THE ATTITUDES OF DOCTORS IN SOUTH AFRICAN TEACHING HOSPITALS TOWARDS MENTAL ILLNESS AND PSYCHIATRY

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Master of Medicine in the branch of Psychiatry

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DECLARATION

I, Kerry-Leigh Cecilia Jury, declare that this research report is my own work. It is being submitted in partial fulfilment of the requirements for the degree of Master of Medicine in the branch of Psychiatry. It has not been submitted before for any degree or examination at this or any other University.

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_____ day of _____ 2016

DEDICATION

For my husband, Marc

And my daughter, Nicola

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PRESENTATIONS

1. Jury, KC, Del Fabbro G. The attitudes of doctors in South African teaching hospitals towards mental illness and psychiatry. (Oral presentation) 26th Annual Psychiatry Research Day. Department of Psychiatry, University of the Witwatersrand; 11th June 2014
2. Jury, KC, Del Fabbro G. The attitudes of doctors in South African teaching hospitals towards mental illness and psychiatry. (Oral Presentation) Biennial SASOP National Congress, Durban; 6th September 2014
3. Jury, KC, Del Fabbro G. The attitudes of doctors in South African teaching hospitals towards mental illness and psychiatry. (Oral Presentation) School of Clinical Medicine (SOCM) Research Day. Faculty of Health Sciences, University of the Witwatersrand; 30th September 2015

PRIZES AND AWARDS

1. Best registrar presentation at the WITS Department of Psychiatry's Annual Research Day, 2014.
2. Joint recipient of the MS Bell award at the Biennial SASOP National Congress, Durban; 6th September 2014
3. Best oral presentation at the Biennial SASOP National Congress, Durban, 6th September 2014.

Abstract

Introduction. Mental illnesses are highly prevalent worldwide. The majority of mentally ill individuals are reintegrated into society where they often encounter stigma and discrimination. Stigmatisation by the community is a well-known and highly researched phenomenon. However, fewer studies have investigated the attitudes of medical doctors towards mental illness and as yet no such study has been done in South Africa. On reviewing the literature it is evident that negative attitudes also exist towards psychiatry as a profession, however to date there is limited data available on this topic. The aim of this study was to determine the attitudes of a group of psychiatric and non-psychiatric doctors towards people with mental illness and towards psychiatry as a profession.

Methods. This was a cross-sectional study in the form of a self-administered questionnaire, which was distributed to medical doctors at five teaching hospitals in Gauteng, South Africa. All qualified doctors working at the selected institutions were eligible to participate in the study, regardless of their level of experience or specialist field. The questionnaire investigated their attitudes towards three mental illnesses namely; depression, schizophrenia and borderline personality disorder, and towards psychiatry as a profession. A convenience sampling method was used and two different questionnaires were distributed, one to the psychiatric and the other to the non-psychiatric doctor group.

Results. A total of 531 doctors (16.4% psychiatric & 83.6% non-psychiatric) completed the questionnaire. Overall, the doctors' attitudes were more negative towards persons with schizophrenia and borderline personality disorder than towards those with depression. For all three of the mental illnesses in question more than 50% of the doctors felt that persons would improve with treatment, however less than one third felt that they would ever recover fully. The non-

psychiatric doctors' attitudes were more negative towards persons with schizophrenia and depression than the psychiatric doctors, with significantly more non-psychiatrists agreeing that such persons are unpredictable, dangerous and hard to talk to. More than 70% of the psychiatric group felt that non-psychiatric doctors considered psychiatrists to know less than other doctors and psychiatry to be an unimportant specialty. However, less than 11% of the non-psychiatric doctors actually held these negative views.

Conclusion. Overall, the doctors in this inquiry did hold negative attitudes towards mental illness. However, the psychiatric doctor group were noted in a number of instances to be significantly more positive in their attitudes towards mental illness than their non-psychiatric colleagues. In addition, a large proportion of the psychiatric doctor group had encountered stigma towards their profession, but it was clear that they have incorrect perceptions with regards to the extent of the non-psychiatric doctors' negative attitudes towards them and their profession.

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LIST OF ABBREVIATIONS

BPD	Borderline Personality Disorder
CHBAH	Chris Hani Baragwanath Academic Hospital
CMJAH	Charlotte Maxeke Johannesburg Academic Hospital
CI	Confidence Interval
DEP	Depression
DV	Dependent variable
HJH	Helen Joseph Hospital
IV	Independent variable
MI	Mental Illness
OR	Odds Ratio
SCZ	Schizophrenia
SFH	Sterkfontein Psychiatric Hospital
Tara	Tara Psychiatric Hospital
UCT	University of Cape Town
WITS	University of the Witwatersrand

CHAPTER 1 INTRODUCTION

1.1 Literature Review

1.1.1 Prevalence and disability of mental illness

Mental illness affects a large number of people regardless of sex, race or socio-economic status. A survey conducted in 14 countries including the Americas, Europe, the Middle East, Africa, and Asia by the World Health Organisation found that the prevalence of mental disorders ranged from 4.3% in Shanghai to 26.4% in the United States.[1] The results of this study indicate that mental illnesses are highly prevalent worldwide. Further to this, a study by Kessler et al. noted no significant difference between developed and developing countries in the projected lifetime risk of having a mental illness.[2] They reported the South African lifetime prevalence and projected lifetime risk for any DSM IV psychiatric disorder as 30,3% and 47.5%, respectively.[2] These figures are consistent with those obtained in the South African Stress and Health study by Stein et al. in which the lifetime prevalence rate for any psychiatric disorder was also found to be 30%.[3]

Not only are mental illnesses highly prevalent in South Africa but they are also often inadequately treated. In a study by Williams et al., it was found that 72.4% of persons in South Africa with a moderate or serious mental illness are not receiving any form of treatment.[4] As a result, mental illness is a major cause of disability in South Africa and makes a significant contribution to the countries' burden of disease.[4] This is consistent with the findings of global studies, which have also highlighted mental illnesses as being a significant cause of disability.[1] According to a World Health Organisation report, in persons aged 15-44 years, unipolar depressive disorders, alcohol-related disorders, self-inflicted injuries, schizophrenia and bipolar

affective disorder are all ranked in the top 10 causes of disability adjusted life years.[5] Mental disorders thus make a significant contribution to the worldwide burden of disease, with a multitude of negative effects both at an individual and economic level.[5] The significant disability associated with mental illnesses is not solely the result of the direct detrimental effects of the illnesses themselves but is also in large part due to the stigma associated with having a mental illness.[6]

1.1.2 **Impact of stigma**

Stigma can be defined as a strong feeling of disapproval that most people in a society have about something, especially when this is unfair.[7] Stigma towards mental illness is a common phenomenon and has been shown to impact negatively on the lives of persons with mental illnesses in numerous ways. Stigma includes the stereotypes associated with a group of individuals, the prejudicial attitudes towards persons with a mental illness as well as the resulting discrimination of such persons by society.[6] Negative beliefs about persons with mental illnesses are varied and have been noted to elicit an associated emotional response in the persons who hold that belief.[6]

One such negative belief is that persons with mental illnesses are dangerous, this specific perception has been noted in numerous studies.[8-11] These studies have noted that such perceptions of dangerousness are often associated with feelings of fear in those who hold the belief.[8-11] Beliefs about dangerousness also correlate with increased avoidance and greater social distance.[6] Furthermore, stigmatising attitudes on the whole have been shown to be associated with greater social distance.[9,12-13] Avoidance and social distance in turn limit the probabilities of

persons with a mental illness having meaningful relationships, getting insurance, finding jobs, safe housing, etc.[6] Thus, avoidance and social distance are significant forms of discrimination which result in a multitude of negative outcomes for persons with mental illness. Such experiences of actual discrimination are further compounded by perceived discrimination and the consequences thereof. Perceived discrimination occurs when persons with mental illnesses are aware of others' stigmatizing attitudes and discriminatory behaviours towards them. In a study by Botha et al more than half of the mentally ill individuals who participated agreed that they felt discriminated against.[14] Persons with mental illness have reported that their communities do not accept or understand their illness and view them as being less capable.[15] They also cited that they had experienced difficulties in obtaining work and felt that others would avoid them or treat them unfavourably if they were aware of their illness.[15-17] These experiences and the fear of further exposure to stigma by persons with mental illnesses is associated with their being less likely to disclose information about their disorders, more likely to avoid social contact, and less likely to apply for job or educational opportunities.[15-17] It is thus clear that individuals' experiences of stigma and discrimination are linked to varying degrees of perceived stigma, which may then result in further social withdrawal and overall functional impairment.[17]

In addition, perceived discrimination has a significant emotional impact resulting in feelings of shame, devaluation, discouragement, hurt, anger, lowered self-esteem and social exclusion.[14,17-19] It is to be expected that with ongoing exposure to stigma persons with mental illnesses may internalise these negative beliefs leading to self-stigma.[6] Studies have found that these individuals think less of themselves and are ashamed of their illnesses.[16] The shame associated with having a mental illness as well as the fear of being stigmatised has been to shown to be

linked to impaired help-seeking behaviours.[20] Furthermore, the fear of being labelled with a mental disorder may result in impaired help-seeking behaviour and become a potential barrier to the effective treatment of individuals with mental disorders.[17,20,21] Also, stigma is linked to the low prioritisation of mental illness by health care and government organisations, resulting in less funding for treatment and research and ultimately in limited treatment options.[8,22,23] All of these factors result in the suboptimal treatment of mental disorders and thus perpetuate the degree of disability and the burden of disease attributable to mental illness.[19]

Thus, stigma has a number of consequences which often pose a threat to the self-esteem, relationships, effective treatment and job opportunities of psychiatric patients.[16] The negative effects of stigma are far-reaching and have a major impact at the individual, family, community and economic levels. As a result, stigma and the consequences thereof have been a public health concern for many years. With the global trend towards deinstitutionalization the issue of stigma seems to have become more apparent. A possible explanation for this is that when reintegrated into their communities persons with mental illnesses are more readily exposed to the negative attitudes of others.[5] The positive correlation between increased stigma and greater community exposure has been noted in a German study which showed that persons with schizophrenia who received treatment in a state hospital perceived stigma as being less prominent than those that were treated in a community setting.[24] Thus it is to be anticipated that stigma will become an even greater issue in the years to come as community reintegration increases.

