between those working within Mental Health and

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Medical, Surgical as well as Primary Health/Clinic setting, as the interval bars do not overlap.

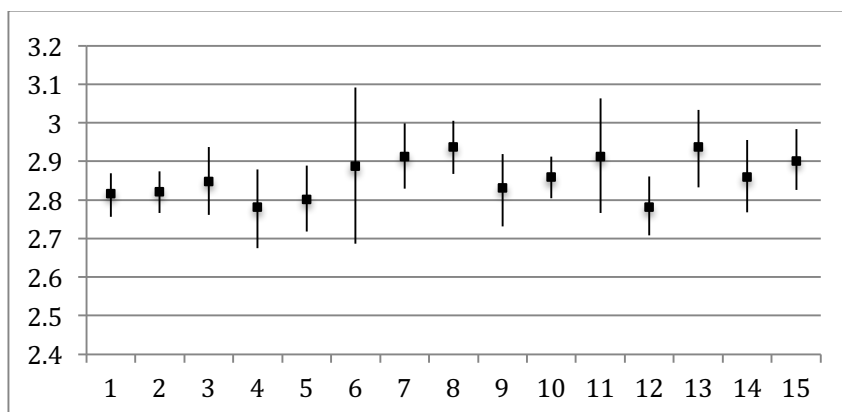| Subscale	Ward Setting	N	Mean Rank	df	Chi-square	P-value
Fear And Exclusion	Medical	301	1126.80	14	23.989	0.046
	Surgical	337	1124.99			
	Accident and Emergency	117	1085.20			
	Orthopedics	90	1152.19			
	Pediatrics	102	1174.93			
	Dermatology	29	1009.48			
	Oncology	92	1054.37			
	Mental Health	243	947.91			
	Theatres	98	1180.27			
	Geriatrics	310	1064.04			
	Community	51	1016.61			
	Primary Health/Clinics	113	1151.41			
	Outpatients	86	1022.48			
	Rehabilitation	68	1049.33			
	Gynecology and Maternity	131	1061.23			
Social Control	Medical	301	1084.66	14	21.392	0.092
	Surgical	337	1084.97			
	Accident and Emergency	117	1133.03			
	Orthopedics	90	1160.87			
	Pediatrics	102	1152.88			
	Dermatology	29	1074.60			
	Oncology	92	1005.53			
	Mental Health	243	1017.57			
	Theatres	98	1016.81			
	Geriatrics	310	1128.81			
	Community	51	1004.47			
	Primary Health/Clinics	113	1188.34			
	Outpatients	86	1004.87			
	Rehabilitation	68	1209.88			
	Gynecology and Maternity	131	990.25			
Goodwill	Medical	301	1029.30	14	20.187	0.124
	Surgical	337	1094.72			
	Accident and Emergency	117	1136.82			
	Orthopedics	90	959.20			
	Pediatrics	102	1116.59			
	Dermatology	29	1330.28			
	Oncology	92	1124.42			
	Mental Health	243	1080.49			
	Theatres	98	1075.18			
	Geriatrics	310	1125.95			
	Community	51	1091.09			
	Primary Health/Clinics	113	970.23			
	Outpatients	86	1092.27			
	Rehabilitation	68	1189.98			
	Gynecology and Maternity	131	1069.46			
Positive Attitude Score	Medical	301	1041.53	14	23.245	0.056
	Surgical	337	1053.88			
	Accident and Emergency	117	1083.56			
	Orthopedics	90	973.98			
	Pediatrics	102	1003.20			
	Dermatology	29	1188.45			
	Oncology	92	1157.01			
	Mental Health	243	1202.15			
	Theatres	98	1063.36			
	Geriatrics	310	1093.75			
	Community	51	1137.63			
	Primary Health/Clinics	113	977.00			
	Outpatients	86	1152.55			
	Rehabilitation	68	1072.76			
	Gynecology and Maternity	131	1137.28			

Table 5.26. *Kruskal-Wallis H test comparing Work Setting and Attitudes*

Kruskal-Wallis H Test was conducted to compare the effects of different areas of Work on the attitudes towards mental illness. There is a significant effect of Work Setting on Fear and Exclusion [H(14)=23.989, p=0.046]. No other significant effect was noted for the other subscales (Social Control, p=0.092, Goodwill, p=0.124 and Positive Attitudes Score, p=0.056). Between group comparisons using the Mann-Whitney U Test indicated significant difference in the following:

Subscale 1 – Fear and Exclusion

      The group working within a Mental Health Setting differed from the group working in a Surgical Setting (p=0.001).

These results indicate that no major significant differences can be observed between the groups working within different settings.

5.13 Years in Mental Health Setting

Subscale 1 – Fear and Exclusion compared to number of years of nurses working in the mental health setting

Figure 5.38. *Boxplot illustrating frequency distribution for Subscale 1 and Years in Mental Health Setting.*

The above boxplot illustrates that the median values of the different "Years in Mental Health Setting" groups are all similar.

Whilst several outliers can be observed in the group with no experience in mental health, accounting for 1.1% of this subgroup distribution, only 2 outliers top end outliers are reported within those subgroups working within mental health nursing. These outliers represent 1.1% of the responses for the group less than 5 years and 3.7% of those within the experience in a mental health setting.

Subscale 2 – Social Control compared to number of years of nurses working in the mental health setting
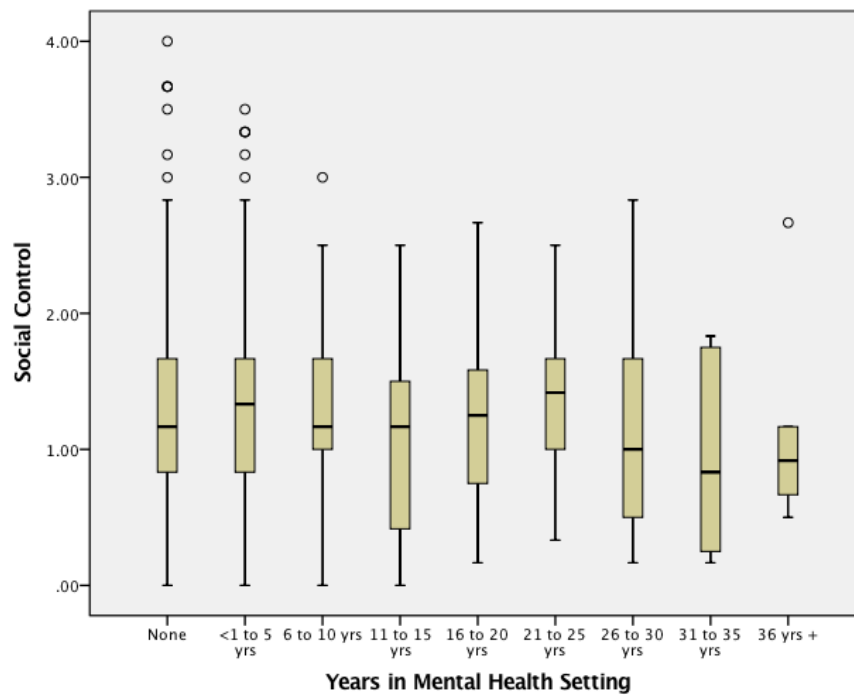
Figure 5.39. *Boxplot illustrating frequency distribution for Subscale 2 and Years in Mental Health Setting.*

This boxplot shows mark wider opinions for the "11 to 15 year", "26 to 30 years" and the "31 to 35" years groups in relation to Social control.

No low end outliers are reported within this subgroup. The total % of outliers accounts for only 0.7%. This is expected with a large sample size. The distribution of the outliers illustrates that these participants hold stricter beliefs towards social control.

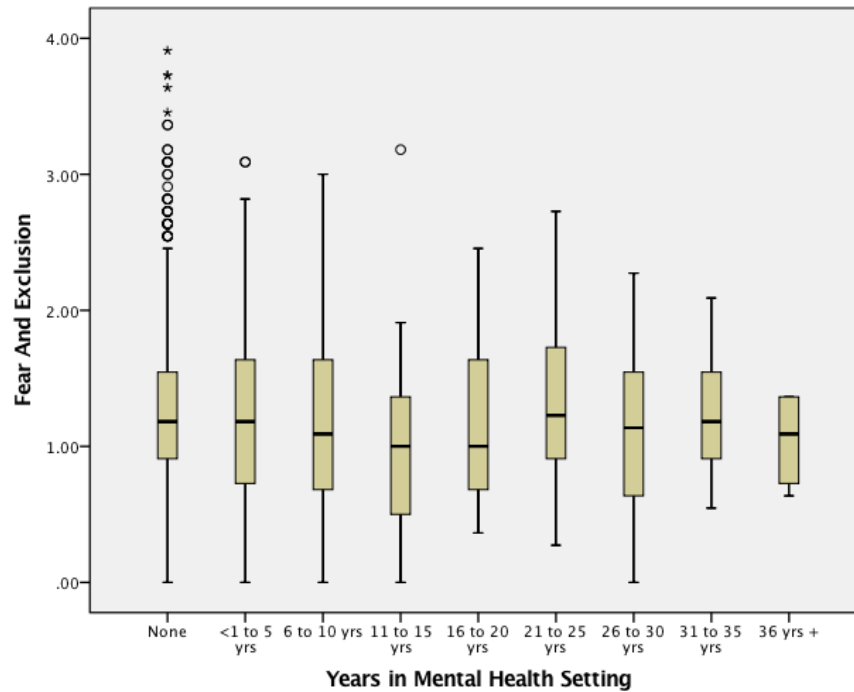*Subscale 3 –Goodwill compared to number of years of nurses working in the mental health setting*
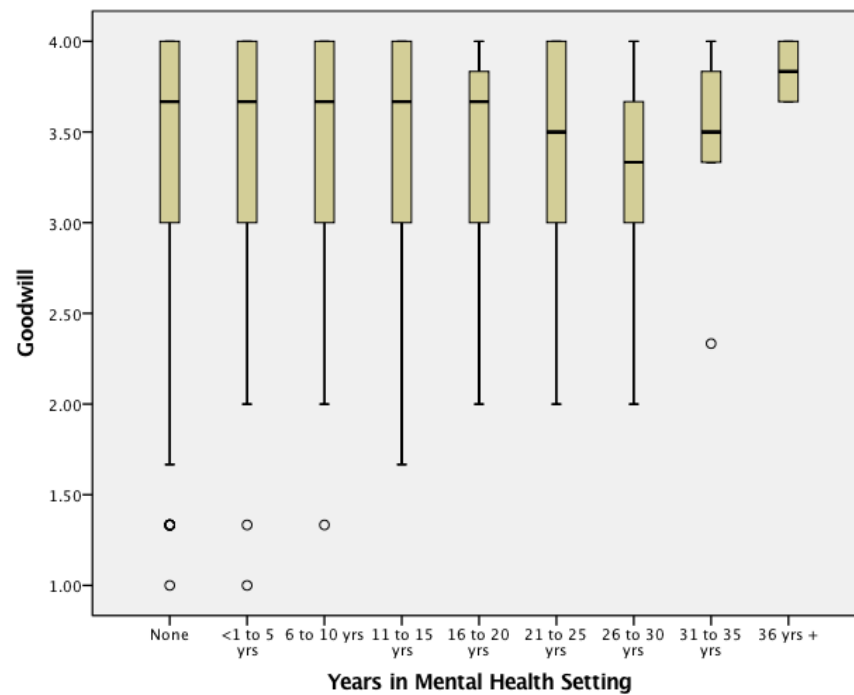
Figure 5.40. *Boxplot illustrating frequency distribution for Subscale 3 and Years in Mental Health Setting.*

The boxplot for Goodwill shows similar group distributions for the majority of the groups, however the "36 years and over" group shows very similar opinions within the group, and also the lowest median value can be seen in the "26 to 30 years" group.

Only 6 outliers are reported. This is again expected within such a large sample population. These low end outliers illustrate that they hold a negative attitude in terms of the Goodwill subscale.

Total Attitudinal Score compared to number of years of nurses working in the mental health setting
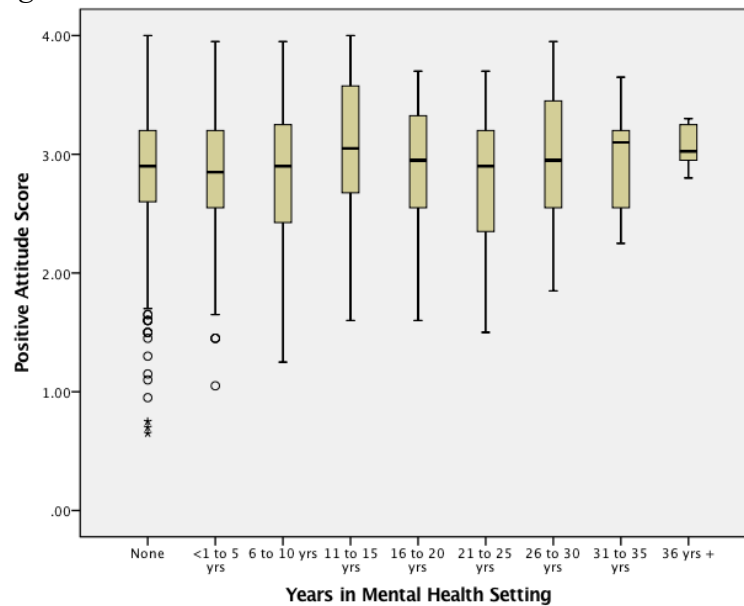
Figure 5.41. *Boxplot illustrating distribution for Total Attitudinal Score and Years in Mental Health Setting.*

Similar median values can be observed within all the groups. The highest median value is observed in the "31 to 35 years" group. Outliers are only reported within the group with no experience in mental health and 2 low end outliers reported in the subgroup less than 5 years mental health experience.
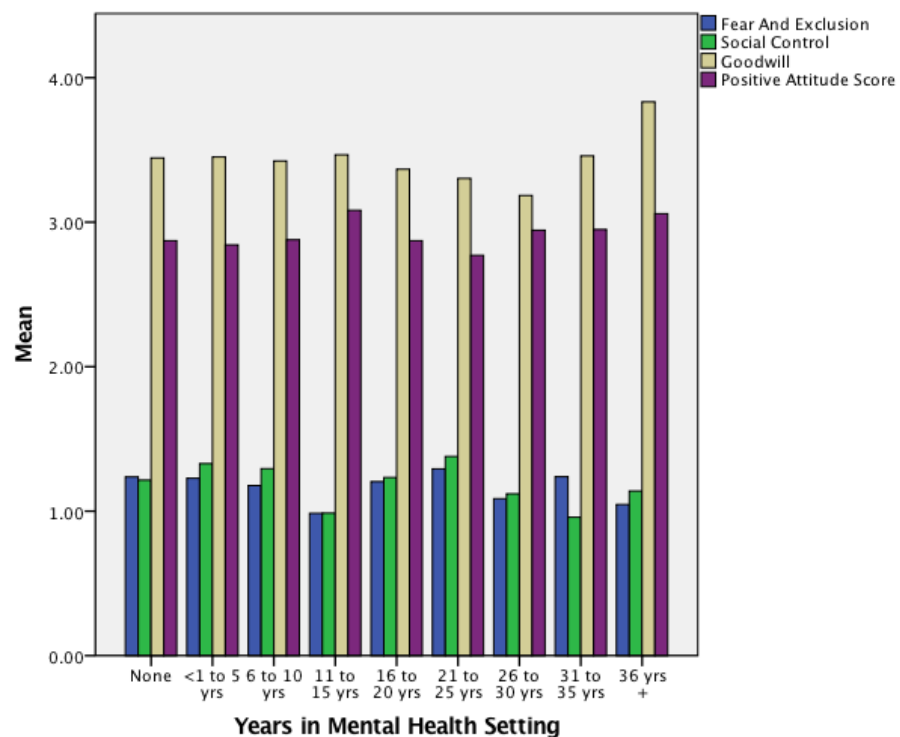
Figure 5.42. *Graph illustrating sample distribution by Subscales according to Years in Mental Health Setting.*

Mean and its confidence Interval according to Years in Mental Health Services

Series	Years in Mental Health Services	Mean	SE	Lower CI	Upper CI
1	None	2.8722	0.1423	2.593292	3.151108
2	<1 to 5 years	2.8434	0.0401	2.764804	2.921996
3	6 to 10 years	2.8782	0.07372	2.7337088	3.0226912
4	11 to 15 years	3.0829	0.09553	2.8956612	3.2701388
5	16 to 20 years	2.8725	0.12558	2.6263632	3.1186368
6	21 to 25 years	2.7705	0.11639	2.5423756	2.9986244
7	26 to 30 years	2.9444	0.14896	2.6524384	3.2363616
8	31 to 35 years	2.95	0.16339	2.6297556	3.2702444
9	36 years and over	3.0583	0.07683	2.9077132	3.2088868

Table 5.27. *Mean and Confidence Interval according to Years in Mental Health Services.*
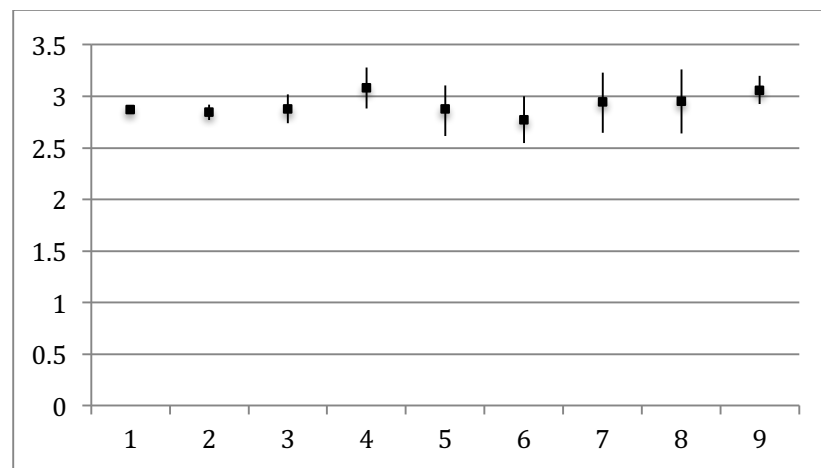
Figure 5.43. *Plot comparing Mean and Confidence interval (95%) by Years in Mental Health Services.*

The above plot compares the Mean and its confidence interval (95%) across Years in Mental Health Service. Significant differences can be noted between groups, "36 years and over" with groups of "None" or "<1 to 5 years", as the interval bars do not overlap.

			Years in Mental Health Setting	Fear And Exclusion	Social Control	Goodwill	Positive Attitude Score
Spearman's rho	Years in Mental Health Setting	Correlation Coefficient	1.000	-.043	.020	-.009	.020
		P-value	.	.099	.433	.740	.435
		N	1483	1483	1483	1483	1483

Table 5.28. *Correlation between Years in Mental Health Setting and Subscales.*

The Spearman correlation test in Table 5.28 describes the strength and direction of the monotonic relationship between the demographic variable Years in Mental Health Setting and the subscales, Fear and Exclusion, Social Control, Goodwill and Positive Attitude. No statistical significant correlations were seen between "Years in Mental Health Setting" and the other Subscales.

Subscale	Years in Mental Health Services	N	Mean Rank	df	Chi-square	P-value
Fear And Exclusion	None	1146	751.08	8	7.886	.445
	<1 to 5 yrs	173	742.75			
	6 to 10 yrs	55	684.67			
	11 to 15 yrs	35	580.04			
	16 to 20 yrs	20	708.58			
	21 to 25 yrs	22	781.57			
	26 to 30 yrs	18	668.19			
	31 to 35 yrs	8	760.44			
	36 yrs +	6	618.83			
	Total	1483				
Social Control	None	1146	735.61	8	12.791	.119
	<1 to 5 yrs	173	803.01			
	6 to 10 yrs	55	791.54			
	11 to 15 yrs	35	603.74			
	16 to 20 yrs	20	730.45			
	21 to 25 yrs	22	871.34			
	26 to 30 yrs	18	651.64			
	31 to 35 yrs	8	589.44			
	36 yrs +	6	595.17			
	Total	1483				
Goodwill	None	1146	743.19	8	7.616	.472
	<1 to 5 yrs	173	756.25			
	6 to 10 yrs	55	738.34			
	11 to 15 yrs	35	765.06			
	16 to 20 yrs	20	676.35			
	21 to 25 yrs	22	655.23			
	26 to 30 yrs	18	577.00			
	31 to 35 yrs	8	741.19			
	36 yrs +	6	1036.75			
	Total	1483				
Positive Attitude Score	None	1146	738.44	8	7.387	.495
	<1 to 5 yrs	173	720.67			
	6 to 10 yrs	55	756.56			
	11 to 15 yrs	35	898.50			
	16 to 20 yrs	20	759.55			
	21 to 25 yrs	22	678.41			
	26 to 30 yrs	18	790.97			
	31 to 35 yrs	8	805.880			
	36 yrs +	6	933.58			
	Total	1483				

Table 5.29. *Kruskal-Wallis H test comparing Years in Mental Health Services and Attitudes*

Kruskal-Wallis H Test was conducted to compare the effects of Years in a Mental Health setting on the attitudes towards mental illness. No statistical significance was noted between any of the groups and Subscales, Fear and Exclusion p=0.445; Social Control p=0.119; Goodwill p=0.472 and Attitude Score p=0.495. Between group comparisons using the Mann-Whitney *U* Test confirmed no significant difference within any subgroups.

5.14 Mental Health Service Work Setting

Subscale 1 – Fear and Exclusion compared to Mental Health Setting

Figure 5.44. *Boxplot illustrating frequency distribution for Subscale 1 and Mental Health Work Setting.*

The above boxplot illustrates that the lowest median values are seen in the "Acute" and "Community" group whilst all other groups share similar median values.

The majority of outliers fall within the top end of the distribution within the subgroup not working within a mental health setting. No outliers are reported for subgroups Chronic, Community, Child and Adolescent, Learning Disabilities and Substance Misuse.

Subscale 2 – Social Control compared to Mental Health Setting
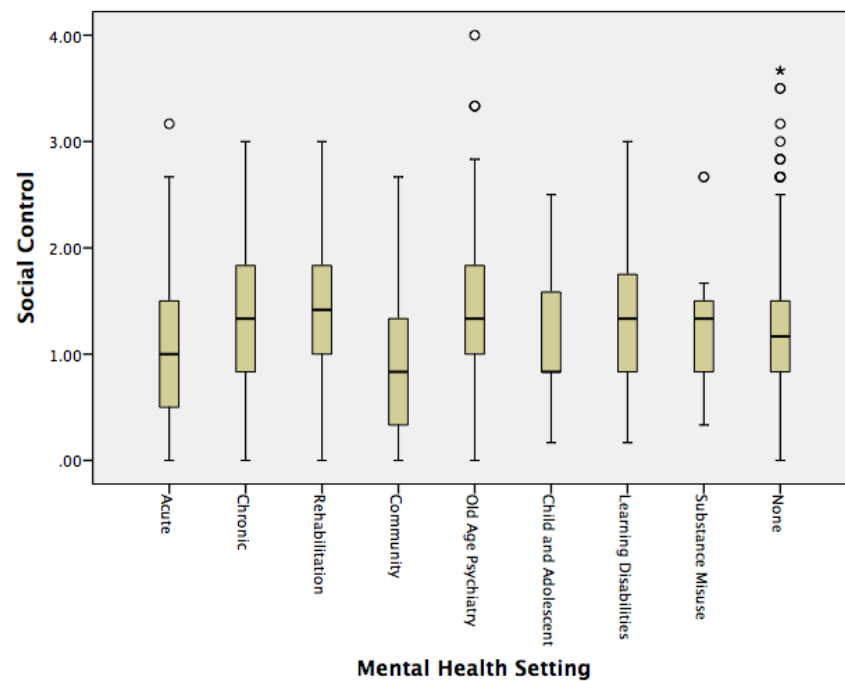
Figure 5.45. *Boxplot illustrating frequency distribution for Subscale 2 and Mental Health Work Setting.*

The opinions held about Social control within the "Community" group are the lowest when compared to all other groups.

The majority of outliers fall within the top end of the distribution within the subgroup not working within a mental health setting. Whilst no outliers are reported for subgroups Chronic, Rehabilitation, Community. No outliers are reported for subgroups Chronic, Rehabilitation, Community, Child and Adolescent and Learning Disabilities. Such outliers are expected with the study's sample size.

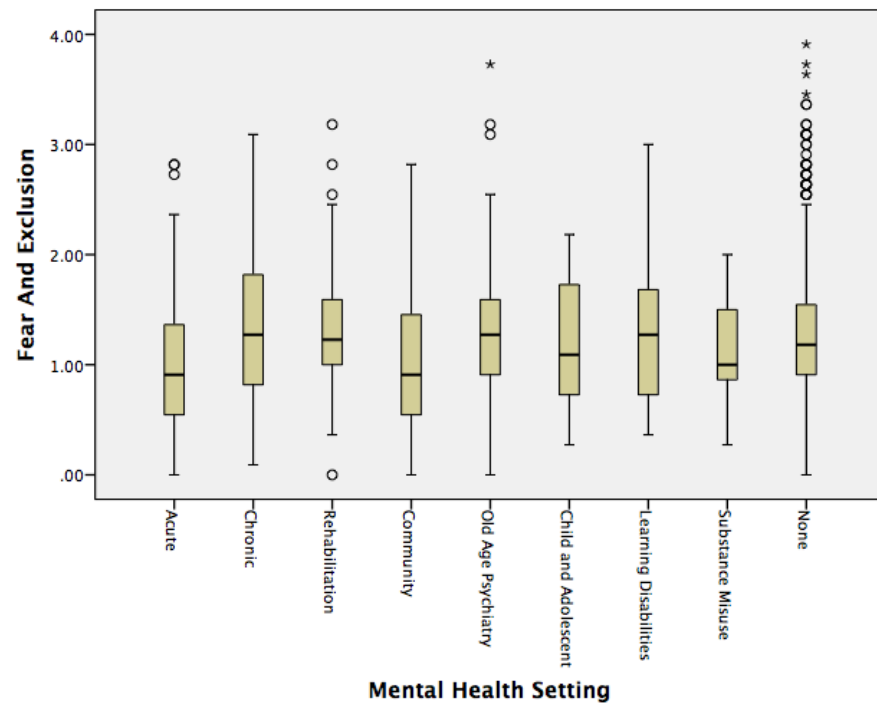*Subscale 3 – Goodwill compared to Mental Health Setting*
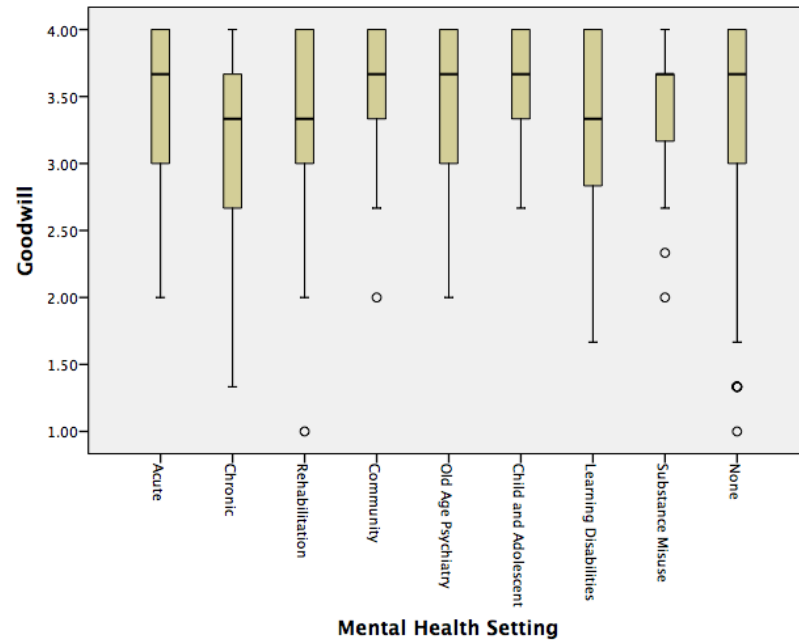
Figure 5.46. *Boxplot illustrating frequency distribution for Subscale 3 and Mental Health Work Setting.*

The above boxplot illustrates identical median values for "Acute", "Community", "Old Age Psychiatry", "Child and Adolescent", "Substance Misuse" and the "None group". "Chronic", "Rehabilitation" and "Learning Disabilities" also share an identical median however at a lower value when compared to the rest of the groups. Only 6 outliers are reported for the subscale Goodwill. This accounts for just 0.4% of the total population distribution. This % is expected in large sample populations.

Total Attitudinal Score compared to Mental Health Setting
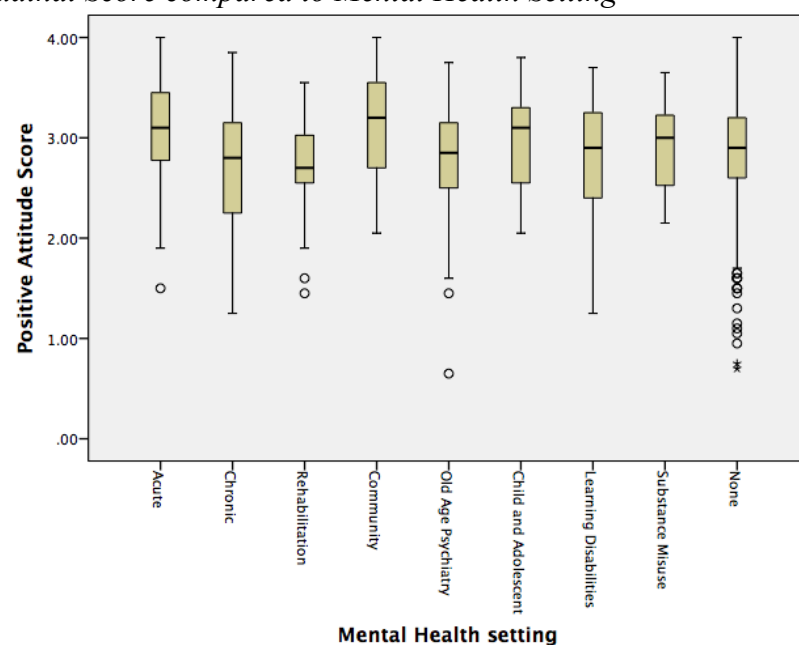
Figure 5.47. *Boxplot illustrating distribution for Total Attitudinal Score and Mental Health Work Setting.*