This heightened exposure to and awareness of stigma has been accompanied by increased research on the topic, which has highlighted the true extent of the problem. In response to this,

numerous anti-stigma campaigns have been developed in various countries.[10,25,26] The primary goal of such campaigns is to improve attitudes towards mental illness and thus reduce the negative consequences of stigma. One such example is a campaign established by the Royal College of Psychiatrists' in 1998 entitled, Changing Minds: every family in the Land. It was a 5-year national campaign that aimed to challenge perceptions of mental health problems and increase knowledge of mental issues.[27] Since then numerous surveys have been conducted in association with the Royal College of Psychiatrists, these have investigated the attitudes of the public, doctors, medical students and psychiatrists towards mental illness.[10,28,29]

These surveys have indicated that negative attitudes are held not only by the public but by health care practitioners as well.[28] This finding is consistent with that of other studies in which mentally ill individuals reported that they encountered stigmatisation from a number of sources, including relatives, friends, work colleagues, community members and even mental health care providers.[8,17]

1.1.3 **Community Stigma**

There is an abundance of research highlighting the negative attitudes of the public towards persons with a mental illness, the majority of which have been conducted in Western counties.[10,12-13] It has been suggested that there is less or minimal stigma encountered in non-westernised developing societies and African countries in particular.[30] However, similar negative attitudes have been shown to exist in African, as well as other developing countries.[8,11,31]
The common themes that have emerged from these studies are that persons with mental illness are often believed to be dangerous and unpredictable, and are thus socially excluded. In a survey

of the British public by Crisp et al. more than half of the respondents considered persons with schizophrenia and substance use disorders to be dangerous, unpredictable and hard to talk to.[10] In keeping with this is a Nigerian study by Gureje et al. in which 96,5% of the participants believed that the mentally ill are dangerous and 82.7% reported that they would be afraid to have a conversation with a mentally ill person.[11] The few South African studies that have investigated community stigmatization of the mentally ill have shown similar negative attitudes.[14,32,33] Negative beliefs towards mental illness are influenced by a variety of factors, namely lack of knowledge, cultural and religious beliefs, the type of mental illness, as well as the degree of familiarity with mental illness.[9-10,32-36]

Illnesses such as schizophrenia and substance use disorders have consistently been shown to elicit more negative responses than depression or anxiety-related disorders, especially with regards to dangerousness and unpredictability.[10,13,34] Not only do communities have negative opinions but they have also been noted to have a lack of knowledge about mental illness.[31,37-38] Limited knowledge as well as various cultural and religious beliefs have also been shown to influence communities' attitudes towards mental illness. Such cultural and religious factors may influence views about disease etiology, with mental illness being attributed to supernatural powers or divine punishment.[8,21,31,36] The impact of cultural and religious beliefs is compounded by the issue of limited knowledge. This has been highlighted in two South African studies, in which the majority of the participants had misconceptions about the causes of mental illness and did not choose medicine as the preferred treatment modality for mentally ill individuals.[32-34]

On the other hand, a factor which has been linked to more positive attitudes towards persons with mental illness is a history of mental illness in the family.[39] This indicates that familiarity with mental illness is associated with more positive attitudes. In keeping with this, Angermeyer et al. found that increased familiarity resulted in fewer perceptions of dangerousness and a lower desire for social distance.[9] Familiarity in this instance was considered to be any of the following; persons' with a mental illness themselves, a relative or friend with a mental illness and those working in the field of psychiatry.[9]

In light of the above factors one would expect that mental health care practitioners should be more positive in their attitudes towards mental illness owing to their increased familiarity and greater knowledge of mental illness. However, some studies comparing the attitudes of the public with those of mental health care providers have found no significant difference between the two groups.[40]

1.1.4 **Attitudes of mental health care providers**

Thus, mental health care practitioners have also been cited as a significant source of stigma and as a result their attitudes towards mental illness have now also become a focus of stigma research. The extent of this issue was highlighted in a review by Schulze et al which noted that stigma related to mental health care accounted for 22.3% of all reported stigma experiences by service users and their families.[22] However, research on this topic has often produced conflicting results, with some studies reporting that more positive attitudes are held by mental health care workers and others showing no difference between their attitudes and those of the general public.[28-29,35,41]

In a study by Jorm et al. mental health care professionals were found to be more negative in their attitudes towards mental illness than the public.[42] The common finding in all of these studies is that negative attitudes towards mental illness are held by mental health care practitioners, albeit to varying degrees. In the case of medical doctors specifically, Buchanan et al. found that up to 56% felt that "psychiatric patients, in general, are not easy to like".[43]

Similar to what has been noted in the public population, mental health care providers' attitudes are affected by the specific psychiatric diagnosis.[20] For example, it has consistently been found that the attitudes of health care practitioners towards persons with schizophrenia or substance abuse are more negative than their attitudes towards depressed patients.[40,44] Of note in the case of mental health care providers is that the diagnosis of borderline personality disorder has specifically been noted to elicit more negative responses.[45-47] Mental health care providers' attitudes have also been noted to be affected by the amount of clinical experience and exposure to psychiatric patients they have had.[28,41,44,49-50] For instance, in a survey conducted by Mukherjee et al. it was found that senior doctors appear to be less stigmatizing and are more optimistic about the outcomes of patients with a mental illness than their junior, less experienced colleagues.[28] However, some studies have not found a significant difference between junior and senior doctors' attitudes or degree of social distance in relation to mental illness, indicating that the degree of mental health training and experience of mental health care practitioners did not have an effect.[43,51]

Doctors' and other mental health care providers' attitudes towards mental illness has a significant impact on the quality of care they provide as well as on their ability to recognize and

treat persons with mental disorders.[43] In addition, such attitudes may adversely affect patient help-seeking behaviours and ultimately result in poorer treatment outcomes.[20,38] Thus, it is clear that doctors also play a role in the stigmatization of mental illness however this is not often acknowledged or addressed. As a result, professionally led anti-stigma programs have been criticized for focusing on everyone else's attitudes except those of psychiatrists.[22]

1.1.5 **Psychiatry and stigma**

Psychiatrists also have stigmatizing attitudes towards mentally ill persons but seemingly to a lesser degree than the community and their non-psychiatric colleagues.[29,44] In a study by Kingdon et al. psychiatrists' attitudes towards patients with Schizophrenia were investigated and noted to be more positive as compared to those of the general public.[28] In particular, it was found that psychiatrists didn't consider patients with schizophrenia to be dangerous to others, were more optimistic about such patients' recovery and the majority reported that they enjoyed working with people with schizophrenia.[29] There are two South African studies which have investigated the perceptions of Muslim general practitioners and psychiatrists with regards to mental illness.[21,36] The results of these studies indicate that religion and culture are believed to have an influence on both community and doctors' attitudes towards the causation and treatment of mental illnesses.[21,36] Other than the above mentioned study there has seemingly been no other research into doctors' or psychiatrists' attitudes towards mental illness in the South African context.[21,36]

Not only are psychiatrists a potential source of stigma, psychiatrists and their discipline are also often the targets of stigma and discrimination.[22] In a study by Lai et al. a significant number of

mental health care workers reported that others had laughed at their line of work and that relatives had discouraged them from joining the mental health care profession.[16] Similar findings were obtained in a study by Scher et al. where students reported that the negative views of friends, relatives and medical professionals had resulted in them not considering psychiatry as a career choice.[52] Studies which have investigated the attitudes of medical students towards psychiatry and psychiatrists noted that a large proportion of students perceived psychiatrists as being odd, weird, confused thinkers and emotionally unstable.[43,53-56] In addition, students considered psychiatry as a profession to be imprecise, ineffective and unscientific. Also, they considered psychiatry to have a lower earning potential and to be less prestigious and of lower status than other medical specialties.[43,52,54-57] Some even regarded the field as being a waste of time.[43]