The opinions within the "Community" group about positive attitudes are the highest when compared to all other groups. Low end outliers can be observed in the group with no experience in mental health, accounting for 1% of this subgroup distribution. 5 low end outliers are reported across the other subgroups accounting for 0.9% for Acute, 3% for Rehabilitation and 1.8% for Old Age Psychiatry.
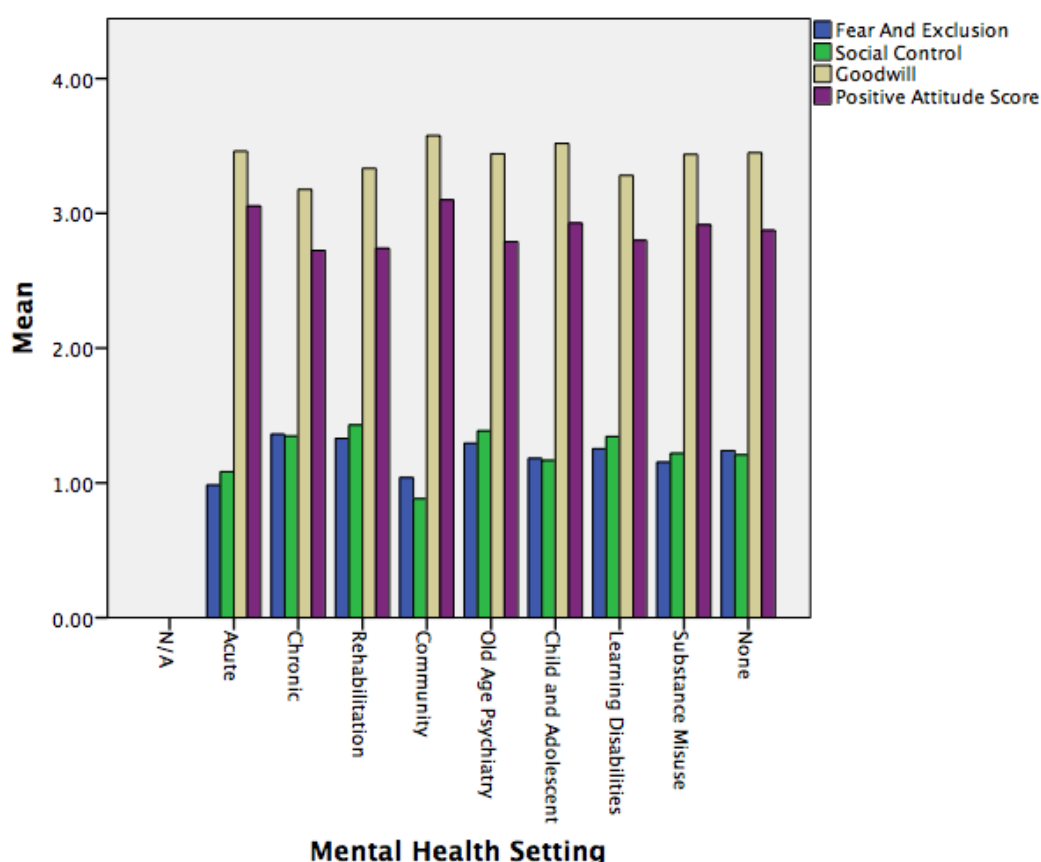
Figure 5.48. *Graph illustrating sample distribution by Subscales according to Mental Health Work Setting.*

Mean and its confidence Interval according to Mental Health Work Setting

Series	Years in Mental Health Services				
		Mean	SE	Lower CI	Upper CI
1	Acute	3.0535	0.04737	2.9606548	3.1463452
2	Chronic	2.7242	0.06908	2.5888032	2.8595968
3	Rehabilitation	2.7398	0.05672	2.6286288	2.8509712
4	Community	3.1	0.08929	2.9249916	3.2750084
5	Old Age Psychiatry	2.7892	0.05286	2.6855944	2.8928056
6	Child and Adolescent	2.9278	0.09505	2.741502	3.114098
7	Learning Disabilities	2.8	0.09789	2.6081356	2.9918644
8	Substance Misuse	2.9156	0.07631	2.7660324	3.0651676
9	None	2.8736	0.01445	2.845278	2.901922

Table 5.30. *Mean and Confidence Interval according to Mental Health Work Setting.*
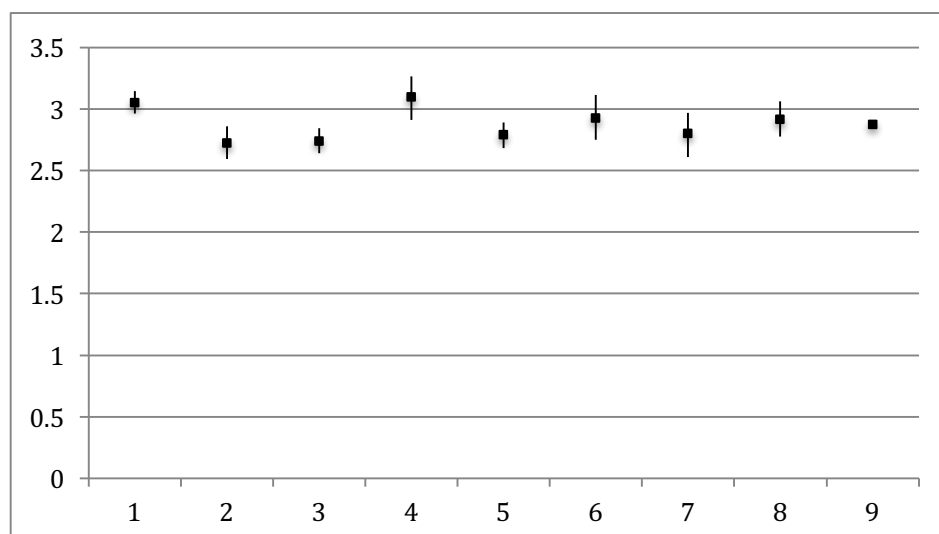
Figure 5.49. *Plot comparing Mean and Confidence interval (95%) according to Mental Health Work Setting.*

The above plot compares the Mean and its confidence interval (95%) according to Mental Health Work Setting. Significant differences can be seen between Group "Acute" and "Chronic", "Rehabilitation", "Old Age Psychiatry" and "None" as the means and confidence interval bars do not overlap. Also the group "Community" seems to be significantly different from groups "Chronic", "Rehabilitation", "Old Age Psychiatry" and "None", as the interval bars do not overlap.

Subscale	Mental Health Setting	N	Mean Rank	df	Chi-square	P-value
Fear And Exclusion	Acute	115	604.89	8	30.199	<0.001
	Chronic	62	876.61			
	Rehabilitation	64	880.94			
	Community	37	656.08			
	Old Age Psychiatry	111	837.68			
	Child and Adolescent	27	755.33			
	Learning Disabilities	32	805.48			
	Substance Misuse	32	748.19			
	None	1116	812.50			
	Total	1596				
Social Control	Acute	115	695.10	8	33.345	<0.001
	Chronic	62	895.83			
	Rehabilitation	64	957.29			
	Community	37	559.64			
	Old Age Psychiatry	111	899.03			
	Child and Adolescent	27	734.96			
	Learning Disabilities	32	878.61			
	Substance Misuse	32	802.00			
	None	1116	791.70			
	Total	1596				
Goodwill	Acute	115	827.17	8	16.835	.032
	Chronic	62	617.28			
	Rehabilitation	64	720.65			
	Community	37	906.61			
	Old Age Psychiatry	111	812.23			
	Child and Adolescent	27	831.35			
	Learning Disabilities	32	706.84			
	Substance Misuse	32	775.13			
	None	1116	807.63			
	Total	1596				
Positive Attitude Score	Acute	115	967.19	8	34.825	<0.001
	Chronic	62	676.27			
	Rehabilitation	64	654.27			
	Community	37	985.99			
	Old Age Psychiatry	111	743.05			
	Child and Adolescent	27	864.72			
	Learning Disabilities	32	757.06			
	Substance Misuse	32	825.55			
	None	1116	794.29			
	Total	1596				

Table 5.31. Kruskal-Wallis H test comparing Mental Health Setting and Attitudes

Kruskal-Wallis H Test was conducted to compare the effects of Mental Health Work Setting on the attitudes towards mental illness. There is a significant effect of the work setting within mental health on Fear and Exclusion [H(8)=30.199, p<0.001]. Social Control [H(8)=33.345, p<0.001]; Goodwill [H(8)=16.835, p=0.032] and Positive Attitude Score [H(8)=34.825, p<0.001]. Between group comparisons using the Mann-Whitney *U* Test indicated significant difference in the following:

Subscale 1 – Fear and Exclusion

Nurses working in an Acute setting differ significantly from those working within a Chronic setting (p=0.001); Rehabilitation (p<0.001); Old Age Psychiatry (p<0.001) and with those not working within Mental health services (p<0.001).

Subscale 2 – Social Control

Significant differences were noted within nurses working in the Acute setting and those working within a Rehabilitation setting (p=0.001) and with those working in Old Age Psychiatry (p=0.002).

Also nurses working within a Community setting differed significantly with those working within Chronic settings (p=0.001); Old Age Psychiatry (p<0.001); Rehabilitation (p<0.001); Learning Disabilities (p=0.007) and with those nurses not working within mental health (p=0.002).

Factor 3 – Goodwill

Nurses working in a Chronic setting differ from those working in Acute (p=0.005); Community (p=0.002) and with nurses not working within mental health (p=0.001).

Positive Attitude Score

Nurses working within the Acute setting differ according to their positive attitude score with those nurses working in a Chronic setting (p<0.001); Rehabilitation (p<0.001); Old Age Psychiatry (p<0.001) and with those nurses not working within mental health (p<0.001).

Also nurses working within the Community differ significantly from those working in a Chronic setting (p=0.003); Rehabilitation (p=0.001); and Old Age Psychiatry (p=0.009).

These finding indicate that nurses working both in an Acute setting as well as those working in a Community setting differ significantly in relation to their attitudes towards mental illness as opposed to other groups. Also those nurses working within a Chronic setting differ significantly to others in relation to their Goodwill score.

5.15 Contact with Mental Health Service Users

Subscale 1 – Fear and Exclusion compared to the contact of nurse's with mental health service users

Figure 5.50. *Boxplot illustrating distribution for Subscale 1 and Contact with Mental Health Service Users.*

Similar group distribution and median values are observed within all the groups. Several outliers are reported, with the majority within the subgroup with no contact with mental health service users. This implies that these outliers hold more negative attitudes in regards to fear and exclusion.

Subscale 2 – Social Control compared to the contact of nurse's with mental health service users
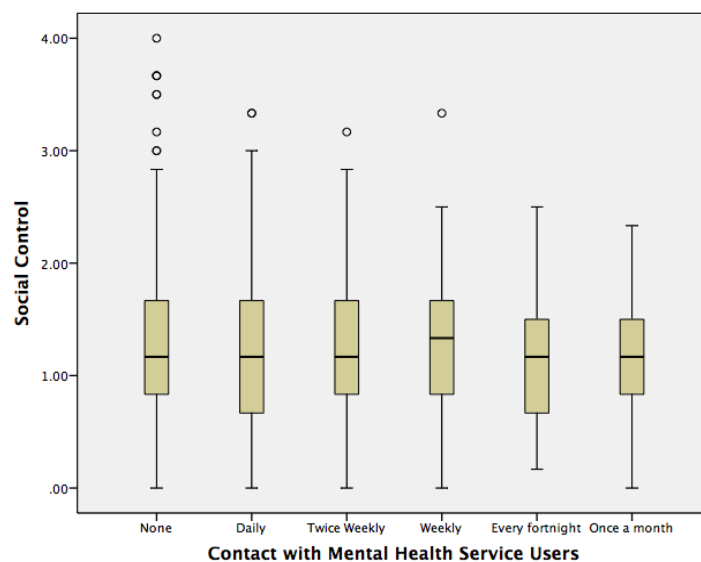
Figure 5.51. *Boxplot illustrating distribution for Subscale 2 and Contact with Mental Health Service Users.*

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Similar group distribution and median values are also observed within all the groups. The highest median value is observed in the "Weekly" group. Whilst no outliers are reported for subgroups having contact with mental health service users every fortnight, and once monthly, 5 outliers are reported within the none subgroup. This accounts for 0.5% of the distribution. Similarly, 1 outlier is reported for the subgroups daily, twice weekly and weekly. This accounts for 0.5%, 2.5% and 1.5% of the distribution respectively.

Subscale 3 – Goodwill compared to the contact of nurse's with mental health service users
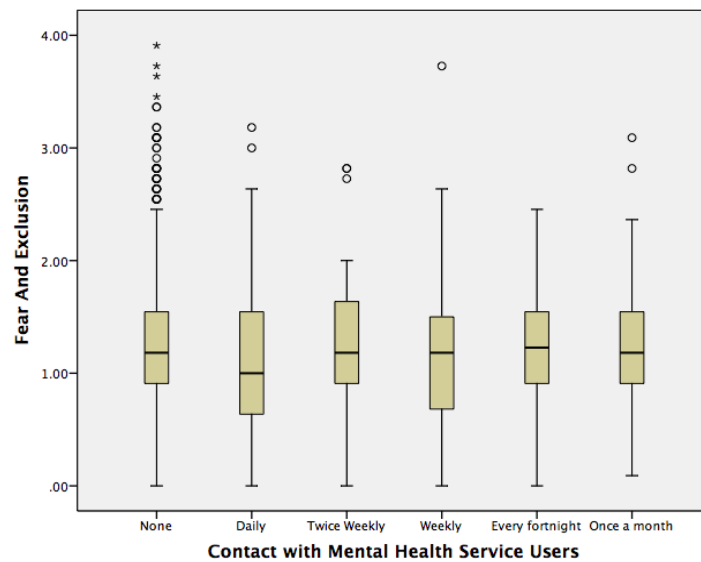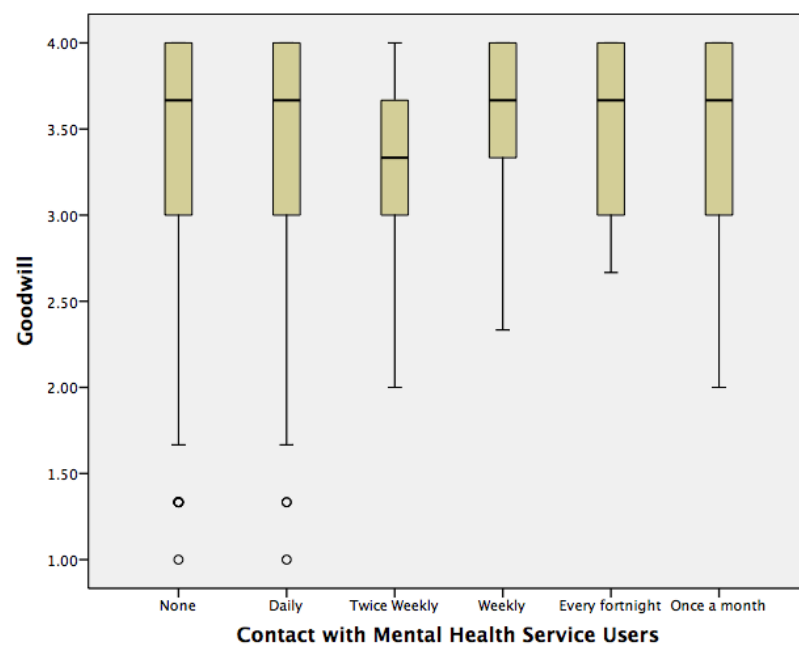

Figure 5.52. *Boxplot illustrating distribution for Subscale 3 and Contact with Mental Health Service Users.*

All groups share an identical median value whilst the group "Twice weekly" has a lower median value.

Only 4 low end outliers are reported, 2 outliers in both the none and daily subgroup. Of note is that both the none and daily subgroups have an identical distribution.

Total Attitudinal Score compared to the contact of nurse's with mental health service users
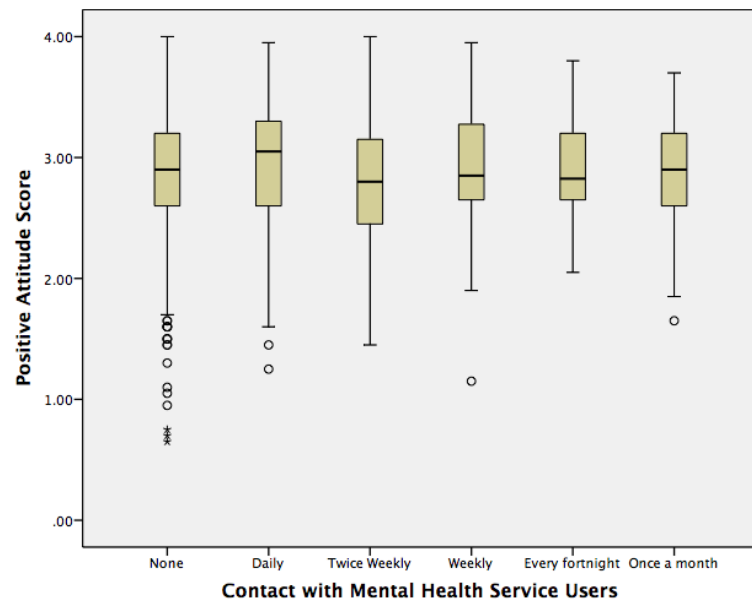
Figure 5.53. *Distribution for Total Attitudinal Score and Contact with Mental H5.1ealth Service Users.*

Similar group distribution and median values are also observed within all the groups. The highest median value is observed in the "Daily" group. Several outliers are reported, with the majority within the subgroup with no contact with mental health service users. This implies that these outliers hold more negative attitudes in regards to their attitudes towards mental illness than the rest of the population distribution.
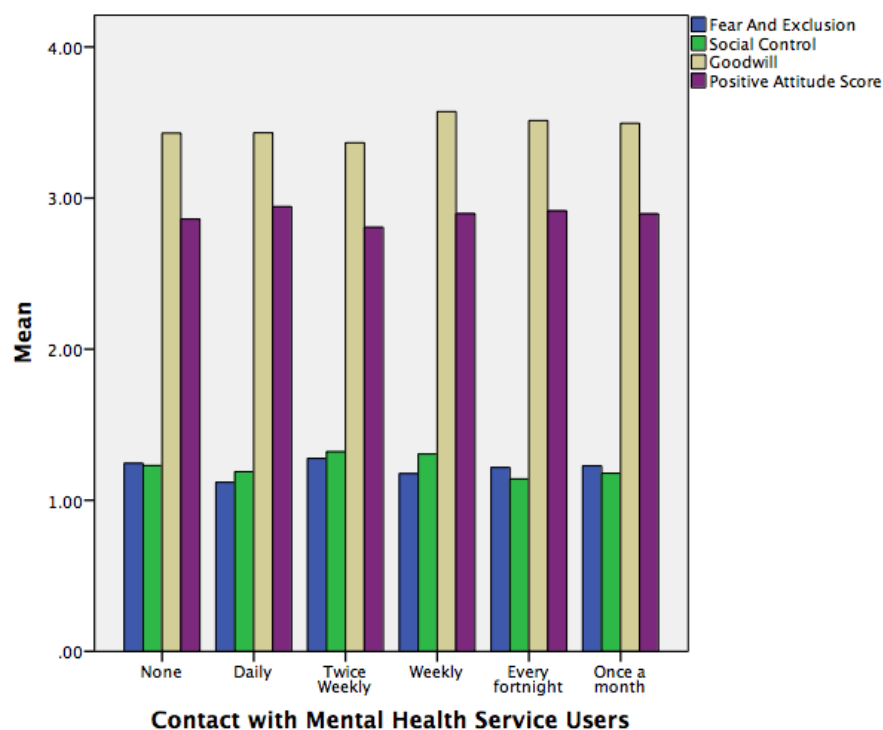
Figure 5.54. *Distribution by Subscales according to Contact with Mental Health Service Users.*

Mean and its confidence Interval according to the frequency of Contact with Mental Health Service Users

Series	Years in Mental Health Services				
		Mean	SE	Lower CI	Upper CI
1	None	2.861	0.01499	2.8316196	2.8903804
2	Daily	2.9427	0.03937	2.8655348	3.0198652
3	Twice Weekly	2.8061	0.08325	2.64293	2.96927
4	Weekly	2.897	0.067	2.76568	3.02832
5	Every fortnight	2.9154	0.09285	2.733414	3.097386
6	Once a month	2.8954	0.04263	2.8118452	2.9789548

Table 5.32. Mean and Confidence Interval according to Contact with Mental Health Service users.
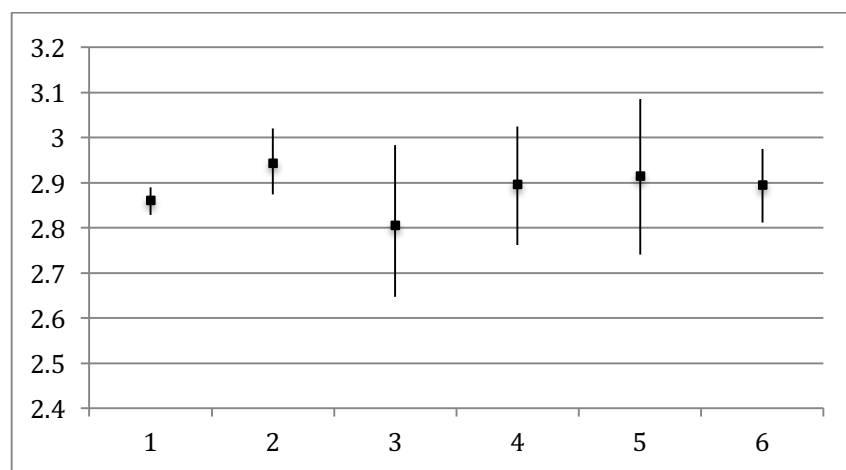
Figure 5.55. Mean and Confidence interval (95%) according to Contact with Mental Health Service users.

The above plot compares the Mean and its confidence interval (95%) across groups with different Contact exposure with Mental Health Service users.

			Contact with Mental Health Service Users	Fear And Exclusion	Social Control	Goodwill	Positive Attitude Score
Spearman's rho	Contact with Mental Health Service Users	Correlation Coefficient	1.000	-.049	-.014	.033	.035
		P-value	.	.059	.590	.210	.176
		N	1483	1483	1483	1483	1483

Table 5.33. Correlation between Contact with Mental Health Service Users and Subscales.

The Spearman correlation test in Table 5.33 describes the strength and direction of the monotonic relationship between the demographic variable Contact with Mental Health Service Users and the subscales, Fear and Exclusion, Social Control, Goodwill and Positive Attitude. No statistical significant correlations were seen between "Contact with Mental Health Service Users" and the other Subscales.

Subscales	Contact with Mental Health Service Users	N	Mean Rank	df	Chi-square	P-value
Fear And Exclusion	None	1066	757.43	5	9.058	.107
	Daily	186	659.62			
	Twice Weekly	41	769.51			
	Weekly	67	702.18			
	Every fortnight	26	752.79			
	Once a month	97	743.35			
	Total	1483				
Social Control	None	1066	746.19	5	3.520	.620
	Daily	186	709.94			
	Twice Weekly	41	787.13			
	Weekly	67	797.07			
	Every fortnight	26	690.83			
	Once a month	97	714.03			
	Total	1483				
Goodwill	None	1066	734.04	5	5.947	.311
	Daily	186	754.38			
	Twice Weekly	41	662.07			
	Weekly	67	835.51			
	Every fortnight	26	778.29			
	Once a month	97	765.19			
	Total	1483				
Positive Attitude Score	None	1066	730.71	5	7.120	.212
	Daily	186	814.26			
	Twice Weekly	41	674.71			
	Weekly	67	747.74			
	Every fortnight	26	742.81			
	Once a month	97	751.82			
	Total	1483				

Table 5.34. *Kruskal-Wallis H test comparing Contact with Mental Health Service Users and Attitudes*

Kruskal-Wallis H test was conducted to compare the effects of contact with mental health service users on the attitudes towards mental illness. No statistical significance was noted between any of the groups and Subscales, Fear and Exclusion p=0.107; Social Control p=0.620; Goodwill p=0.311 and Attitude Score p=0.212. Between group comparisons using the Mann-Whitney *U* Test confirmed no significant difference within any subgroups.

5.16 Regression

Tests of Between-Subjects Effects

Dependent Variable: Positive Attitude Score

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	25.068[a]	51	.492	2.077	.000
Intercept	653.887	1	653.887	2763.239	.000
Grade	1.133	7	.162	.684	.686
Gender	.139	1	.139	.589	.443
Age	2.456	8	.307	1.298	.240
Education	6.798	15	.453	1.915	.018
Years Nursing Service	1.865	7	.266	1.126	.344
Years in Mental Health Setting	2.238	8	.280	1.182	.306
Contact	.440	5	.088	.372	.868
Error	338.629	1431	.237		
Total	12617.738	1483			
Corrected Total	363.697	1482			

a. R Squared = .069 (Adjusted R Squared = .036)

Table 5.35. Regression Analysis.

Regression analysis was used to realte the positive attitude score to 7 predictors namly, Grade, Gender, Age, Education, Years of Nursing Serice, Years in Mental Health Setting and Contact. The model identifies 1 significant predictor (Education) since it's P-Value (0.018) is less than the 0.05 criterion. The lower the P-value the higher the contribution of the predictor in explaining variation in the positive attitude score. So education is ranked first, followed by Age (p=0.240), years in mental health settings (0.306), years in nursing service (0.344), gender (0.443), grade (0.686) and contact (0.868).

The R Squared value of 0.069 indicated that the 7 predictor model explains 6.9% of the total variation in the responses. This implies that there are other predictors affecting the positive attitude score which were not included in the study, namely collegiality between colleguaes, work burnout, communication, personal variables such as relations and home situations as well as aptitude.

5.17 Conclusion

Results presented in this chapter highlight the findings from a national survey investigating the attitudes of Maltese nurses and midwives towards mental illness and which of the demographic and work related variables have a significant effect on the attitudes of Maltese nurses and midwives towards mental illness. The demographic variable Gender and work related variables Years in Mental Health Setting and Contact with Mental Health Service Users report no significant effect on the attitudes towards mental illness held by nurses and midwives in Malta. Conversely the demographic variable Age and wok related variables Nursing Grade, Education, Years in Service, Work Setting and Mental Health Services Work Setting all seem to significantly infer on the attitudes of nurses and midwives toward mental illness in Malta. Between group comparisons indicates which subgroups within the specific variables infer on the subscales Fear and Exclusion, Social Control and Goodwill. It is worth nothing the significant difference between Registered Mental Health Nurses and the other grades in all subgroups. Similarly, those aged between 26 to 30 years old also showed significant differences to other groups within all subscales. Another considerable difference is also noted between those nurses holding a BSc in Mental Health Nursing when compared to other nurses with lower level of education. Those nurse with less than 5 years working experience showed a significant difference in relation to the Social Control subscale only. Similarly, when data were analysed by work setting significant difference was only identified between those working with a mental health setting and those working in a surgical setting for the fear and exclusion subscale. No other significant differences related to work setting was identified. Nurses working in both Acute and Community mental health settings differ significantly in relation to their attitudes towards mental illness as opposed to other group working in the mental health field. An attempt to interpret, compare and critically analyse the results presented in this chapter in relation to previous literature and their implications within the Maltese context will follow in the Discussion chapter.

Chapter 6
Discussion

6.1 Introduction

This chapter aims to discuss the findings illustrated in the previous chapter in light of existing literature. In section 6.2 an attempt is made to interpret, explore, compare and critically analyse the attitudes of Maltese nurses and midwives towards mental illness whilst which from the variables previously identified in literature influence such attitudes are investigated in section 6.3. A discussion on the psychometric properties of the instrument used for data collection within the Maltese nursing and midwifery population is presented in section 6.4, followed by an outline of the study's strengths and limitations in sections 6.5 and 6.6 respectively. Finally, recommendation for policy implications and future research directions emerging from these findings are proposed in section 6.7.

6.2 The Relationship between Professional Attitudes and Care

In order to understand the implications of nursing and midwifery attitudes towards mental illness, it is important to define attitudes. The word Attitude has several definitions, one being the way of thinking or feeling about something or someone (Oxford Online Dictionary, 2017). In this study this translates to the thoughts and feelings of Maltese nurses and midwives towards mental illness. Stigmatising attitudes are well documented in literature (Lauber, *et al.,* 2003; Graf *et al.,* 2004; Lauber *et al.,* 2004; Jorm, Christensen and Griffiths*,* 2006), including stereotypes, prejudice and discrimination. Such stereotypes, prejudice and discrimination often arise from the depiction of mental illness commonly associated with misconceptions, such as individuals with mental illness are unpredictable and violent, jobless and dirty (Thio*,* 1983; Baker, Richards and Campbell, 2005; Kukulu and Ergün, 2007). Thornicroft (2008) describes stigma as an amalgamation of ignorance and misinformation coming from lack of knowledge. Since this study aims to analyse if specific demographic and work related variables infer on nursing and midwifery attitudes towards mental illness, the origins of such professional attitudes should first be explored.

Richmond and Foster (2003) suggest that negative professional attitudes originate from lack of knowledge whilst other authors (Lauber, Nordt and Rossler, 2005; Lauber *et al.,*

2006; Liu, Gerdtz and Liu, 2011) link such negative professional attitudes with inadequate mental health literacy. Literature also attributes negative professional attitudes to a sense of frustration and inadequacy when caring and/or managing difficult client groups (Hugo, 2001; Payne *et al.,* 2002). Professional stigma and negative professional attitudes have been identified as having far worst repercussions on the delivery of care and hinders individuals from seeking appropriate care (Anderson and Standen, 2007; Watson *et al.,* 2007; Chambers *et al.,* 2010; Schafer, Wood and William, 2010). Professional stigma affects adversely both quality of care and recovery rates (Chambers *et al.,* 2010), shape nurse-patient therapeutic relationships thus limiting the support of patients with mental illness to recover easily (Liu, Gerdtz and Liu, 2011). But what is care and how does professional attitude actually infer with care delivery?

Caring in nursing is a therapeutic art in which two or more individuals interact to reach a common goal (Peplau, 1952). Caring is such a simple word however it is difficult to define as it has many implications in the clinical practice. The words caring and nursing are synonymous and very intertwined (Lachman, 2012), therefore in order to understand care it important to define nursing. The Royal College of Nursing (2014) defines nursing as,

> *"The use of clinical judgement in the provision of care to enable people to improve, maintain, or recover health, to cope with health problems, and to achieve the best possible quality of life, whatever their disease or disability, until death."* *(2014, p 2).*

The above quote refers to the provision of nursing care irrespective of the disease or disability. Therefore, this implies that negative professional attitudes towards a specific disease, such a mental illness jeopardises the provision of care and the quality of life led by such individuals.

In line with the RCN (2014) definition, the Maltese Code of Ethics for Nurses and Midwives (1997) states that nurses and midwives practicing in Malta, should:

> *"not discriminate amongst patients/clients on grounds of age, nationality, race, sex, gender orientation, religious beliefs, personal attributes, nature or origin of their health problem or any other factor"* *(1997, p 5)*

The above excerpt highlights that Maltese nurses and midwives should not be judgemental or discriminatory, implying that they should not hold negative professional attitudes.

However, literature identifies that stigmatising attitudes towards mental illness are not uncommon among health professionals (Hugo, 2001; Richmond and Foster, 2003; Lauber, Nordt and Rössler, 2005; Lauber *et al.,* 2006; Horsfall, Cleary, and Hunt, 2010; Liu, Gerdtz, and Liu, 2011). Various studies have linked gender, age grade, education, years in service, work setting, and exposure with attitudes. Therefore, it is important to understand the attitudes of Maltese nurses and midwives towards mental illness, and which variables do influence such attitudes.

The present study reports for the first time the attitudes of Maltese nurses and midwives towards mental illness. Findings show that Maltese nurses and midwives hold positive attitudes towards mental illness. Scores for positive attitudes were also reported when nursing and midwifery attitudes were analysed according to the 3 subscales of the CAMI tool, Fear and Exclusion, Social Control and Goodwill, implying that Maltese nurses and midwives view individuals with mental illness as not dangerous, should have the same social rights as any other individual, and also feel a responsibility towards their care, thus, within a local context, the nursing and midwifery population at the time of the study did not hold discriminatory, judgemental or prejudicing attitudes against mental illness. This concurs with the findings outlined in the 2016 Annual Report carried out by the Commissioner of Mental Health in Malta, who reports that, 88% of service users interviewed described being treated with respect and dignity, whilst 86% reported that staff were kind and caring and delivered a professional service (Commissioner of Mental Health, 2017). As outlined by several authors (Howard and Chung 2000; Kukulu and Ergün 2007, Giannouli *et al.,* 2009; Hamdan-Mansour and Wardam, 2009) negative professional attitudes hinder delivery of care, therefore, the positive attitudinal results reported in this study would signify that the attitudes held by Maltese nurses and midwives facilitate rather than hinder the provision of nursing and midwifery care towards mental illness.