It has been found that medical students as well as non-psychiatric doctors do have negative attitudes towards psychiatry, specifically reporting that psychiatrists do not keep up to date with general medical conditions and that they avoid treating medical emergencies.[22,58] Also, they felt that psychiatrists often struggle to reach a consensus in their diagnosis and treatment of mental illnesses.[58] However, overall the attitudes towards psychiatry were noted to be quite good.[58] This is consistent with the results of other studies which also concluded that non-psychiatric doctors actually appear to have a positive view of psychiatrists and the value of psychiatry as a profession.[59]

Despite these conflicting results it is clear that psychiatrists' perceptions of how other doctors view them and their profession are poor. As was noted by Berman et al. where a considerable

number (45%) of psychiatrists felt that their specialty is considered less important by other medical specialists.[53] In another study, by Lambert et al. investigating why prospective psychiatrists left the profession it was noted that such persons felt that psychiatry had a poor public image and that other doctors didn't respect psychiatry as a profession.[60] Thus, not only are those with a mental illness seen in a negative light but the field of psychiatry is at times also stigmatized by non-psychiatric colleagues and society as a whole. Doctors' attitudes towards psychiatry has implications on who chooses to specialise in it and also on the quality of the care that persons with mental illness receive from other doctors.[43]

1.1.6 **Need for the study**

The proposed study will investigate the attitudes of medical doctors towards persons with mentally illness. As noted above, previous studies on this topic have produced conflicting results and there is a gap in this literature in the South African context. It is important to determine doctors' attitudes towards mental illness as their attitudes are likely to directly impact on the quality of care that they provide. Also, doctors and psychiatrists in particular need to be at the forefront of the fight against stigma, however such endeavours are less likely to be successful if they too have negative attitudes towards mental illness. In addition, the study will explore the views of non-psychiatric doctors towards psychiatry and psychiatrists. This is important as such attitudes are likely to impact on consultation-liaison services and overall patient care. Furthermore, at present there is no South African data available on the attitudes of non-psychiatric doctors towards psychiatry. If their attitudes are found to be negative then ways of improving psychiatry's image will need to be considered.

1.2 HYPOTHESIS

A two-fold hypothesis was adopted for this study:

(1) That both psychiatric and non-psychiatric doctors have negative attitudes towards persons with a mental illness.

(2) That both psychiatric and non-psychiatric doctors also have negative attitudes and perception of psychiatry as a profession.

1.3 OBJECTIVES

The objectives for this study were:

(1) To determine the attitudes of medical doctors (psychiatric and non-psychiatric) towards persons with mental illness.

(2) To determine if the doctors' attitudes differ based on the specific type of mental illness.

(3) To compare the attitudes of the psychiatric and non-psychiatric doctor groups towards persons with mental illness.

(4) To determine the attitudes of non-psychiatric doctors towards psychiatrists and psychiatry as a profession.

(5) To determine the psychiatric doctors' perceptions about other doctors' attitudes towards psychiatry and psychiatrists.

(6) To determine if personally knowing someone with a mental illness has any impact on doctors' attitudes towards persons with a mental illness and psychiatry as a profession.

CHAPTER 2 METHODS

2.1 Study Design

This was a cross-sectional study, which was primarily descriptive in nature. The study was administered in the form of a survey, which was distributed to a defined group of individuals. The term 'survey' is commonly applied to a research methodology designed to collect data from a specific population, or a sample from that population, and typically utilizes a questionnaire or an interview as the survey instrument.[61]

For the purposes of this study a self-administered questionnaire was selected as the most appropriate survey instrument. A questionnaire is defined as a set of printed or written questions with a choice of answers, devised for the purposes of a survey or statistical study.[62] A questionnaire was selected as it was less intrusive to the participants than an interview and also ensured anonymity was maintained. Questionnaires are also more convenient and less time consuming than an interview and was thus more appropriate in this study given the time constraints of the researcher and the participants.[63]

2.2 Study Population

2.2.1 Sample

All qualified medical doctors employed at one of the five selected academic hospitals were eligible to participate in the study. The five hospitals included in the study were;

- Charlotte Maxeke Johannesburg Academic Hospital (CMJAH)
- Chris Hani Baragwanath Academic Hospital (CHBAH)
- Helen Joseph Hospital (HJH)

- Tara Psychiatric Hospital (Tara)
- Sterkfontein Psychiatric Hospital (SFH)

All of these hospitals are government institutions that are affiliated with the University of the Witwatersrand (WITS) and are situated in Gauteng Province, South Africa. Three of the five hospitals are located in the greater Johannesburg region with the exceptions being SFH and CHBAH. SFH is located in Mogale City, West of Johannesburg and CHBAH is located in Soweto, South of Johannesburg.

Three of the five academic hospitals are general medical hospitals, these include HJH, CMJAH and CHBAH. The other two, namely SFH and Tara, are specialist psychiatric hospitals. As these are all academic hospitals, the doctors employed spanned a wide range of disciplines and levels and include interns, community service doctors, medical officers, registrars and consultants.

2.2.2 **Inclusion Criteria**

- All qualified medical doctors working at one of the five selected hospital sites were eligible to participate in the study.
- All levels of doctors were included that is, interns, community service doctors, medical officers, registrars and consultants.
- All of the various specialist fields were also included, namely; Paediatrics, Surgery, Obstetrics and Gynaecology, Internal Medicine, Anaesthesiology, Casualty, Radiology, Pathology and any other additional specialties that were present in the selected hospitals.

2.2.3 **Exclusion Criteria**

- Any person who worked at the above hospitals but was not a qualified medical doctor was excluded from the study.
- All potential participants who were not willing to participate were also excluded.
- Qualified medical doctors who were not employed at one of the five selected hospital sites were also not eligible to participate in the study.

2.2.4 **Sample Size**

The potential sample comprised of all qualified medical doctors working at CMJAH, CHBAH, HJH, Tara and SFH. The Human Resource Departments of these hospitals were contacted so as to obtain an estimate of the number of doctors employed at these institutions. The numbers obtained were as follows; CMJAH – 580; CHBH – 850; HJH – 212, Tara – 18 and SFH 27. The total of these is 1687 and was considered to be the potential total sample prior to initiating the study. Based on this figure and evidence from the literature the projected sample size required for a power of 90% and a significance level of 0.05 was calculated to be 240 participants. This value was calculated according to the literature where a difference of approximately 20% between the psychiatric and non-psychiatric groups was found. However, in similar studies an average response rate of approximately 30-40% was obtained.[28-29] Thus, it was calculated that a minimum of 720 surveys would have to be distributed to account for the potentially low response rate.

Based on these calculations a total of 750 hard copy questionnaires were printed, 150 for the psychiatric group and 600 for the non-psychiatric group. However, it was later discovered that the total number of potential psychiatric participants was only 124 and as such not all of the hard copy psychiatric questionnaires were distributed. A convenience sampling method was used in the distribution of the survey.

2.3 Data Collection

The questionnaire was distributed over a three month period from October to December 2012 and two methods of distribution were used, either by hard copy or email. The majority of the questionnaires were handed out in a hard copy form at various departmental meetings. At the onset of the departmental academic meetings the study and the purpose of the questionnaire was explained to the prospective participants. It was made clear that participation in the study was completely voluntary and should participants not wish to participate then they could leave the questionnaire blank. The questionnaire was then handed out to all of the doctors and remained with them for the duration of the meeting. After the questionnaires had been handed out the researcher left the room and a box was left at the door into which participants then placed their completed or blank questionnaires. The researcher then left the meeting and returned to collect the box with the questionnaires at the end of the meeting. Given time constraints, the multiple sites included in the survey and that the questionnaires were personally distributed a number of the researchers colleagues were approached to assist with the distribution of the questionnaires. These doctors were working in various departments and based at any one of the five hospital study sites at the time. A number of those approached agreed to assist and they were then responsible for the handing out and collecting of the questionnaires at their departmental

meetings. They were informed of the procedure and adhered to the same mode of distribution as that described above.

The second manner in which questionnaires were made available to prospective participants was by email. This mode of distribution was again implemented due to time constraints and logistical difficulties with getting to the various hospitals. Email was only utilized as a mode of distribution in the psychiatric group of participants. The departmental secretary was asked to assist and agreed to email the questionnaire to all of the doctors working in the department of psychiatry. In the email participants were informed of the purpose of the study and that participation was voluntary and anonymous. It was clearly stated that should participants choose to participate in the study then they should email their completed questionnaires back to the departmental secretary. These completed questionnaires were then printed by the secretary and placed in a box in her office. In order to ensure that the questionnaires remained anonymous the secretary removed any identifying participant information prior to printing the completed questionnaires and these questionnaires were then collected from the allocated box in the secretary's office approximately once a week.

2.4 Measuring Instrument

The questionnaire that was developed to investigate doctors' attitudes towards mental illness and Psychiatry, consists of four components, (Appendix A. Questionnaire: Attitudes of doctors towards mental illness and psychiatry), including:

- Demographics and work
- Attitude towards people with mental health problems

- Attitude towards Psychiatry as a profession
- Perceptions of other doctors' attitudes towards psychiatrists and to Psychiatry

Demographic and work related variables explored include: gender; age; race; graduate university; current clinical department or specialty; years of clinical experience after graduation; amount of psychiatric clinical exposure; whether or not participants personally knew someone with a mental illness.