These results concur with various researchers (Williams, 1999; Richmond and Foster, 2003; Munro and Baker, 2007; Chambers *et al.,* 2010), who reported positive nurses' attitude towards mental illness. Studies reporting positive attitudes were conducted in UK (Williams, 1999; Richmond and Foster, 2003; Munro and Baker, 2007), and Portugal, Finland, Italy, Ireland and Lithuania (Chambers *et al.,* 2010). Such comparable findings could be linked to the similarities of the Maltese health care system to that of UK, as well

as, similarities between the Western European culture. Of note is that findings emerging from the work of Chambers *et al.* (2010) highlight that Lithuanian nurses' attitudes towards mental illness were the most negative when compared to the other West European Countries. Conversely, the studies reporting negative attitudes were conducted in Turkey (Kukulu and Ergün 2007), Greece (Giannouli *et al.,* 2009) and Jordan (Hamdan-Mansour and Wardam, 2009). This difference in nursing attitudes could be attributed to the cultural differences between Western European nurses and those from East Europe and the Middle East. This further corroborates that nurses and midwives' attitudes towards mental illness vary across countries and according to the sociological and cultural background (Al-Adawi *et al.,* 2002; Kermode *et al.,* 2009).

In the studies reporting nurses' positive attitudes towards mental illness, three studies (Williams, 1999; Richmond and Foster, 2003; Chambers *et al.,* 2010) recruited nurses from the acute and community settings, whilst Munro and Baker (2007) only sampled nursing staff working within an acute setting. Sample sizes also varied across these studies, with n=189, 103, 813 and 140 respectively, which may not be reflective of the target population. Finally, the above studies all shared a common limitation by using convenience sampling. Convenience sampling may introduce selection bias due to the high levels of sampling error. This present study addresses these limitations and strengthens the findings previously reported by authors, by employing a total population survey, limiting the introduction of sampling bias. This study recruited more participants than all of the above mentioned studies combined together. A high response rate of 74.15% (n=1483) from the entire cohort with a 1.29% maximum margin of error allows for generalisability of the findings both within a local and an international context. This study also extends the findings reported in literature by including midwives within the sample, allowing for the first time, comparison of attitudes towards mental illness between nurses and midwives, thus contributing to the extant literature. Since nurses and midwives were recruited from all the clinical areas, data were also analysed according to work settings, thus not limiting findings to one specific setting as often reported in literature (Williams, 1999; Cleary, Siegfried and Walter, 2002; Filer, 2005; Kukulu and Ergün, 2007; Giannouli *et al.,* 2009).

Of note is that two of the above studies investigate nurses' attitudes towards a specific mental illness, namely, schizophrenia (Kukulu and Ergün, 2007) and borderline personality disorder (Giannouli *et al.,* 2009). Literature outlines that specific mental illnesses can be

more difficult to manage and at times prove more challenging than others, such as those diagnosed with borderline personality disorder (Giannouli *et al.,* 2009). Results of attitudes towards specific mental illnesses needs to be interpreted with caution, as such results are limited to the respective mental health illness and cannot be generalised to all mental illnesses. The aim of the present study was to investigate the attitudes of Maltese nurses and midwives towards mental illness and identify which variables infer on such attitudes. Therefore, no attempt was made to investigate attitudes in relation to specific mental illnesses. Further research is warranted in order to investigate if attitudes of Maltese nurses and midwives differ between different mental health conditions.

As outlined in Chapter 3 (page 55), there is a dearth of research pertaining to the attitudes of midwives towards mental illness. An in-depth comparison and critical analysis between Maltese nurses and midwifery attitudes will be discussed in the following section.

6.3 The Influence of Variables on Attitudes towards Mental Illness

This section illustrates the inference of the demographic and work related variables on the attitudes of Maltese nurses and midwives towards mental illness. Demographic variables include gender and age. Work related variables include grade, education, years in service, work setting, years in mental health setting, mental health work setting and exposure. These variables will be compared and critically analysed, in relation to the local clinical context and previous literature, in the subsections below.

6.3.1. Grade and Work Setting

The relationship between professional attitudes and care has been discussed in section 6.2, however it is essential to identify what infers on such attitudes. Results show that overall Maltese nurses and midwives hold positive attitudes towards mental illness, and also report positive attitudes in all CAMI subscales (Fear and Exclusion, Social Control and Goodwill). However more in-depth exploration was conducted in order to identify which, from the demographic and work related variables, contribute to such attitudes.

Literature outlines contradicting views on which variables influence nurses and midwifery attitudes towards mental illness. One such variable identified to have an inference on

nursing and midwifery attitudes towards mental illness is professional grade. Relevant literature suggest that grade has an association with nursing attitudes, namely, that positive attitudes increase with a higher grade (Chambers *et al.,* 2010; Hsiao, Lu and Tsai, 2015). These studies were conducted in 5 European Countries and Taiwan respectively. In concordance with the findings of Chambers *et al.* (2010) and Hsiao, Lu and Tsai, (2015), present findings show positive attitudes in all the Maltese nursing and midwifery grades. In line with other research (Chambers *et al.,* 2010; Hsiao, Lu and Tsai, 2015), mean ranks for positive attitudes tend to increase the higher the professional grades, implying that more positive attitudes are held by those in higher grades. This is also seen from participants in the present study from the midwifery profession. However, it must be acknowledged that the higher the professional grade, the less contact one has with individuals experiencing mental illness (Scott and Philip, 1985; Tay *et al.,* 2004), potentially influencing the results. In order to address this finding, contact with mental health service users, was also investigated and will be discussed in section 6.3.4. Other authors report no statistical significant association between professional grade and attitudes (Munro and Baker, 2007; Hamdan-Mansour and Wardam, 2009). The studies reporting no significant association were conducted in UK and Jordan respectively. In the limited studies that investigate midwifery attitudes towards mental illness Lau *et al.* (2015) report that midwives held overall more negative attitude towards suicide than maternal child health nurses, which may seem contradictory to the present findings, however these results are limited only towards suicide, thus might not be representative of the attitudes of midwives towards mental illness in general, indicating the need for further research to substantiate such findings. This present study contributes by addressing this dearth of research as it is the first to investigate the attitudes of midwives towards mental illness, not specific to one condition, for example post-partum depression.

Contradicting findings originate from different countries within Europe, Middle East, and Asia, and also recruited a sample reflective of the target population, thus differences are not linked to culture or potential sampling bias. However, an important difference can be noted between the different grades sampled. Arguably, studies reporting no correlations between grade and attitudes towards mental illness recruited registered and associate nurses (Munro and Baker, 2007; Hamdan-Mansour and Wardam, 2009). Conversely, those studies which report a correlation recruited staff nurses, registered mental health nurses and nurse managers (Chambers *et al.,* 2010), and staff nurses and head nurses (Hsiao, Lu

and Tsai, 2015). Registered and associate nurses work within the same clinical environment. Conversely there is a marked difference in the roles, duties and responsibilities between staff nurses including RMNs and head nurses and nurse managers. This might account for the differences in the results reported in the literature. In an attempt to address this limitation and add to the existing body of knowledge, this study investigated all the different nursing and midwifery grades. Doing so would allow for more accurate comparison of findings and identify if any correlation exists between grade and attitudes towards mental illness.

Findings from the post-hoc analyses for grade and Total Attitudinal Score indicate a statistical significant difference between RMNs and other grades within the subgroup (NOs, DNOs, SNs, ENs and Midwives). Results also indicate that RMNs differ significantly from others groups, which are indicated within brackets, when compared to the 3 subscales as follows: Fear and Exclusion (NOs, SNs, ENs and Midwives) Social Control (NOs, DNOs, SNs and ENs) and Goodwill (ENs). Results in all 3 subscales suggest that Maltese Mental Health Nurses view individuals experiencing mental illness as less dangerous and should be given more social autonomy, than other grades. It is difficult to identify just one possible reason for such differences, however one such reason could be the RMNs specialised work setting. Other reasons include RMNs level of mental health literacy, awareness and knowledge towards mental illness and their specific pre-registration training. The latter will be discussed in more detail in section 6.3.2.

Of note is that the subgroup 'Enrolled Nurses' differed statistically from other groups (DNMs or higher, NOs, DNOs, SNs, & RMNs) when data were analysed at post hoc level by the Goodwill subscales. Results suggests that Enrolled Nurses differ positively in their responsibility towards those with a mental illness compared to other grades within this study. Such difference might be attributed to this group's older educational programme, which was more clinically oriented, with extensive clinical practice and exposure, allowing for more patient contact. Ryrie *et al.* (1996), outlined that the least qualified nurses were those that interacted most with individuals with mental illness, corroborating to explain why in Malta, Enrolled Nurses differ significantly for the Goodwill subscale. This highlights the importance of extensive clinical practice and exposure during the prequalification formative years.

It has been previously outlined that work setting could be the reason why Registered Mental Health Nurses differ from the rest of the subgroups. Literature also supports the hypothesis that work setting may play an influential role towards the attitudes held by nurses and midwives (Märtensson, Jacobsson and Engström, 2004; Hamdan-Mansour and Wardam, 2009; Saunders *et al.,* 2012). Richmond and Foster (2003) add that work place/clinical setting might influence attitudes, and challenging settings may have a direct impact on the attitudes of nurses and midwives. Such challenging settings may decrease job satisfaction, increase work related stress and induce burnout as well as potentially expose nurses to harm by violent and aggressive patients (Melchior *et al.,* 1997; Edwards *et al.,* 2000; Staniuliene *et al.,* 2013; McTiernan and McDonald, 2015). Although this study does not show any significant effect between work setting and Social Control or Total Attitudinal Score, a significant effect on both subscales Fear & Exclusion and Goodwill is noted. Post hoc analyses only reveals significant statistical difference between those working within a mental health setting and those working in a Surgical Setting in relation to the Fear and Exclusion subscale. Nurses working within a mental health setting may have more opportunity to engage and care for individuals with a mental illness, as opposed to nurse working in different settings (Björkman, Angelman & Jönsson, 2006). Therefore, such a difference may be attributed to the limited engagement opportunities for nurses working in the surgical setting. Such limited opportunities may cause surgical nurses to feel less competent in caring for individuals with a mental health illness during the delicate preoperative and postoperative period. Such findings further highlight the need for mental health training in all the Maltese nursing and midwifery areas. With the increase in prevalence of mental illness, Kitcher and Jorm (2006) identify that Mental Health First Aid training improved attitudes towards those diagnosed with a mental illness. Also they report that Mental Health First Aid improved mental health literacy, increased confidence, lowered social distance and increased supportive behaviour. Such a course is indicated with the local scenario. Although mental health first aid training may help to improve attitudes, it is no substitute to specialised training in mental health nursing, which should be offered to all nurses and midwives working within the Maltese mental health services. Unfortunately, within the Maltese mental health services there is no differentiation between a registered mental health nurse and a general nurse. This may give rise to discrepancies in the provision of care. Therefore, in Malta, it is imperative to adequately train those nurses and midwives who work within the speciality of mental health and have received little related training during their pre-registration training.

Literature highlights (Markham, 2003; Rueve and Welton, 2008) the challenges in caring for individuals who are distressed and disturbed. In fact, these individuals tend to be the most stigmatised against (Rueve and Welton, 2008). Several authors (Nehls, 2000; Cleary, Siegfried, and Walter, 2002; Markham, 2003; Giannouli *et al.,* 2009) report that working within the mental health setting is considered stressful, challenging and demanding. However, present results show that those working in such setting hold the most positive attitudes when compared to others. Study findings (Hamdan-Mansour and Wardam, 2009; Hsiao, Lu and Tsai, 2015) corroborate that place of work does influence nurses' attitudes. However, comparison of findings within literature are limited between acute and chronic or rehabilitative mental health settings, rather than to all the mental health settings. In order to address such a limitation this study investigates the attitudes of those nurse working within all the Maltese mental health settings. Mental health settings in Malta have expanded over the years and includes acute, community, rehabilitation, chronic, old age, learning disabilities, substance misuse and child and adolescent mental health. To date, no midwife works within the mental health setting, therefore results are only representative of those nurses working within this specific field. McCrae *et al.,* (2007) confirm that little has been published on the differences between clinical staff working within a hospital and community settings, whilst no reference in literature was found in relation to the attitudes of nurses working within all the different mental health settings. Therefore, by investigating all the different mental health settings, this study aims to contribute new knowledge towards this under studied area.

Kruskal-Wallis H test shows significant effect between Mental Health Work Setting and Factors Fear & Exclusion, Social Control, Goodwill and Total Attitudinal Score. Such difference may be attributed to dealing with service users rotating in and out of services (Hughes and Umeh, 2005). Other reasons may include the intense relationships nurses build with service users and their families when dealing with situations of suicide, self-harm or challenging behaviours (Kipping, 2000). McTiernan and McDonald (2015) add that inpatient psychiatric wards are filled with chaos and pressure. Nurses are faced to manage crises situations, manage involuntary admissions and also deal with aggressive behaviour (McTiernan and McDonald, 2015). Findings by Staniuliene *et al.* (2013) show that management of distressed and disturbed patients is a major problem and leaves mental health nurses feeling emotional and cognitively distressed.

Present findings illustrate that nurses working within the chronic setting hold more positive attitudinal scores in relation to the Goodwill subscale, corroborating with existing literature (Staniuliene *et al.,* 2013; McTiernan and McDonald, 2015). In Malta, such a setting involves inpatient long term care, with less disturbed and distressed patients. Results for Total Attitudinal Score also indicate that nurses working in the Acute setting differed significantly from those working in the Chronic, Rehabilitation, Old Age Psychiatry and those not working within the mental health setting. Nurses working within the Community mental health setting also differed significantly by Total Attitudinal Score from those working in the Chronic Setting, Rehabilitation and Old Age Psychiatry. Results for Total Attitudinal Score would imply that Maltese nurses working within the Acute and Community mental health setting show more positive regard and seem to hold more positive attitudes towards service users. A similar difference has also been observed by subscale "Fear and Exclusion" and "Social Control". This may be linked to several plausible reasons, including constant contact with service users. Another reason might be attributed to better job satisfaction from the care of different acute cases (Hamdan-Mansour and Wardam, 2009). McCrae *et al.* (2007) highlight that employees feel more satisfied when they are recognised for their work. Of note is that in Malta acute and community settings are populated mainly by RMNs, unlike other mental health settings. The difference in grades coupled with potential different workloads might infer on such results. McCrae (2014) outlines that although the workload in UK's inpatient setting is high, nurses still have more contact time with patients as opposed to other professionals. This close contact would allow for the development of positive relationships (Bowers *et al.,* 2005). Conversely, the acute and community mental health settings are the ones affected most from understaffing with inadequate nurse/patient ratios (Office of the Commissioner for Mental Health, 2015). Another possible reason might be linked to the difference in education, knowledge and skills within the various mental health services. Although in Malta mental health is considered a speciality, any nurse can work within such a setting, influencing such results. The majority of nurses working in the acute and community mental health settings received specific mental health education whilst undergoing their formation training, potentially influencing these results.

Chambers *et al.* (2015), concur that education and training are highly valued by nurses working in acute psychiatric settings. Such knowledge and training provide nurses with the

necessary tools to deal with difficult and stressful situations such as disturbed and distressed service users. In the seminal work by Benner (1984) the 5 stages of achieving clinical competence are discussed. The first stage is the novice stage, followed by advance beginner, competent, proficient and finally expert. During the transition from each stage, nurses and midwives acquire and develop new skills in order to become an expert. Benner (1984) describes a novice or at times also referred to as a beginner as an individual with no experience in the situation in which they are expected to perform. This description echoes the ethos of student nurses, at the starting point of their journey to become professionals. The various education programmes leading to a nursing or midwifery qualification may be influential on the attitudes of both nurses and midwives towards mental illness.

6.3.2 Nursing Education

This section will discuss the influence of Nursing Education on the attitudes of nurses and midwives towards mental illness.

Pre-registration Nursing and Midwifery education provides an individual the required knowledge and skills to qualify as a nurse or a midwife. This process involves study, which is dependent on the individual, teaching which is determined by the specific course one undertakes and also experience. As described by Benner (1979) a newly qualified nurse or midwife passes from a progress which is described as the transitions from novice to expert. Education, knowledge and mental health literacy have been identified as influential variables that may be associated with attitudes towards mental illness (McHale and Felton, 2010; Hori *et al.,* 2011; Märtensson, Jacobsson and Engström, 2014). Lack of education is considered the primary rationale for negative attitudes (McHale and Felton, 2010). In Malta several nursing and midwifery courses have been available throughout the years, which varied both in content and length. A description of these courses can be found in Chapter 2 (pages 21-22), outlining the 16 subgroups, representing all the different nursing/midwifery educational levels. These including Masters, Degree, Diploma and other nursing courses, such as, Pupil and Student nursing courses which preceded the teaching of nursing and midwifery at university level.

Results from the Maltese cohort corroborate with literature (McHale and Felton, 2010; Hori *et al.,* 2011; Märtensson, Jacobsson and Engström, 2014), identifying education as a significant and influential variable to attitudes of nurses and midwives towards mental illness. Further analyses illustrate that all subgroups show positive attitudes, with Masters in Mental Health Nursing reporting the highest positive score, followed by Bachelor of Science in Mental Health Nursing and other Masters programs, e.g., Nursing. Results indicate that in Malta a positive correlation exists between the level of education and the attitudes of nurses and midwives towards mental illness. This would imply that the higher the level of nursing/midwifery education achieved the more positive the attitudes towards mental illness. This result resonates with current literature (Märtensson, Jacobsson and Engström, 2014) who also report positive correlations between nurses' positive attitudes towards mental illness and increase in knowledge.

Current findings contradict those by Chambers *et al.* (2010), who report that education did not have any influence on nursing attitudes, across the 5 countries sampled. Chambers *et al.* (2010) recruited nurses holding secondary school education, basic diplomas, degrees and post-basic qualifications. This would allow for comparison of education as an influence on attitudes to mental illness. However, Chambers' *et al.* (2010) study is hindered by organisational differences. The variations in the nursing educational programmes within the 5 sampled countries potentially influenced the results. Conversely, Hamdan-Mansour and Wardam (2009) report that level of education had minimal contribution to the differences in nurses' attitudes. However, they add (Hamdan-Mansour and Wardam, 2009) that those who received specialised mental health training reported more positive attitudes than those that did not. Such findings must be interpreted with caution, as the authors report lack of training in mental health nurses. Based on the WHO (2003) report, Hamdan-Mansour and Wardam (2009) highlight that in Jordan there are only 3 psychiatric nurses and 2 psychiatric nurse practitioners. Therefore, it is unclear if the lack of training reported by the authors concerns this group or a general lack of mental health training within the Jordanian mental health setting. This study also includes registered nurses with Masters, Degree and associate level of education. However, there is no indication if any of these courses is a specialised mental health or psychiatric nursing course. In Malta, specialised training is provided specifically in the Bachelor of Science in Mental Health Nursing programme. Since literature (McHale and Felton, 2010; Hori *et al.,* 2011; Märtensson, Jacobsson and Engström, 2014) identifies education as one of the major

variables inferring on attitudes, the diverse nursing and midwifery educational pathways were investigated in an attempt to explore in-depth this variable and allow for comparison. Although studies report the effect of education in the student's formative years pre-registration (McCann, Lu and Deegan, 2009; Happel, Robins and Gough, 2008a, Happel, Robins and Gough, 2008b; Joyce *et al.,* 2011) and also post registration (McHale and Felton, 2010; Hori *et al.,* 2011; Märtensson, Jacobsson and Engström, 2014), this study is the first to investigate and compare the influence of all the different nursing and midwifery courses offered in an entire country, towards the attitudes held by nurses and midwives to mental illness.

Post hoc analyses reveals a significant difference in positive attitudes between those nurses who followed a Bachelor of Science in Mental Health Nursing and eight other groups (BSc in Nursing studies, BSc in Midwifery studies, Diploma in Nursing studies, Diploma in Midwifery studies, Conversion course, CNP course, Student Nurse course and Pupil Nurse course). Similarly, more statistical significant differences were revealed when nursing education data were analysed by the 3 subscales of the CAMI instrument. Analysis between education and Fear and Exclusion identifies that the group Bachelor of Science in Mental Health Nursing differed significantly with those nurses who graduated following a Bachelor of Science in Nursing Studies, Bachelor of Science in Midwifery Studies, Diploma in Nursing, Conversion course, Student Nurse course and Pupil Nurse course. The lowest mean rank for the Fear and Exclusion subscale was noted in the group which graduated from the BSc in Mental Health Nursing. This would imply that such nurses view mental illness as less dangerous and hold more inclusive views than the other groups. This difference may be attributed to course content of the Bachelor in Science in Mental Health Nursing, which is specific to psychiatric nursing and teaches aspects of dealing with violence, aggression, challenging behaviour and social inclusion. This course also includes a substantial practical component which exposes students to different mental health settings, possibly also influencing the results. Similarly, when comparing level of education on the Social Control subscale, the same BSc. in Mental Health Nursing group differed significantly from 6 other groups (Chapter 5, page 132). Such findings would imply that in Malta nurses with a BSc. in Mental Health Nursing view mental illness as any other illness with less need for any kind of social restrictiveness than the other above mentioned groups. Radhakanth *et al.* (2016) and Vijayalakshmi *et al.* (2014) report that nursing students following a specific mental health nursing educational programme held

more positive attitudes towards restrictiveness, benevolence and stigmatisation than those not that did not, corroborating that present findings may be attributed to the knowledge gained from specific mental health educational programmes such as the BSc Mental Health Nursing course. For example, aspects of social inclusion, dealing with psychiatric emergencies and rehabilitation may influence such attitudes. The group Masters in Nursing studies also report significant differences to two other groups (Conversion course, Pupil Nurse course) for the Social Control subscale. Such results may be linked to the continuation of further education, where aspects of dignity, respect, patient rights and ethics are explored and discussed at a deeper level. In addition, students reading for a Master's in Nursing follow certain modules, such as, critical thinking in application of health care, with the Master's in Mental Health nursing students. This module incorporates students reporting and sharing case scenarios from their own work setting and then discussing the case with the guidance of a lecturer. Similarly, the group Masters in Nursing also report statistically significant difference between the group Pupil Nurses on the Goodwill subscale. Again the level of education varies between programs. The pupil nurse program which lead to a qualification as an Enrolled Nurse was discontinued in 1982. At the time this programme included limited educational training, awareness and exposure to mental health issues, possibly influencing such results. This highlights the importance of mental health education within preparatory courses and also post registration. Although, locally mental health is included in all undergraduate nursing and midwifery courses, the content varies. Therefore, efforts should be undertaken to standardise the course content across the different courses.

Reflective of literature (McHale and Felton, 2010; Hamdan-Mansour and Wardam (2009); Hori *et al.,* 2011; Märtensson, Jacobsson and Engström, 2014), present findings support the hypothesis that specialised mental health education has a positive inference on attitudes. Those nurses who followed specialised mental health education programme (Masters in Mental Health Nursing; BSc in Mental Health Nursing), reported the most positive attitudes and differed significantly from other groups in all the subscales. The specific attributes of these programme, for example in depth mental health knowledge and literacy, understanding and managing difficult and challenging client groups, coupled with the intense exposure to mental health during clinical placements might explain these results. Findings would imply that having specific mental health education would improve the attitudes towards mental illness, supporting the recommendations that specific mental

health nursing content should be part of all nursing and midwifery undergraduate curricula (Wolff *et al*., 1996b; Evangelou, 2010; Schafer, Wood and Williams, 2010; Wynaden, 2011).

6.3.3 Age, Years in Service and Years in the Mental Health Service

Nursing is a high demanding job and affects the health and well-being of nurses, potentially exposing them to higher levels of stress, burnout and decreased job satisfaction which are documented to increase over time (Tooren and De Jonge, 2008; Abdalrahim, 2013; McTiernan and McDonald, 2015). In this section, the influence of work related time variables on attitudes of nurses towards mental illness will be discussed. These variables include Years in Mental Health Services, Years in Nursing Services and Age of nursing and midwifery professionals.

Research mainly highlights the association of demographic variables such as, years in the nursing professional and age, to professional attitudes. The association of age with attitudes towards mental illnesses has been investigated by several authors, however they unanimously report no statistical significance, thus not influential (Williams, 1999; Munro and Baker, 2007; Chambers *et al.,* 2010; Hori *et al.,* 2011). Conversely, results from the present study indicate that age has a significant influence on nursing and midwifery attitudes towards mental illness. Spearman's correlation identifies significant correlations between Age and Social Control, Goodwill and Total Attitudinal Score but no statistical significant value has been reported for the subscale Fear and Exclusion. The comparison of results across all CAMI subscales illustrate that within the Maltese nursing and midwifery population, attitudes tend to become less positive as age increases. Further post hoc analyses reveal differences between groups for the Social Control (20 to 25 yrs with 56-60 yrs). Differences between groups are also noted for the Goodwill subscale (56-60 yrs with 26-30 yrs; 46 to 50 yrs). Patterson, Whittington and Bogg (2007) argue that motivated staff hold more positive attitudes than those less motivated, thus such differences may be attributed to either the enthusiasm (Cleary, Siegfried, and Walter, 2002; James and Cowman, 2007) energy and motivation held by newly qualified staff starting their professional career and/or to the influence of their educational program pre-registration. As this study did not investigate the level of motivation of nurses and midwives therefore

further research is indicated. Van Bogaert *et al.* (2017) outlines that burnout, work-related stress and job dissatisfaction are common within the nursing profession. Therefore, results reported for the group aged 56 to 60 may indicate that this group might be experiencing the most stress, potentially suffer from the highest rates of burnout and also might be affected by a decrease in job satisfaction when compared to the other age groups. Since this study did not investigate the inference of stress, burnout and job satisfaction one can only speculate, thus further research is indicated.

Only two studies have been identified that analyse their findings in relation to years of nursing service. The study by Chambers *et al.* (2010) recruited nurses from 5 European countries, whilst that of Tay *et al.* (2004) was conducted in Singapore. However, these two studies only focus on nurses working within the mental health field. Due to the dearth of such research, this current study tries to augment existing knowledge and shed more light on the association between years of experience and nursing and midwifery attitudes towards mental illness. In order to provide a comparison between years of experience and nursing attitudes, this study investigates two separate time variables, that is, the years spent in the caring profession (years in nursing and midwifery service) and the years spent specifically within the mental health services. This study is the first to include midwives within a study which explores the attitudes towards mental illness and is also the first to investigate if years in nursing/midwifery service, irrespective of the work setting, influence the attitudes of nurses and midwives towards mental illness.

Although only two studies investigate correlations between years in mental health service and attitudes, opposing views exist. Tay *et al.* (2004) report that the more years spent as a nurse within the mental health setting, the more positive the attitudes, whilst Chambers *et al.* (2010) reported no association between years of nursing service and attitudes. The results outlined by Tay *et al.* (2004) must be interpreted with caution, as findings are based on one specific group, namely those who self-harm, thus may not be representative of the nurses' attitudes towards mental illness. Spearman's rank correlation test shows no significant correlations between years in mental health service and attitudes in the present study. Kruskal Wallis H test followed by Mann-Whitney Post hoc analyses also confirms no statistical differences between years in mental health setting and attitudes, which concur with the findings by Chambers *et al.* (2010). However, the results outlined in the present study need to be further investigated as the variable years in mental health services was categorised in subgroups by a 4-year margin of difference, that is, <1 to 5 years, 6 to 10

years etc. Benner (1984) describes that nurses become competent when they are in the same work setting for a period of 2 to 3 years and are confident in their actions. Therefore, categorising the variable years in mental health into such broad subgroups might have masked any possible correlations and significant differences, indicating the need for further investigation.

Whilst results from the present study suggest that the length of service seems not to have an effect on attitudes towards mental illness within the specialised mental health setting, results also reveal that within the Maltese nursing and midwifery population, positive attitudes towards mental illness tend to decrease with the accumulation of nursing/midwifery service. Current literature (Ward, 2011; Abdalrahim, 2013; McTiernan and McDonald, 2015) report that since nursing is a stressful occupation, over time nurses and midwives are likely to experiences emotional exhaustion, depersonalization as well as a reduced sense of personal accomplishment (McTiernan and McDonald, 2015), thus potentially influencing attitudes towards mental illness. Study findings are in line with the above as comparison of mean ranks between years in nursing service and the CAMI subscales reveals a decrease in positive attitudes over time. Kruskal Wallis H test results indicate statistical significance between years in service and Social Control, which was further explored by post hoc analysis. Significant differences were reported between the group with less than 5 years in nursing service and 3 other groups (6 to 10, 16 to 20 and 26 to 30 years in service). Nurses and midwives working in all the clinical settings for less than 5 years may lack experience and expertise when dealing with individuals with mental illnesses. Therefore, unsure of appropriate interventions and boundaries in terms of Social Control. Also such a group might possess a lot of energy and highly motivated towards promoting change and improve care which may influence the results. Finally, the difference may also be attributed to differences in pre-registration education. The nurses and midwives within this group would be those who followed the most recent nursing/midwifery educational programs, possibly influencing the findings. This corroborates with the findings reported by Björkman, Angelman & Jönsson, (2006), who identify less negative attitudes in those nurses who had the most recent training. Conversely, nurses following recent training reported more negative attitudes towards recover from mental illness. This may be attributed to the increase in mental health literacy, which provides a more realistic picture of the difficulties for recovery (Björkman,

Angelman & Jönsson, 2006). Study findings are in line with current literature (Ward, 2011; Abdalrahim, 2013; McTiernan and McDonald, 2015) who report that since nursing is a stressful occupation, over time nurses and midwives are likely to experiences emotional exhaustion, depersonalization as well as a reduced sense of personal accomplishment (McTiernan and McDonald, 2015), potentially also influencing attitudes towards mental illness. Emerging findings indicate the importance of having clinical supervision, which is still lacking in Malta. Brunero and Stein-Parbery (2008) identifies that clinical supervision provides support from more experienced nurses and midwives. It also enhances the development of skills and knowledge. Also, clinical supervision has been reported to reduce stress in nurses as well as increase their accountability (Brunero and Stein-Parbery, 2008).

This study suggests that specialised education and/or at a higher level increases the likelihood of positive attitudes whilst the older and the longer one works within the nursing and midwifery profession tends to decrease the positive attitudes towards mental illness. The influence of such variables on attitudes towards mental illness will reflect on how proficiently nurses and midwives engage with their patients (Molin, Graneheim and Lindgren, 2016).

6.3.4 Gender and Contact with Mental Health Service Users

This section explores if the gender and contact with mental health service users, influence nurses and midwifery attitudes towards mental illness, potentially facilitating or hindering the formation of a therapeutic relationship. Pullen and Mathias (2010), describe a therapeutic relationship between a nurse and a patient as a helping rapport that is based on mutual respect and trust, nurturing hope and faith whilst being sensitive towards the patient's physical, social, emotional and spiritual needs. The importance of building a therapeutic relationship is crucial in delivering high quality care. Without active engagement nurses and midwives can easily miss important clues of underlying mental illnesses such as for those admitted for an elective operation or monitoring during pregnancy (Molin, Graneheim and Lindgren, 2016).