The questions in the main questionnaire sections on attitude and perceptions, requested responses in the form of a five point Likert scale, consisting of graded answers to specific statements. The attitudes to these statements were assessed on a continuum with answers ranging from "strongly disagree" to "strongly agree". Likert-type or frequency scales use fixed choice response formats and are designed to measure attitudes or opinions.[64] The first of three sections on attitude and perceptions contained questions about doctors' attitudes towards persons with mental illnesses, including depression, schizophrenia and borderline personality disorder. The questions used in this section were replicated from a survey developed by Crisp et al.[10] The original study for which this survey was developed was part of the Royal College of Psychiatrists' "Changing minds" campaign. In this survey the public's attitude towards a total of seven different mental illnesses was assessed.[10] (Permission was obtained from the Royal College of Psychiatrists to use these attitudinal statements in this questionnaire.) It was decided to only include three mental illnesses in this questionnaire, so as to limit the length of the questionnaire and hence reduce the time taken to complete it. Two of the seven disorders used in the original study by Crisp et al. were included, namely schizophrenia and depression.[10] A third, borderline personality disorder,

was added to this as it was argued that personality disorders have also generally been associated with negative attitudes from health care workers.[45-48] A decision was thus made to include one of the more common personality disorders in the survey.

The two remaining sections on attitude and perceptions contain questions regarding doctors' attitudes towards Psychiatry and psychiatrists, and on the perceptions of doctors working in Psychiatry of other doctors' attitudes towards Psychiatry and psychiatrists. These sections also made use of a Likert scale structure and questions included here were specifically developed for this study. Two different sets of questions were therefore administered, one set to the doctors working in Psychiatry ("psychiatric doctor goup") and another to the "non-psychiatric doctor group". Thus, the psychiatric doctor group included all doctors working in psychiatry at the time the questionnaire was completed. These doctors included interns, medical officers, registrars and specialist psychiatrists.

At the end of the questionnaire the respondents were asked if they had ever completed this survey before so as to avoid duplication. Anyone who selected the yes option, indicating that they had previously completed the questionnaire was excluded from the study.

2.5 **Procedures**

2.5.1 **Pilot Study**

A pilot study is a smaller study that precedes the main study and the purpose of which is to test the survey instrument.[65] Such a pilot was conducted in a smaller group of subjects who had similar characteristics to those of the subjects who eventually participated in the main study.[65]

This questionnaire was piloted on a group of doctors who were working in the private sector, but who did not participate in the main study. The details of subjects who would be eligible to participate in the pilot study were obtained from colleagues of the researcher. A total of 15 potential participants were invited by email to take part in the pilot study, of whom five were unable attend. The final pilot study group thus comprised of 10 doctors, one of whom was a psychiatrist and the rest were either specialists in other fields or general practitioners. The pilot study was conducted in the form of a focus group which took place in June 2012. A focus group is a discussion based interview of a group of subjects at the same time.[64] This format gave subjects the opportunity to openly discuss their views of mental illness and psychiatry. After this discussion the questionnaire was handed out and completed by each of the subjects in the group. The subjects were asked to comment on the comprehensiveness and clarity of the questionnaire's content.

The purpose of the pilot study was twofold. The initial discussion component of the focus group was used to determine if the subjects had any additional views regarding those with mental illnesses. This was important to ensure that the survey was comprehensive in its content. The feedback obtained from the subjects after they had completed the questionnaire allowed the researchers to assess whether the participants were familiar with the mental illnesses included and the psychiatric terminology used. Also, it served to ensure that the questionnaire was clear, unambiguous and understandable. The only change made to the questionnaire following this pilot study was the addition of a comments section at the end of each page.

2.6 **Data Analysis**

The data from the questionnaires was manually captured onto an excel spreadsheet. Three respondents who indicated that they had completed the survey before were eliminated from the data set prior to calculating the response rates. The questions relating to the doctors' attitudes to mental illnesses and to psychiatry as a profession were categorised as follows:

- Disagree: Strongly disagree / disagree (score 4 or 5)
- Neutral: the neutral response (score 3)
- Agree: Strongly agree / agree (score 1 or 2)

2.6.1 **Descriptive analysis**

A descriptive analysis was conducted on the demographic data as well as the attitudinal questions prior to doing further statistical analyses. This analysis was expressed as numbers and percentages. Data analysis was carried out in SAS (SAS Institute Inc., *SAS Software, version 9.3 for Windows,* Cary, NC, USA: SAS Institute Inc., 2002-2010). The 5% significance level was used throughout, unless specified otherwise.

2.6.2 **Comparative analysis**

(1) **Associations between demographic independent variables**

In preparation for the multivariate analyses of the attitudinal questions, bivariate correlation analysis was conducted among the demographic and work related independent variables: phi coefficients were determined between two dichotomous variables and Cramer's V between two

categorical variables. The role of all of the independent variables was taken into account in determining the attitudes.

(2) **Effect of the independent variables on attitude**

The determination of the significant independent variables associated with each attitude for each mental illness was done by multinomial logistic regression, using the categorised attitudinal variable as the dependent variable (DV) with "disagree" as the reference category, and the following variables as independent variables (IVs): doctor specialty; gender; race; university group; clinical experience; and know someone with mental illness. Age was omitted as an independent variable since it was strongly associated with clinical experience and clinical experience is likely to be a better indicator of attitudes. Psychiatric experience was also omitted as an independent variable since it is strongly associated with doctor specialty. In a further analysis, the effect of psychiatric experience within the psychiatric group alone was considered. For the multinomial logistic regression that was carried out, odds ratios and their 95% confidence intervals were calculated. The total data set, which included all of the doctors, was then divided into "psychiatric doctor" and "non-psychiatric doctor" groups.

(3) **Psychiatric doctor groups' attitude towards mental illness**

The determination of the significant independent variables associated with each attitude for each mental illness was again done by multinomial logistic regression, using the categorised attitudinal variable as the dependent variable (DV) with "disagree" as the reference category, and the following variables as independent variables (IVs): gender; race; university group; clinical experience; psychiatric experience; know someone with mental illness. Odds ratios and their 95% confidence intervals were calculated.

(4) **Differences between "psychiatric doctor" and "non-psychiatric doctor" groups**

The psychiatric and non-psychiatric doctor groups were then compared with regards to their attitudes to the three mental illnesses. In order to obtain an initial overview of the relationship between the attitudes and doctor group, the relationship between each attitude for each mental illness and doctor group (psychiatric and non-psychiatric) was tested by the X^2 test. The p-values for the tests were calculated.

(5) **Differences in attitudes towards mental illnesses**

The differences in responses to each of the eight attitudinal statements were compared between pairs of mental illnesses using Bowker's test of symmetry. If this test is non-significant, it indicates that the cell proportions in the cross-tabulation of the ratings of the attitudes for the two mental illnesses are symmetric, or that $p_{ij} = p_{ji}$ for all pairs of table cells. If it is significant, it means that the respondents are selecting the categories in differing proportions for the two mental illnesses being compared. The comparison was carried out for both the psychiatric and non-psychiatric groups. The p-value for Bowker's test of symmetry was calculated and, if the test was significant, the mental illness for which the attitude was more negative was stated.

(6) **Attitudes towards Psychiatry as a profession**

The determination of the significant independent variables associated with each attitude for the non-psychiatric doctor group, and for the psychiatric doctor group was done by multinomial logistic regression, using the categorised attitudinal variable as the dependent variable (DV) with 'disagree' as the reference category, and the following variables as independent variables (IVs): Doctor specialty (for the non-psychiatric group only); gender; race; university group; clinical experience; psychiatric experience (for the psychiatric group only); know someone with mental

illness. As before, age was omitted as an IV since it was strongly associated with clinical experience (and clinical experience is likely to be a better indicator of attitudes). The odds ratios and their 95% confidence intervals were calculated.

(7) **Comparison of psychiatric and non-psychiatric doctor groups' attitudes towards psychiatry**

For those questions which were comparable for the psychiatric and non-psychiatric groups, the differences in responses between the two groups were compared using the Chi-square test, for which the p values were calculated.

2.7 Ethics

Ethical approval was obtained prior to conducting the study from the Human Research Ethics Committee of the University of the Witwatersrand. The protocol (number M120554) was approved unconditionally (Appendix B). Prior to distributing the questionnaires written permission was sought and obtained from the superintendent or chief executive officer of each of the five hospitals included in the study, as well as from each of the departmental clinical heads. In addition, the Royal College of Psychiatrists was contacted by the investigator per email so as to explain the purpose of the study and obtain their permission to replicate their questionnaire in the South African context. They granted the permission to use their survey and forwarded a copy of their original questionnaire.

CHAPTER 3 RESULTS

3.1 The sample

The total number of doctors employed at the 5 selected hospitals was 1687; 580 at CMJAH, 850 at CHBH, 18 at Tara, 27 at SFH and 212 at HJH. However, owing to time and resource limitations, the questionnaire was only distributed to a total of 724 doctors of whom, 531 completed and returned the questionnaire. Resulting in an overall response rate of 73.34%, as is illustrated in Table 3.1.

Table 3.1 Response Rate

	Non-Psychiatric	Psychiatric	Total
Questionnaires Distributed	600	124	724
Questionnaires Received	444	87	531
Response rate	**74%**	**70.16%**	**73.34%**

Twelve of the questionnaires received were excluded from the data set as they had demographic or some other form of data missing (Table 3.2).

Table 3.2 Questionnaires excluded and final sample size

	Non-Psychiatric group	Psychiatric group	Total
Questionnaires Received	444	87	531
Questionnaires Excluded	11	1	12
Final Sample	**433**	**86**	**519**

3.2 Demographic Variables

The sample comprised of 87 psychiatric doctors (16.4%) and 444 (83.6%) non-psychiatric doctors. The ratio of females as to males in the sample was 1.6:1 (Table 3.3).

Table 3.3 Demographic variables of the psychiatric and non-psychiatric doctor groups

Demographics		Total		Non-Psychiatric		Psychiatric	
		Number(n)	%	Number(n)	%	Number(n)	%
Age	**20-29y**	162	31.21	147	33.95	15	17.44
	30-39y	276	53.18	225	51.96	51	59.30
	40-49y	47	9.06	34	7.85	13	15.12
	50y+	34	6.55	27	6.24	7	8.14
Sex	**F**	319	61.46	245	56.58	74	86.05
	M	200	38.54	188	43.42	12	13.95
Race	**African**	172	33.14	148	34.18	24	27.91
	Asian	25	4.82	17	3.93	8	9.30
	Caucasian	209	40.27	177	40.88	32	37.21
	Coloured	13	2.50	11	2.54	2	2.33
	Indian	94	18.11	74	17.09	20	23.26
	Other	6	1.16	6	1.39		.
University	**International**	44	8.48	38	8.78	6	6.98
	Other SA	120	23.12	94	21.71	26	30.23
	Pretoria	63	12.14	54	12.47	9	10.47
	UCT	66	12.72	62	14.32	4	4.65
	WITS	226	43.55	185	42.73	41	47.67
Clinical Experience	**<= 10y Junior**	390	75.14	335	77.37	55	63.95
	> 10y Senior	129	24.86	98	22.63	31	36.05
Psychiatry experience	**< 1y Junior**	408	78.61	400	92.38	8	9.30
	1-5y Middle	63	12.14	25	5.77	38	44.19
	> 5y Senior	48	9.25	8	1.85	40	46.51
Know someone with MI*	**N**	138	26.59	123	28.41	15	17.44
	Y	381	73.41	310	71.59	71	82.56

* MI – Mental Illness

More than 50% of the respondents were between the ages of 30 and 39 years, with only 15% being older than 40 years of age. The sample comprised of mainly Caucasian (40%), African (33%) and Indian (18%) respondents. Just under half of the respondents were graduates from the University of the Witwatersrand. At least three quarters of the sample had less than ten years of clinical experience and less than one year of psychiatric experience. About 72% of the respondents personally knew someone suffering from a mental illness.

The doctors included spanned a wide range of specialties, namely Anaesthetics (Anaes), Medicine, Surgery, Obstetrics and Gynaecology (ONG), Paediatrics (Paeds) and Psychiatry (Psych). The 'Other' group comprised of doctors in the fields of Radiology, Pathology and Haematology (Figure 3.1).

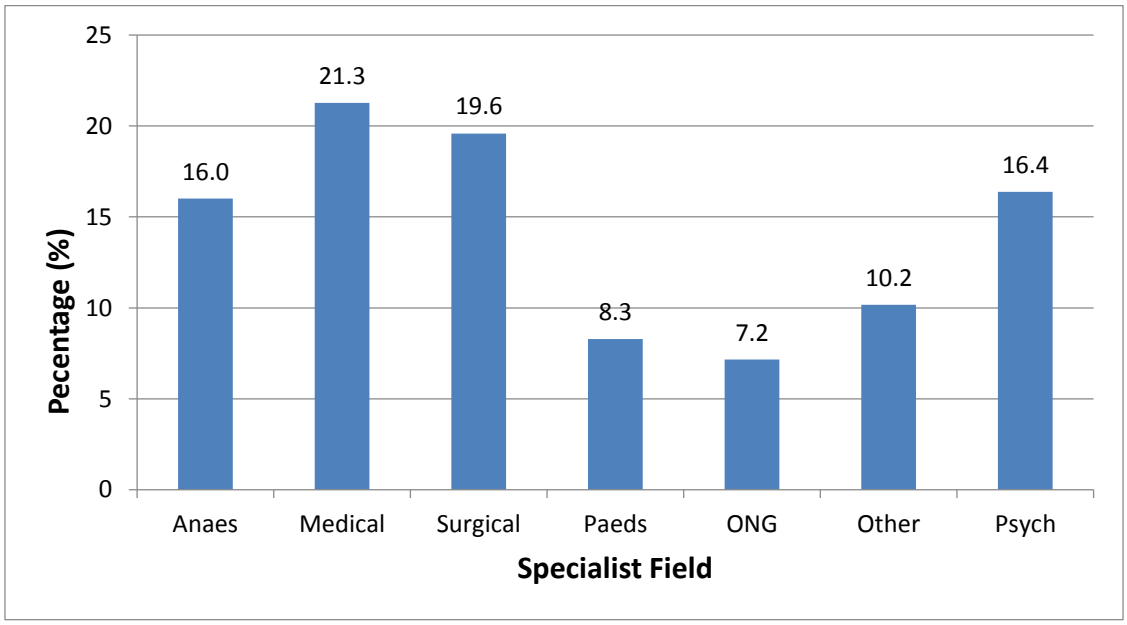

Figure 3.1 Percentage of participants from various specialist groups

3.3 Significant Associations between independent demographic variables

3.3.1 Age

As can be seen in Figure 3.2 below the majority of the participants (approximately 85%) were younger than the age of 40 years.

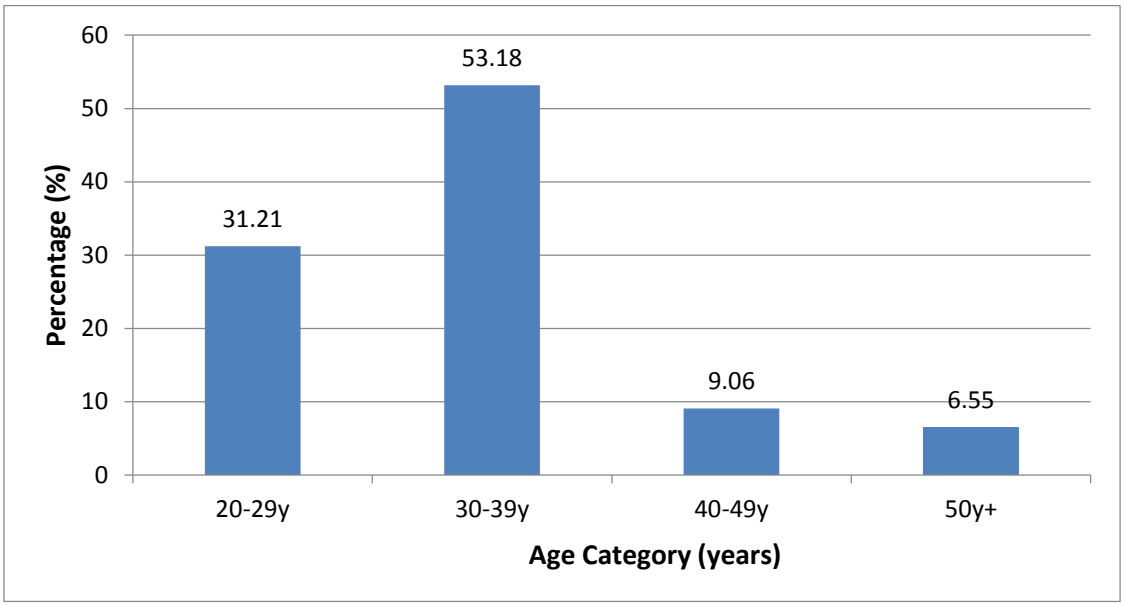

Figure 3.2 Percentage of participants per age category

There were significant associations between **age** and:

- **Gender** (p=0.0013; Cramer's V=0.17: weak association): There was a higher proportion of females among the younger respondents than among older respondents. With a total of 73% of the females being between the ages of 20 to 29 years (Figure 3.3).