Several authors report the association between gender and attitudes towards mental illness (Hamdan-Mansour and Wardam, 2009; Chambers *et al.,* 2010; Hori *et al.,* 2011; Saunders

et al., 2012). The majority of literature identifies female nurses to hold more positive attitudes than their male counterparts (Hamdan-Mansour and Wardam 2009; Chambers *et al.*, 2010; Hori *et al.*, 2011; Saunders *et al.*, 2012). Munro and Baker (2007) caution that gender might be interacting with other characteristics when differences between gender and attitudes are reported.

For the Maltese nursing and midwifery participants, gender does not influence attitudes towards mental illness. Such findings corroborate with other literature also reporting no statistical significance (Williams, 1999; Addison and Thorpe, 2004). Conversely, these findings conflict with findings in the majority of literature (Hamdan-Mansour and Wardam, 2009; Chambers *et al.*, 2010; Hori *et al.*, 2011 and Saunders *et al.*, 2012). Literature supports the fact that female nurses tend to have more positive regard towards individuals with mental illness. The differences in attitudes towards mental illness between males and females could be related to cultural differences. The studies that support this hypothesis were conducted in different countries, including Jordan, Australia, Singapore, New Zealand and also five European countries, all sharing different cultural values and beliefs. This diversity in countries and cultures would imply that other factors might account for this finding. Ogura & Ueno (2004) report that female nurses show more empathy in situations in which they are required to place a patient in seclusion or restraint. Yada *et al.* (2014) add that a feeling of discrepancy between the attitude towards how psychiatric care should be delivered and the type of care they are required to provide might be influencing female nurses' more positive attitudes. Another possible explanation for such results might be attributed to the caring and nurturing aspects of the female's maternal instinct, however as no attempt was made to measure the influence of the maternal instinct on attitudes towards mental illness, further research is indicated. Hamdan-Mansour and Wardam (2009) suggested that although gender is a significant influential factor in the formation of nurses' attitudes towards mental illness, such difference may be compensated by the intensive, specialised education and training. This might be reflected in the present findings, as in Malta, education, training, work duties and responsibilities are equal irrespective of the nursing or midwifery gender, thus possibly explaining the non-significance of the results.

Contact and exposure to individuals with mental illness is mentioned in literature as potential contributors to attitudes, with authors arguing that decreased contact with service users may increase stigmatisation (Sadow, Ryder and Webster, 2002). Fraser and Gullop (1993) add that there is a tendency to provide more affection and empathy to familiar patients rather than unfamiliar ones, whilst Saunders *et al.* (2012) describe that experience, and the extent of exposure to individuals who self-harm has a positive impact on attitudes of health professionals. This might translate to how effectively nurses and midwives engage in a therapeutic relationship. Conversely, Chambers *et al.* (2010) report that contact and exposure do not influence the attitudes of nurses towards mental illness. Only two studies have been identified in literature that investigate the inference of exposure on nurses' attitudes to mental illness. (Björkman, Angelman and Jönsson, 2006; Chambers *et al.,* 2010). Björkaman Angelman and Jönsson (2006) report that nurses working within a mental health setting showed more positive attitudes than those working within somatic care, attributing this difference to contact and exposure. However, results should be interpreted with caution as these findings may be caused by the difference in work setting rather than actual exposure to mental illness. The only other study that investigates the influence of contact with mental health service users on attitudes of nurses towards mental illness was conducted by Chambers *et al.* (2010). The results of the present study also concur with those by Chambers *et al.* (2010) with no statistical significance reported when data were analysed in relation to the contact variable. This study contributes to further knowledge in this neglected area of research, suggesting that rather than contact, other confounding variables such as differences in work setting, or education influence attitudes of nurses and midwives towards mental illness. Once again the similarities between these two studies could be attributed to the cultural similarities across Western Europe. The absence of correlations between contact time and attitudes would imply that such a factor is not inferential within the Maltese Nursing and Midwifery population. Further research is warranted in order to compare if International midwives share similar attitudes towards mental illness. So far no other work has been identified that investigates contact of midwives, making this study the first to investigate such a correlation.

6.3.5. Implications of variables towards Rehabilitation and Recovery

As previously outlined stigma towards mental illness is widespread (Lauber, *et al.,* 2003; Graf *et al.,* 2004; Lauber *et al.,* 2004; Jorm, Christensen and Griffiths*,* 2006). Throughout

history, attitudes towards the mentally ill have been unfavourable and those labelled as mentally sick or ex-mental patients might have been unfairly treated because of this (Link *et al.,* 2004). One major obstacle in trying to help the mentally ill and ex-patients lies in the public's negative attitude towards them. Studies (Thio*,* 1983; Hannigan, 1999; Zartaloudi and Madianos, 2010) have shown that most people, irrespective of age or gender, or level of education, feel that the mentally ill are dirty, worthless, unpredictable and dangerous. Based on such attitudes individuals with mental health conditions are often discriminated against and denied jobs and any meaningful interaction with other members of society. Negative attitudes can also be seen in health care professionals (Richmond and Foster, 2003; Horsfall, Cleary and Hunt, 2010) which have severe repercussions on recovery and rehabilitation (Chambers *et al.,* 2010). Herman and Freeman, (1974) identified early on that stigma acts as a deterrent to recovery and may also exacerbate the tendency to deny further help.

Nurses' attitudes towards, and understanding of, mental illness will ultimately shape therapeutic relationships and support patients in their recovery (Liu, Gerdtz and Liu, 2011). With the introduction of programmes such as Mental Health First Aid, therapeutic relationships might be shaped more positively. Results in the present study showcase that Maltese nurses and midwives do have positive professional attitudes towards mental illness, with specific groups, such as RMNs reporting higher positive attitudes than other groups as outlined in the findings chapter and also above. However other factors contribute to the barriers of rehabilitation and recovery including financial status of the individual, housing, family network and support (Lauber *et al.,* 2004; Teixeira, Santos and Abreu, 2014). Although these are not within the remits of this work nor within the job description of Maltese nurses and midwives, one must not forget that attitudes towards service users are crucial in the engagement and planning of individualized care plans, that reflect the service users' specific needs. Service user involvement is essential as it provides a perspective of what their needs are and more importantly, if such needs are being met. Education, awareness, mental health literacy and contact have all been mentioned in literature as contributing factors to facilitate the process of recovery. This study concurs and strengthens the existing knowledge that education is essential in order to facilitate effective recovery, potentially reducing financial costs and bed occupancy stay (Stevens, Hammer and Buchkramer, 2001).

6.4 Validation of the CAMI scale to investigate nursing and midwifery attitudes in Malta

The Community Attitudes towards the Mentally Ill Scale (Wolff *et al.,* 1996a) was used to investigate the attitudes of Maltese nurses and midwives towards mental illness. This study adds to the existing data pertaining to the validation of the Wolff *et al.* (1996a) scale, by identifying if the same model proposed by Wolff *et al.* (1996a) is achieved using the Maltese nursing and midwifery data set. The statistical testing performed by Wolff *et al.* (1996a) were reproduced. Factor analysis revealed the same 3 factor solution, which the authors (Wolff *et al.,* 1996a) named Fear and Exclusion, Social Control and Goodwill.

Further analyses of the Maltese nursing and midwifery data set reveals that out of the 20 statements, 19 load onto the same factors identified by Wolff *et al.* (1996a). Data shows that the statement *"The mentally ill do not deserve our sympathy"* does not load on the factor Goodwill as described by Wolff *et al.* (1996a). In the Maltese data, this statement showed a high loading on both the Social Control and the Goodwill subscale. This implies that such a statement has ramifications in both these subscales. There are two plausible assumptions for such a result. Firstly, it might be that in Malta, this statement does not fit any of the three subscales and thus not useful. Therefore, the CAMI scale can be reduced to a 19 item tool in the Maltese context. Secondly, if it is assumed that the statement itself is valid and has implications in both the Social Control and Goodwill dimensions within a Maltese cultural context, then the definition of the subscales need to be slightly different to those of Wolff *et al.* (1996a), in order for item 19 to load on one factor. Pincock (2005) describes the unique geographical characteristics of the Maltese Islands, creating a very close knit community, with accessible health care services. Due to this close knit community Maltese in general tend to be very supportive, eager and willing to help especially on issues related to ill health (Persaud *et al.,* 2007). This local close knit culture coupled with a profession based on the art of caring, may explain why the statement, *"The mentally ill do not deserve our sympathy",* has both ramifications in the Social Control and in the Goodwill dimensions within the Maltese nursing and midwifery population. Taking into account the Maltese cultural factor, this statement was not dropped nor were the subscales redefined. Within a Maltese context, it is not surprising that the statement *"The mentally ill do not deserve our sympathy",* has both ramifications within the Social Control

and Goodwill dimension as both subscales reflect the nature of support and care towards individuals with mental illness. Overall the CAMI scale (Wolff *et al.,* 1996a), provided a good fit to analyse for exploring the attitudes of nurses and midwives towards mental illness in Malta. This tool is also adequate for further research of nursing and midwifery attitudes towards mental illness.

6.5 Strengths of the Study

There are a number of strengths associated with this study. It is the first to investigate the attitudes of nurses and midwives towards mental illness within the Maltese Islands and the first that investigates demographic factors that may influence such attitudes within the Maltese setting. Other strengths are outlined below.

This study achieved a high response rate (74.15%). It is the first of its kind to adequately represent the attitudes of Maltese nurses and midwives towards mental illness. The survey design ensured that all the target population is included in the study, giving insight across the spectrum of nursing and midwifery. Having 1483 participants out of the entire 2000 nursing and midwifery population at the time of data collection makes this study reflective of the attitudes towards mental illness held by Maltese nurses and midwives, allowing for the generalisability of the results.

This study presents a large sample size with a high distribution in each age group, representative of the target population. This is not seen in any other study investigating the effect of age on nursing attitudes towards mental illness. It is worth noting that this study is the first to explore the inference of age, years in service and exposure to mental health service users on the attitudes of midwives towards mental illness.

Another strength of this study is that it does not limit itself to outline the attitudes of the Maltese nursing and midwifery population but also investigates variables, which might have an effect on such attitudes. Again this study is the first to compare the attitudes of Registered Mental Health nurses working within different mental health specialties with those nurses working in other settings, such as a medical or surgical setting. This study

also illustrates the views of Maltese midwives towards mental illness and compared them with those of nurses, which to date was never been done.

The tool used guaranteed anonymity, thus respondents were free to disclose their attitudes without any prejudice or discrimination. This study made use of the CAMI tool (Wolf *et al.,* 1996a), again confirming the 3-factor solution and validity of this tool.

6.6 Limitations of the Study

Although this study has several strengths its limitations also need to be acknowledged. The study aimed to explore, compare and critically analyse the attitudes of Maltese nurses and midwives toward mental illness and identify the various factors that influence such attitudes. The regression model only accounts for 6.9% of the total variation in the response, implying that other factors are influential on the attitudes of nurses and midwives towards mental illness. Factors such as level of stress, burnout, motivation and job satisfaction were not investigated in this study.

Although all the Maltese nursing and midwifery population working within the public sector were potential recruits, the Nursing Officers/Charge Nurses distributing the questionnaires on behalf of the author might not have managed to contact all nurses.

The fact that self-reported questionnaires were used might lead to response bias, with participants reporting socially desirable responses rather than their true feelings, especially, where the participants tend to misrepresent their opinions in the direction of answers consistent with prevailing social norms (Polit and Beck*,* 2006).

The investigation of the variable "*Years in Nursing Service*" in subgroups categorised, <1-5 years; 6-9 years etc., could have masked potential correlations between the initial years in nursing service and attitudes. Ideally the first 5 years should have been listed independently and not grouped.

Literature (Angermeyer and Dietrich, 2006; Chambers *et al.,* 2010) outlines that the link between actual behaviour and attitudes is tenuous, thus it's a weakness shared by all studies investigating attitudes.

6.7 Recommendations

Nurses attitudes towards, mental illness will ultimately shape therapeutic relationships, delivery of care and recovery of patients with mental illness (Liu, Gerdtz and Liu 2011). This study discussed the findings within the Maltese context in view of current literature, identifying those variables that infer on the attitudes of nurses and midwives towards mental illness. Education has been identified as one of the strongest contributors to the attitudes of nurses and midwives towards mental illness in Malta. Resulting from the study the following recommendations for policy, practice development, education and further research are being suggested

6.7.1 Recommendations for Policy, Practice and Education.

- Due to the increase in the prevalence of mental illness, Mental Health First Aid should be provided to all nurses and midwives. Such programme would equip nurse and midwives with adequate knowledge and skills to better care for individuals with mental illness irrespective of their work setting.

- The introduction of Specialist Maternal Mental Health Midwives is recommended. Such specialised Midwives would support women with a mental illness through pregnancy and early postnatal period. Such role would also ensure that specific individual needs are meet, safeguarding the pregnant woman and the baby. Finally, the Specialist Maternal Mental Health Midwives would be a great asset to a multidisciplinary care approach so that holistic care can be provided.

- Clinical Supervision should be introduced in all settings. Such supervision can support inexperienced staff with any difficulties during their initial stages of their career. With adequate clinical supervision the build-up of stress leading to burnout and decreased job satisfaction may be counteracted.

- It has been identified that education, specifically mental health education increases the positive attitudes towards mental illness. Therefore, it is being recommended that continuous professional development courses specific on mental health should be available for all nurses and midwives working in the governmental sector post

qualification. This would ensure that the nursing and midwifery workforce keeps up with the current developments and strategies used within the national mental health services.

▪ Nurses working in the National Mental Health service and not registered as RMNs should be offered specific training, ideally leading to a Mental Health registration. The current Maltese health strategy does not differentiate in the allocation of nurses, thus a registered nurse may be deployed in any setting, even in a specialized area such as mental health. Therefore, nurses should either receive post-registration training specific to mental illness, or be given the necessary support to undergo studies leading to a Mental Health registration.

▪ Given the importance of Education on attitudes towards mental illness, it is being recommended that the mental health content should be increased in all pre-registration courses. The content should include aspects of therapeutic engagement, effects of professional stigma, stereotypes and discrimination together with effective reduction strategies.

6.7.2 Recommendations for Further Research

Research findings show that the variables Grade, Gender, Age, Education, Years in Nursing Service, Years in Mental health setting and Contact only account for 6.9% of the total variation in the responses. This implies that other predictors exist that affect the positive attitude score. Such predictors might include work burnout, communication or lack of, motivation, collegiality between colleagues and personal variables such as home situations and person problems. Therefore,

▪ More qualitative and quantitative research on attitudes towards mental illness, should be conducted in partnership with service users. Service users should be actively involved in design and delivery of professional development courses and pre-registration courses from conception to dissemination. Such involvement will highlight how service users perceive the delivery of care and attitudes towards

mental illness. This would translate into education and training reflective of their needs, as ultimately they are the receivers of care.

- This study has identified a dearth in local research, thus more research both quantitative and qualitative in nature should be conducted to further explore the attitudes of Maltese nurses and midwives towards mental illness.

- A similar study should be conducted, however replacing non- significant variables. This would attempt to further identify what variables influence attitudes of nurses and midwives towards mental illness.

- Further quantitative research is also suggested, in order to investigate what factors are responsible for the differences between subgroups, in the statistically significantly variables, such as education, grade and years in service

- Further research should be conducted on the attitudes of midwives towards mental illness. This area of study is still under researched and should be investigated both qualitatively and quantitatively.

- More exploratory research should be conducted to investigate the relationship between specific nursing and midwifery educational programs and attitude formation.