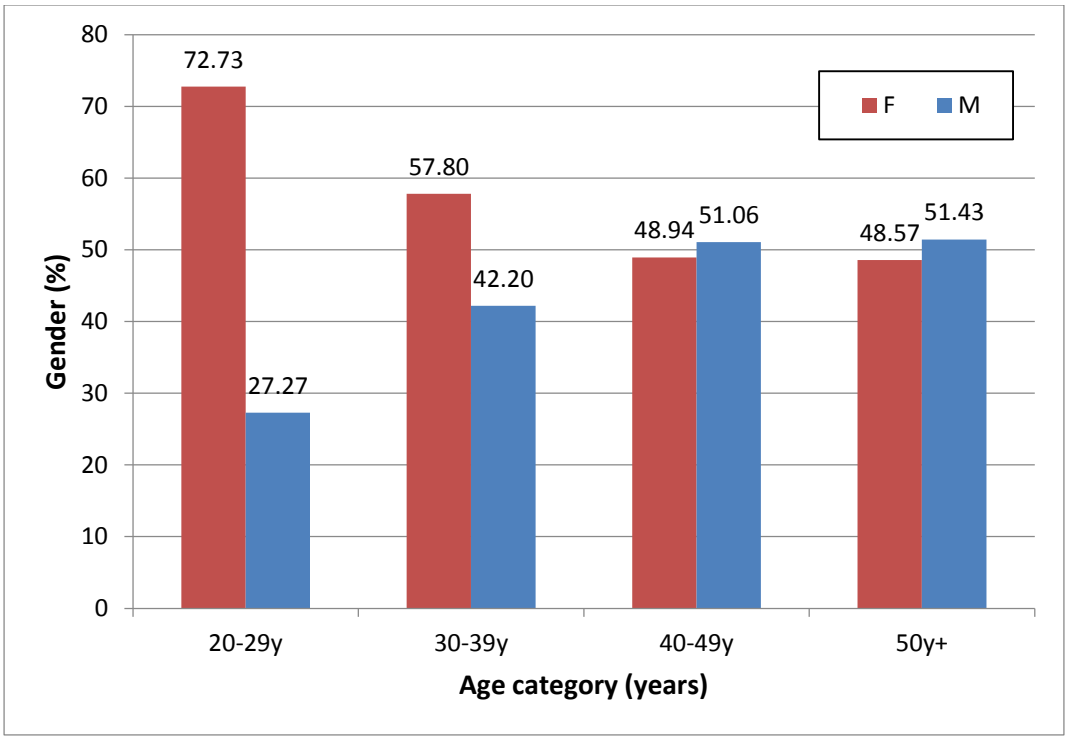

Figure 3.3 Association between age and gender

- **Race** (p=0.026; Cramer's V=0.12: weak association): Among respondents aged 50 years and over, there was a higher proportion of Caucasians (and a lower proportion of Africans) compared to the younger age groups. More than two thirds of those older than 50 years of age were Caucasian and less than 20% in this age group were African (Figure 3.4).

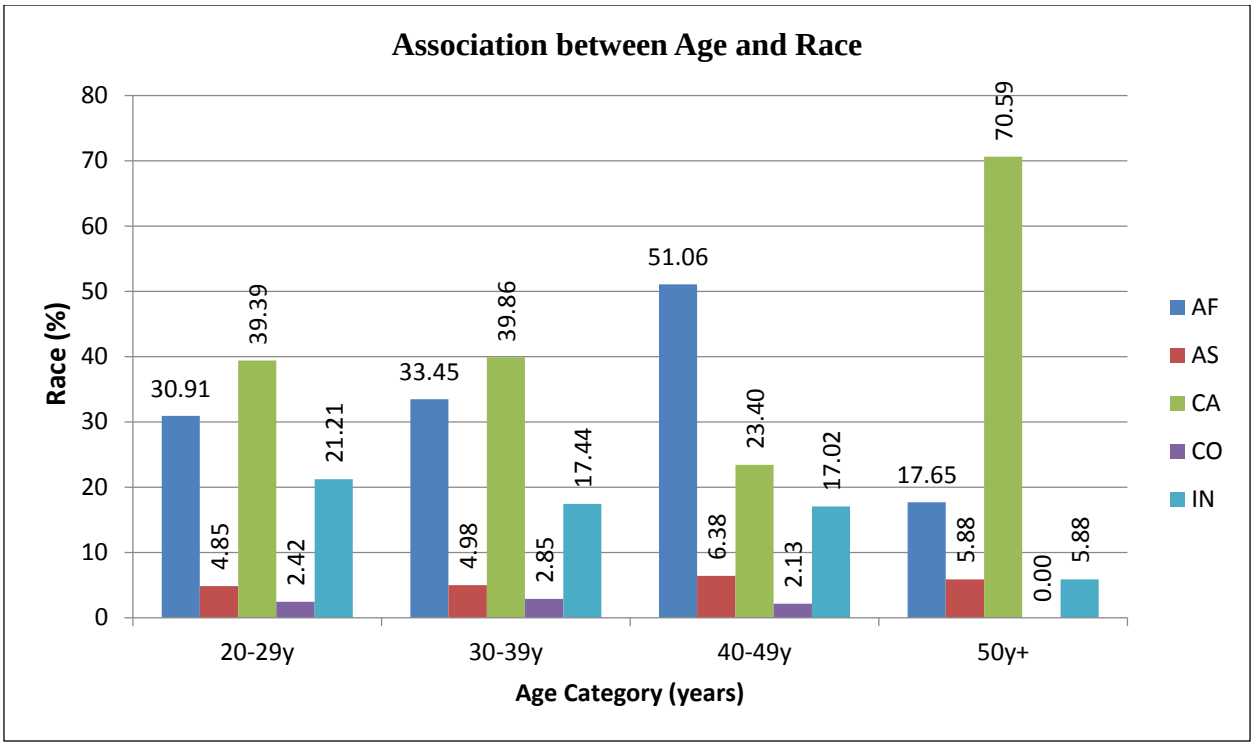

Figure 3.4 Association between age and race

- **University group** (p<0.0001; Cramer's V=0.17: weak association): Among older respondents (50+), there was a higher proportion of international graduates and a lower proportion of graduates from other South African universities, compared to the younger age groups.
- Doctor group (p=0.0084; Cramer's V=0.15: weak association: Doctors in the psychiatric group were older than those in the non-psychiatric group.
- Doctor specialty (p=0.0004; Cramer's V=0.17: weak association): Doctors in the Anaesthetics, Other and Psychiatric groups were older than those in the other groups.
- **Clinical experience** (p<0.0001; Cramer's V=0.68: **strong association**): As expected, clinical experience was very strongly associated with age.

- Psychiatric experience (p<0.0001; Cramer's V=0.18: weak association): Those with more than five years of psychiatric experience tended to be older, which is to be expected.
- Know someone with mental illness (MI) (p=0.023; Cramer's V=0.14: weak association): The proportion of respondents who knew someone with a MI increased with age, but the trend was not very clear.

3.3.2 **Gender**

There were significant associations between gender and:

- Doctor group (p<0.0001; Cramer's V=0.23: weak association): There was a higher proportion of females in the psychiatric doctor group compared to the non-psychiatric group (Figure 3.5).

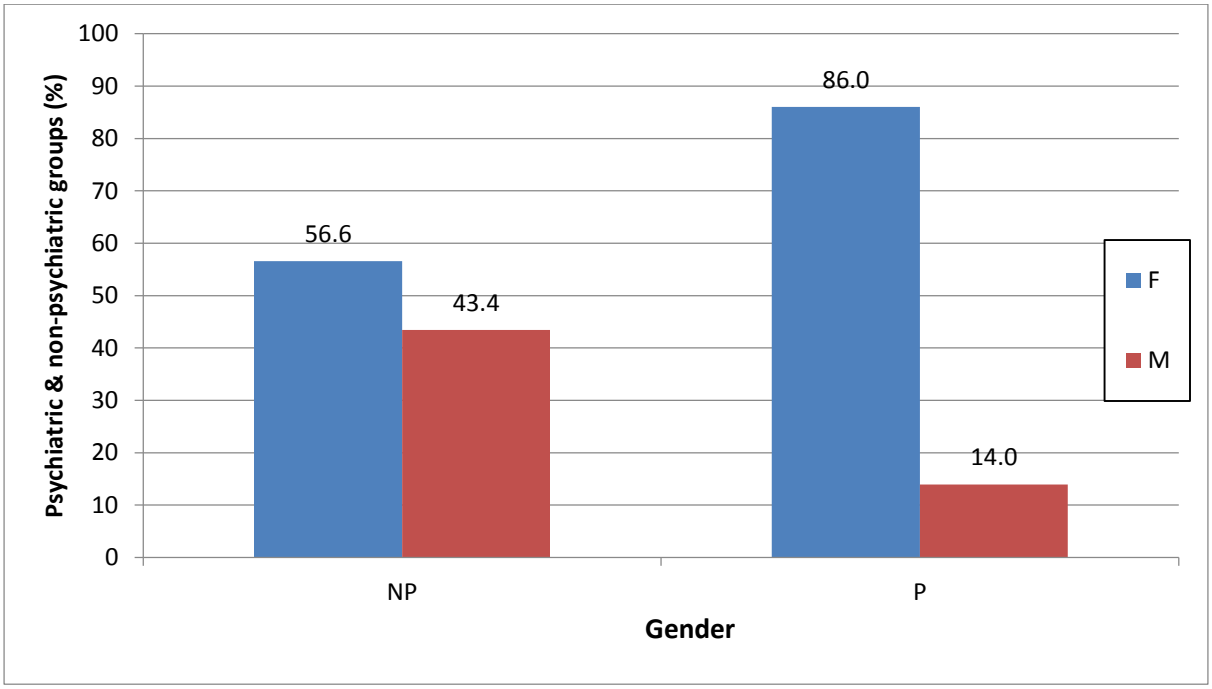

Figure 3.5 Association between gender and doctor group

- Doctor specialty ($p<0.0001$; Cramer's V=0.29: weak association): When compared to all of the other groups, there was a higher proportion of females in the psychiatric group and a higher proportion of males in the surgical group.
- Psychiatry experience ($p=0.016$; Cramer's V=0.13: weak association): There were more females among those with more psychiatric experience.

3.3.3 **Race**

There were significant associations between race and:

- University group ($p<0.0001$; Cramer's V=0.23: weak association): African respondents had graduated from a variety of universities, while the majority of Caucasian and Indian respondents had graduated from WITS.
- Doctor speciality ($p=0.022$; Cramer's V=0.14: weak association): There was a higher proportion of Caucasians in Anaesthetics (and a lower proportion of Africans), compared to other groups. There was a lower proportion of Indians in the "Other" and "Surgical" groups, compared to other groups.
- Psychiatric experience ($p=0.0046$; Cramer's V=0.15: weak association): There were higher proportions of respondents with senior level experience amongst the Asian and Indian groups (which links to the race vs. doctor specialty profile above).
- Know someone with mental illness ($p=0.041$; Cramer's V=0.14: weak association): There was a higher proportion of respondents who knew someone with a mental illness amongst Caucasian and Coloured race groups (Figure 3.6).

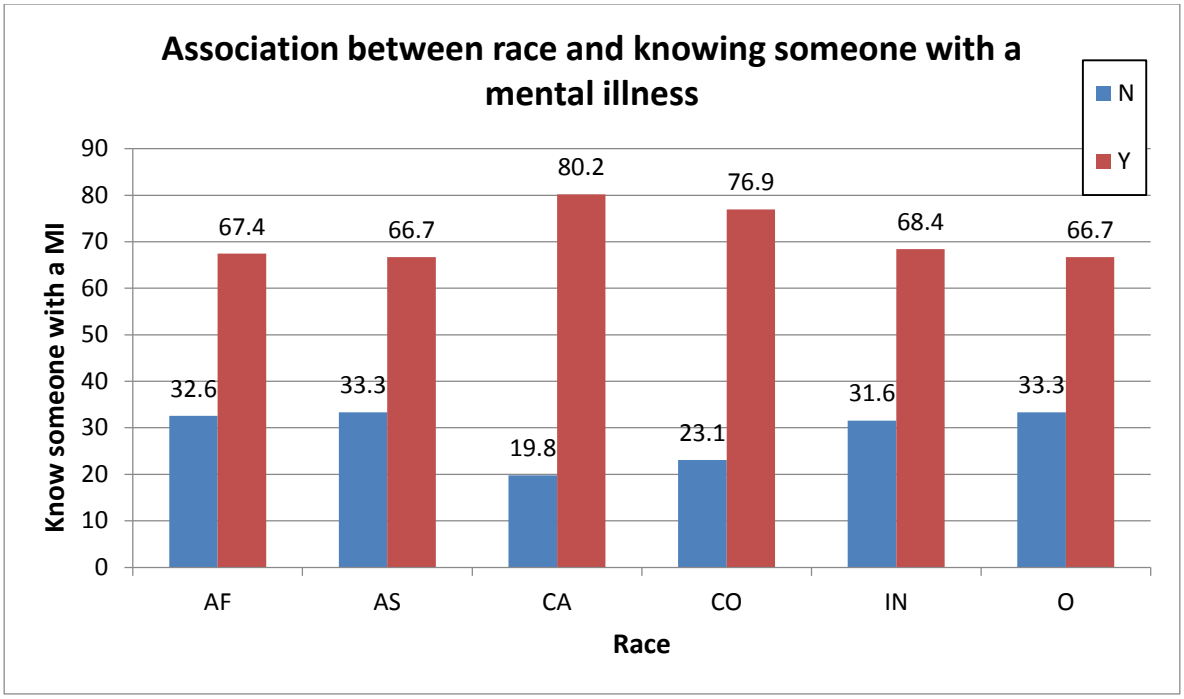

Figure 3.6 Association between race and personally knowing someone with a mental illness

3.3.4 **Graduate University**

There were significant associations between graduate university and:

- Doctor speciality group (p=0.0002; Cramer's V=0.17: weak association): University of the Witwatersrand (WITS) graduates predominated in most groups, except for ONG (where WITS predominated together with Other SA) and "Other", where WITS predominated together with University of Pretoria (UP).
- Clinical experience (p=0.015; Cramer's V=0.15: weak association): Respondents from international universities had a larger proportion with senior level clinical experience compared to the other university groups. The reverse was true for the UP graduates.

3.3.5 **Doctor group**

There were significant associations between doctor group and:

- Clinical experience (p=0.014; Cramer's V=0.11: weak association): The Psychiatric group had a higher proportion of respondents with senior level clinical experience compared to the non-psychiatric group.
- Psychiatric experience (p<0.0001; Cramer's V=0.77: strong association): Much higher levels of psychiatric experience were observed within the psychiatric group (P), compared to the non-psychiatric group (NP), as is expected (Figure 3.7).

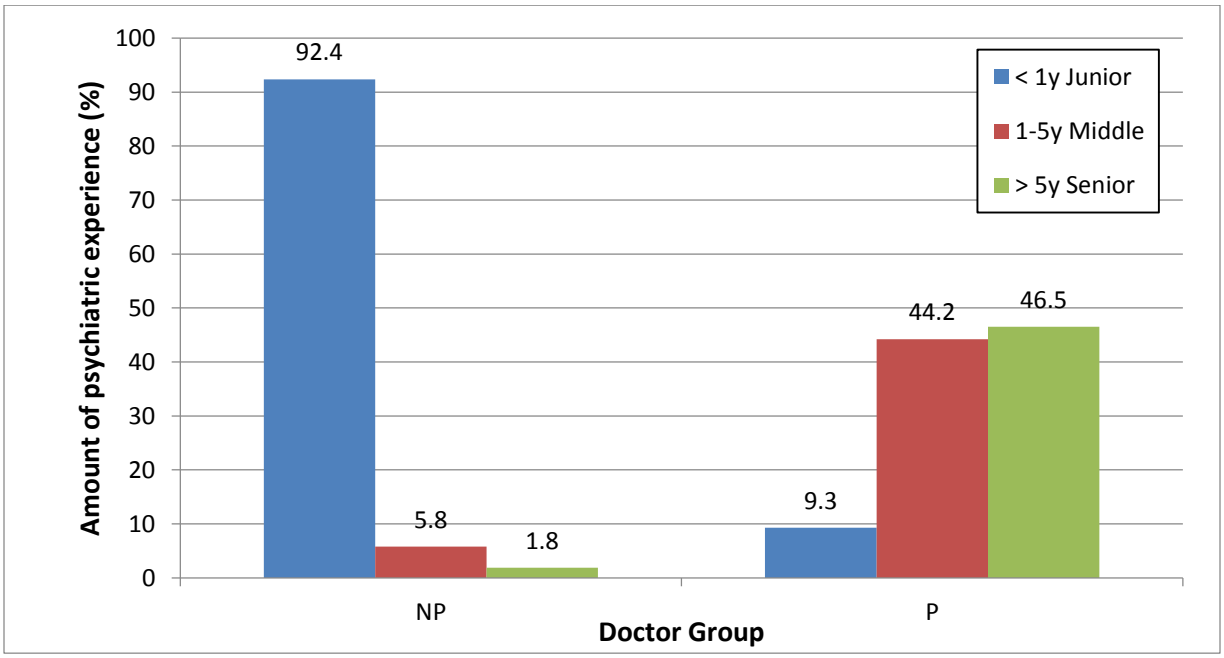

Figure 3.7 Association between doctor group and amount of psychiatric experience

- Know someone with a mental illness (p=0.027; Cramer's V=0.10: weak association): There was a higher proportion of respondents in the psychiatric group (P) who knew someone with a mental illness (MI) than in the non-psychiatric group (NP) (Figure 3.8).