6.8 Conclusion

Notwithstanding its limitations, this study revealed that Maltese nurses and midwives view mental illness with positive regard. Also specific variables such as Professional Grade, Age, Education, Years in Nursing Service and Nurses working within the Mental Health field seem to effect attitudes of Maltese nurses and midwives towards mental illness, whilst Gender, Work setting, Years in mental health work setting and Contact with Mental Health Service Users have no effect on such attitudes. In order to enhance the attitudes of Maltese nurses and midwives towards mental illness more education and training should be implemented. Such education includes aspects of interaction and engagement in pre-registration courses as well as the introduction of Mental Health First Aid post registration. The lack of experience of newly qualified staff and the increased level of stress over the

years could be counteracted by implementing clinical supervision. The introduction of Specialised Maternal Mental Health Midwives would strengthen the holistic delivery of care. Further qualitative and quantitative research, with more patient involvement is indicated in order to explore in depth the influence of demographic, work related and personal variables on the attitudes of nurses and midwives towards mental illness.

Chapter 7
Overall Conclusion

7.1 Introduction

The previous chapter has described in detail the attitudes of Maltese nurses and midwives towards mental illness. It also compared the influence of variables on such attitudes in relation to existing literature and the local context. In conclusion, the local nurses and midwives seem to view mental health service users with positive regard, with specific variables having a direct correlation with this positive regard. Key variables influencing the attitudes within the Maltese nursing and midwifery population include Professional Grade, Age, Education, Years in Nursing Service and Working within the Mental Health field. These findings together with the recommendations, should forge upcoming policies, practices and educational programmes in order to nurture the best possible nursing and midwifery professionals.

7.2 Comprehensive Overview

Stigma and negative attitudes towards mental illness is considered one the major burdens towards seeking help. Negative professional attitudes have been documented in literature, although studies report both positive and negative nursing and midwifery attitudes towards mental illness. This study aims to explore, compare and critically analyse the attitudes of Maltese nurses and midwives towards mental illness and identify the various demographic and work related variables that influence such attitudes. No previous study has been conducted in Malta that addresses this aim and objectives, making it the first of its kind. Results from this cross sectional study, which investigated all the nurses and midwives employed within State owned hospitals and facilities reveal that overall, Maltese nurses and midwives hold a positive attitude towards mental illness. Various demographic and work related variables identified in literature reported to influence attitudes have also been investigated. These demographic and work related variables include, Grade, Gender, Age, Nursing Education, Years in Nursing Service, Work Setting, Years in Mental Health Setting, Mental Health Work Setting and Contact with Mental Health service users. The Community Attitudes towards Mental Illness (CAMI) scale developed by Wolff *et al.* (1996a) was used. This scale provides is a 20-item questionnaire providing a three factor solution to the previously validated 40-item CAMI scale developed by Taylor and Dear

(1981). The Subscales in the CAMI scale Wolff *et al.* (1996a) named Fear and Exclusion, Social Control and Goodwill address the various domains commonly associated with formation of attitudes towards mental illness. It is described in literature that due to lack of proper mental health literacy, mental illness is often viewed negatively, with individuals suffering from mental health conditions often labelled irrational, violent, aggressive, dirty, unfit for work and need constant support in their lives. Misinformation, lack of education and awareness gives rise to these labels, which in turn affect directly individuals with mental illness from seeking help.

This study identifies the importance of education in the formation of attitudes. Results show that specific mental health education that leads to a specialised nursing profession hold the highest attitudinal score. It is worth mentioning that all the current educational pathways leading to a nursing or midwifery qualification have a mental health component. This mental health component includes theoretical teaching and clinical exposure. Although this component is limited compared to the courses in mental health nursing, it still exposes student nurses/midwives to mental illness and sheds light on the myths and misinformation surrounding mental illness. Apart from education and professional grade, age, years in service and working specifically within the mental health field seem to also affect the attitudes of Maltese nurses and midwives towards mental illness. Conversely, the variables Gender, Work setting, Years in mental health work setting and Contact with mental health service users have no effect on such attitudes. Influencing factors only account for 6.9% of the total variation in the responses, implying that other predictors exist that affect attitudes. Such predictors might include work burnout, motivation, communication or lack of this, collegiality between colleagues and personal variables such as home situations, and person problems. These predictors warrant further research. This present study has contributed more data to the existing body of knowledge as well as investigated for the first time the attitudes of midwives towards mental illness. It is also the first to investigated the influence of all the nursing and midwifery work settings and the pre-registration courses within Malta. This is outlined in the contribution to the body of knowledge section.

7.3 Contribution to the body of knowledge

This study explored, compared and critically analysed the attitudes of Maltese Nurses and Midwives towards mental illness and identify various factors have an influence on such attitudes. To further extend the body of research, this study provides an adequate representation of the attitudes held by Maltese nurses and midwives, allowing for comparisons with other similar studies. This study validates the CAMI tool (Wolff *et al.,* 1996a) as an adequate tool to investigate the attitudes of nurses and midwives towards mental illness. The study also contributes to the dearth of research on the effect of years in nursing service on attitudes towards mental illness. It also contributes to the findings already reported for the demographic and work related variables such as education, gender and grade. Moreover, this study is the first of its kind to investigate the attitudes towards mental illness of the entire nursing and midwifery population of a country. Unlike other studies, the geographical layout and access to health facilities made this possible. This study is also the first to attempt to compare the attitudes of nurses and midwives according to their years in service. Also this study reports for the first time the influence of working within all the different mental health settings. To the researcher's knowledge this study is also the first to include a midwifery population within the comparisons. Education has been a constant theme within this research and this outlines the importance of having proper educational programmes at pre and post-registration level.

7.4 Impact on the Maltese Health Services and Patient care

This study provides the first concrete view of the attitudes of nurses and midwives working with the public sector in Malta towards mental illness. As previously discussed professional attitudes will ultimately shape therapeutic relationships, delivery of care and recovery of patients with mental illness (Liu, Gerdtz and Liu 2011). Findings reported in this study together with the recommendations emerging from such can help shape practices and well as improve the care delivery. Education or the lack of adequate knowledge about mental health has been identified as one of the strongest contributors to the attitudes of nurses and midwives towards mental illness in Malta. It has been identified that education, specifically mental health education increases the positive attitudes towards mental illness This finding has major implications towards improving the present services and ultimately also improve care. Recommendations to the Director of Nursing in Malta, responsible for the nursing organisation, the Faculty of Health Sciences Dean, responsible for the nursing

and midwifery courses, and the Mental Health Commissioner, who is responsible to safeguard that patients receive high quality care amongst other roles will be put forward highlighting the need of continuous professional development courses specific on mental health. This would ensure that the nursing and midwifery workforce keeps up with the current developments and strategies used within the national mental health services. Mental Health First Aid training should be provided to all nurses and midwives. Such programme would equip nurse and midwives with adequate knowledge and skills to better care for individuals with mental illness irrespective of their work setting. Another important concern identified in this study is the importance of providing support to inexperienced staff during their initial stages of their career. Recommendations for the introduction of clinical supervision will be also presented to the stakeholders responsible for local practice, mainly, the Director of Nursing Services in Malta and also the various Nursing Directors responsible of the different public hospitals in Malta. This study also identified that those nurses who are registered as mental health nurses hold more positive attitudes than the rest of the other nurses and midwives. Whilst RMNs working within the mental health services, this setting is not restricted to such professional group. Due to the human resources needed to operate such a setting, the current Maltese health strategy does not differentiate in the allocation of nurses, thus a registered nurse may be deployed in any setting, even in a specialized area such as mental health. This may cause inadequacy in care delivery due to the lack of knowledge, skills and experience require to work in such a setting. Therefore, it is being recommended that all those nurses should either receive post-registration training specific to mental illness, or be given the necessary support to undergo studies leading to a Mental Health registration. Another identified issue is that in Malta there are no Specialist Maternal Mental Health Midwives. The role of such midwives is crucial in supporting women with a mental illness through pregnancy and early postnatal period. Such role would also ensure that specific individual needs are meet, safeguarding the pregnant woman and the baby, ultimately improving the quality of care provided to the those in need. This role will be suggested to the Director of Nursing Services together with the Maltese Union for Midwives and Nurses in hope that such a specialized group of professionals would also be introduced locally. Positive attitudes are key to the provision of quality care, therefore every effort should be undertaken to strengthen the positive results identified in this study, whilst address areas of improvement highlighted in the recommendations section (Chapter 6, p191) and above.

7.5 Reflection on the study

The entire process to complete this work provided many learning opportunities. I have developed more interest in statistics and data analyses, which I hope to pursue in the near future. This interest originates from my personal weakness in this area, prompting myself to expand my knowledge. This study has showed me that interpretation of statistical results outside of the lab are not always black or white, as human interaction can produce a lot of in between shades.

Upon reflection, has the study aim and objectives been meet? Although acknowledging the study's limitations, after investigating the attitudes of Maltese nurses and midwives towards mental illness, results show positive attitude. Also objectives focused on investigating the variables that contribute to attitudes towards mental illness. This has also been investigated in detail, however it is apparent that a lot more research should be conducted. It is surprising that variables investigated in this study, originating from literature only account for such a low percentage of the total variation in response. This clearly shows the need for further research to identify which other variables infer on such attitudes. Reflecting upon this one cannot but wonder how complex attitudes can be and how these can change depending on presenting situations and life experiences.

Since this study only investigated the attitudes of Maltese nurses and midwives, result reflect only their views. The opinions of service users have not been investigated in this study, however reflecting upon the findings and outcomes of this study, one would pose the question:

Considering the positive attitudes held by Maltese nurses and midwives, are service users being treated with positive regards and is their perceived experience positive? In order to answer this question a new study should be conducted. This reflects the need of having service user involvement in research. It would be interesting to identify if the positive attitudes showcased by nurses and midwives are truly manifesting in a more positive experience for the service user.

This study has made me aware of how limited local research related to attitudes towards mental illness is. This highlights the importance of furthering such research in order to ameliorate the delivery of quality care. This study has served to provide a baseline of attitudes towards mental illness by the Maltese nursing and midwifery population during a

specific period. These attitudes may change over time for a multitude of reason, one being the expansion of health care on the island. This prompts the importance of nurturing a positive, non-judgmental culture within the nursing and midwifery profession. This would battle the ever so present stigma surrounding mental health.

On reflection I wonder if this study has truly come to an end? The honest reply is that this study is just the beginning. This work has provided valuable insight about the attitudes of Maltese nurses and midwives towards mental illness, however a lot of questions remain unanswered. What other contributors are influencing the attitudes towards mental illness within the nursing and midwifery population? If the recommendations suggested in this work are implemented, will these have the desired effect? How can educators improve the nursing and midwifery programmes in order to address the findings of this study? These are no easy questions to answer however, with the continuous monitoring and research within this field both at a local level and also internationally, potential answers may be identified. Identifying and understanding what influences attitudes of nurses' and midwives' attitudes towards mental illness is crucial to the delivery of quality care.

7.6 Final Thoughts

I would like to conclude this work with a few final thoughts. The lengthy process does not come without sacrifices however the end process is very rewarding. I have met a lot of people along the way whom I consider not only mentors but also friends. They have helped me grow both academically and also personally. I will ensure that I will transfer their teachings on to my students during the course of the years. I hope that this research is just the tip of the iceberg for local research on professional attitudes within the nursing and midwifery field. Especially now after having identified a baseline for the local nursing and midwifery population. It is intriguing to think that all the variables explored only account of 6.9% of the total variation in response. This prompts for further research in this field. Finally reflecting on the words of the psychiatric nurse of the century Hildegard Peplau (1952), nursing is therapeutic because it is a healing art, assisting an individual who is sick or in need of health care. Nursing and midwifery can be viewed as an interpersonal process because it involves interaction between two or more individuals with a common goal, therefore positive attitudes are crucial for such an interpersonal process to occur.

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Appendices

Appendix 1
Research Instrument

Maltese Nurses' and Midwives' attitudes to Mental illness: A Comparative Study

Demographic Data

Please tick your answers below with ☑

Grade:	Departmental Nursing Manager or higher	☐	Nursing Officer	☐
	Deputy Nursing Officer	☐	Staff Nurse	☐
	Registered Mental Health Nurse	☐	Enrolled Nurse	☐
	Midwifery Officer	☐	Midwife	☐

Gender:		Male	☐	Female	☐

Age:	20 yrs – 25yrs	☐	26 yrs – 30 yrs	☐	31 yrs – 35 yrs	☐	36 yrs – 40 yrs	☐
	41 yrs – 45 yrs	☐	46 yrs – 50 yrs	☐	51 yrs – 55 yrs	☐	56 yrs – 60 yrs	☐
	61 yrs +	☐						

Nursing Education:	PhD	☐	Masters in Health Service Management	☐
	Masters in Nursing Studies	☐	Masters in Mental Health Nursing	☐
	BSc in Nursing	☐	BSc in Mental Health Nursing	☐
	Diploma in Nursing	☐	Diploma in Mental Health Nursing	☐
	BSc in Midwifery Studies	☐	Masters in Midwifery Studies	☐
	Diploma in Midwifery Studies	☐	Traditional Midwifery Course	☐
	Conversion Course	☐	CNP Course	☐
	Student Nurse Course	☐	Pupil Nurse Course	☐
	Other	☐		

Years in Nursing Service:	Less than 5 yrs	☐	6 to 10 yrs	☐	11 to 15 yrs	☐
	16 to 20 yrs	☐	21 to 25 yrs	☐	26 to 30 yrs	☐
	31 to 35 yrs	☐	36 yrs +	☐		

Work Setting:	Medical	☐	Surgical	☐	Accident and Emergency	☐
	Orthopaedics	☐	Paediatrics	☐	Dermatology	☐
	Oncology	☐	Mental Health	☐	Theatres	☐
	Geriatrics	☐	Community	☐	Primary Health/ Clinics	☐
	Outpatients	☐	Rehabilitation	☐	Gynaecology and Maternity	☐

Years in Mental Health Setting:	None	☐	<1 to 5 yrs	☐	6 to 10 yrs	☐
	11 to 15 yrs	☐	16 to 20 yrs	☐	21 to 25 yrs	☐
	26 to 30 yrs	☐	31 to 35 yrs	☐	36 yrs +	☐

In which area of mental health do you work (if any):	Acute	☐	Chronic	☐
	Rehabilitation	☐	Community	☐
	Old Age Psychiatry	☐	Child and Adolescent	☐
	Learning Disabilities	☐	Substance Misuse	☐

Contact with Mental Health Service Users:	None	☐	Daily	☐	Twice Weekly	☐
	Weekly	☐	Every fortnight	☐	Once a month	☐

Community attitudes towards the mentally Ill (CAMI)
Wolff et al., (1996a)

Instructions: *Please tick the appropriate box to your point of view. Only tick one point of view per question.*

No	Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1.	Locating mental health services in residential neighbourhoods does not endanger local residents					
2.	Local residents have a good reason to resist the location of mental health services in their neighbourhood					
3.	It is frightening to think of people with mental problems living in residential neighbourhoods					
4.	Residents have nothing to fear from people coming into their neighbourhood to obtain mental health services					
5.	Having mental patients living within residential neighbourhoods might be good therapy, but the risks to residents are too great					
6.	Locating mental health facilities in a residential area downgrades the neighbourhood					
7.	I would not want to live next door to someone who has been mentally ill					
8.	Mental health facilities should be kept out of residential neighbourhoods					
9.	Residents should accept the location of mental health facilities in their neighbourhood to serve the needs of the local community					
10.	No-one has the right to exclude the mentally ill from their neighbourhood					
11.	The mentally ill should be isolated from the rest of the community					
12.	Mental patients need the same kind of control and discipline as a young child					
13.	One of the main causes of mental illness is a lack of self-discipline and will power					
14.	As soon as a person shows signs of mental disturbance, he or she should be hospitalized.					
15.	Anyone with a history of mental problems should be excluded from taking public office					
16.	There is something about the mentally ill that makes it easy to tell them from normal people					
17.	The best way to handle the mentally ill is to keep them behind locked doors					
18.	We have a responsibility to provide the best possible care for the mentally ill					
19.	We need to adopt a far more tolerant attitude to someone who has been mentally ill on our society					
20.	The mentally ill do not deserve our sympathy					

Appendices 2-6 have been removed as they contained personal address data