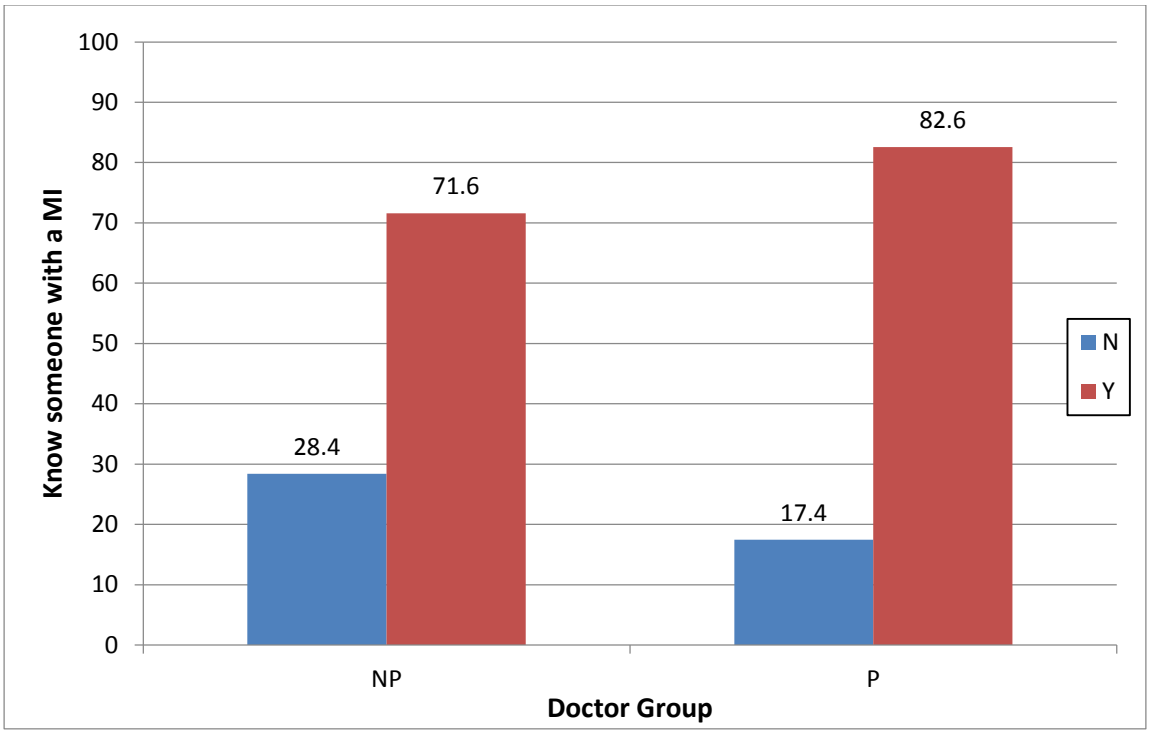

Figure 3.8 Association between doctor group and knowing someone with a mental illness

3.3.6 **Doctor specialty**

There were significant associations between doctor specialty and:

- Clinical experience (p=0.024; Cramer's V=0.17: weak association): The Other and Psych groups had a higher proportion of respondents with senior level clinical experience
- Psychiatric experience (p<0.0001; Cramer's V=0.56**: strong association**): Much higher levels of psychiatric experience were observed within the Psych group, compared to the other groups, as is to be expected (Figure 3.9).

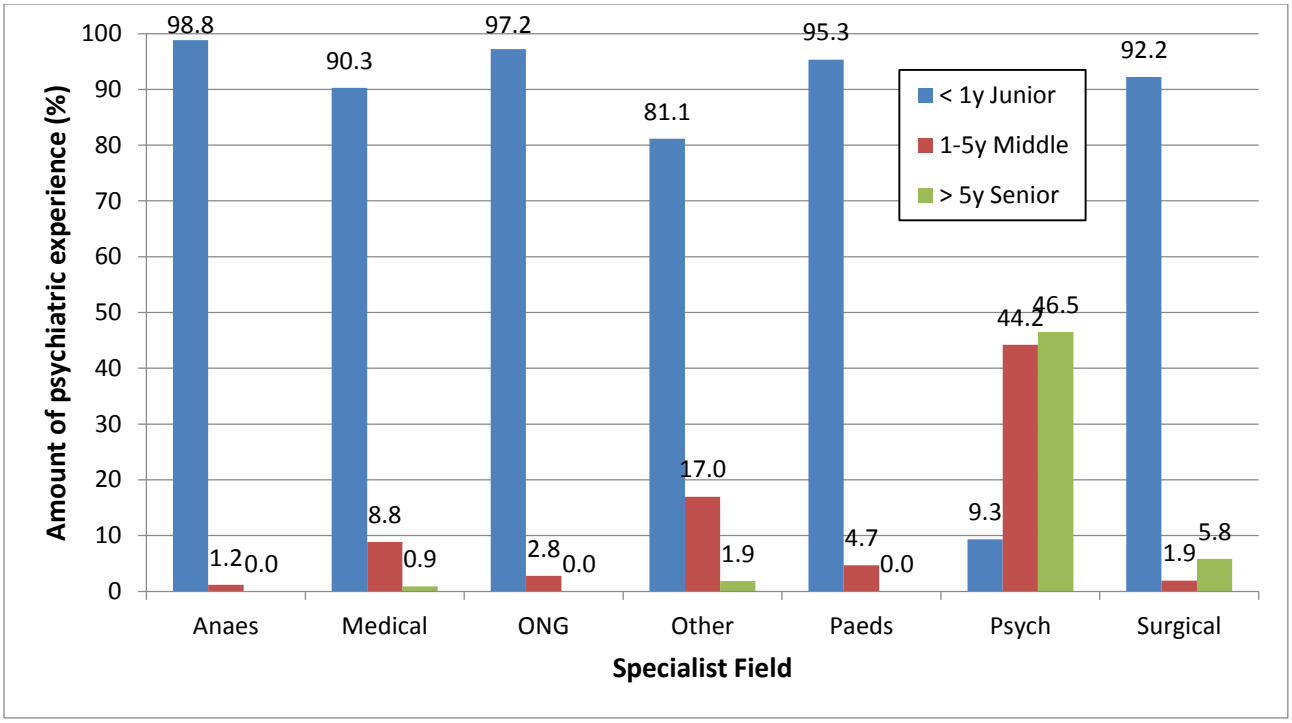

Figure 3.9 Association between specialty and amount of psychiatric experience

- Know someone with a mental illness (p=0.010; Cramer's V=0.18: weak association): There was a lower proportion of respondents in the Paediatric and Surgical groups who knew someone with a mental illness (Figure 3.10).

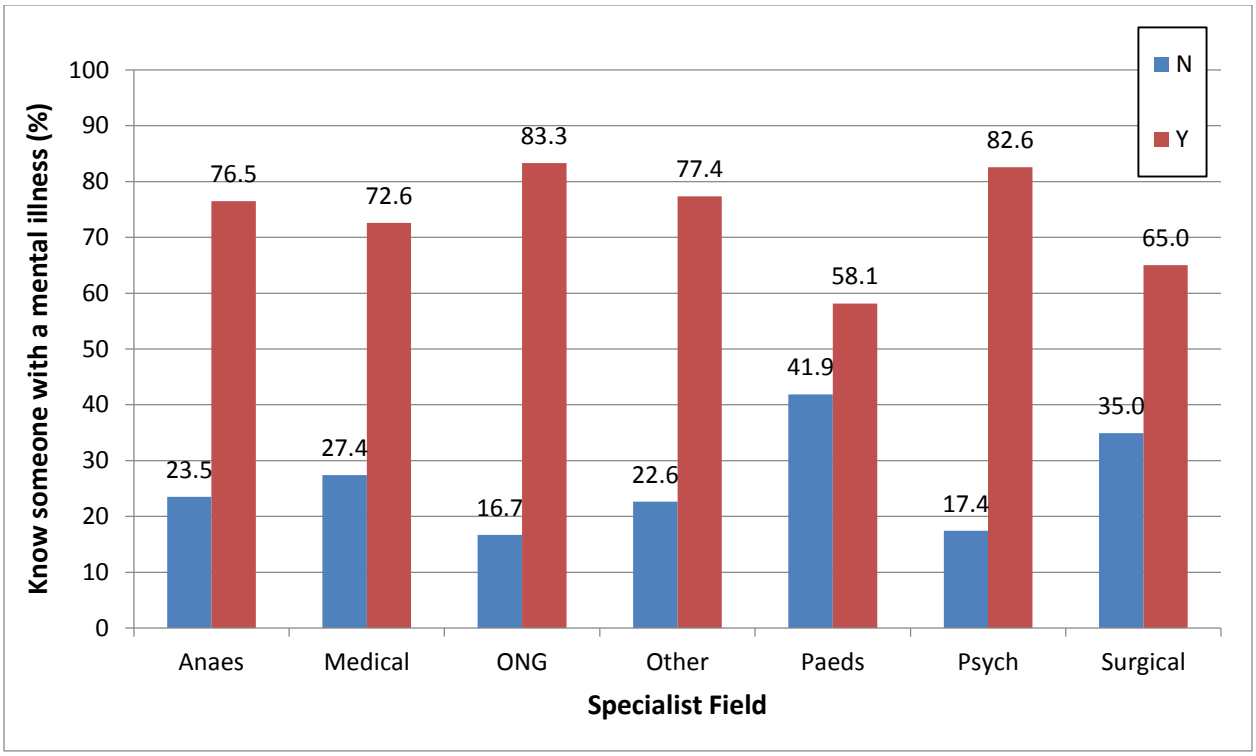

Figure 3.10 Association between specialist field and knowing someone with a mental illness

3.3.7 **Clinical experience**

- There was a significant association between clinical experience and the level of psychiatric experience ($p<0.0001$; Cramer's $V=0.28$: weak association). Those with a senior level of clinical experience had a higher level of psychiatric experience.
- There was a significant association between clinical experience and knowing someone with a mental illness ($p=0.0091$; phi coefficient=0.11: weak association). Those with more clinical experience were more likely to know someone with a mental illness (Figure 3.11).

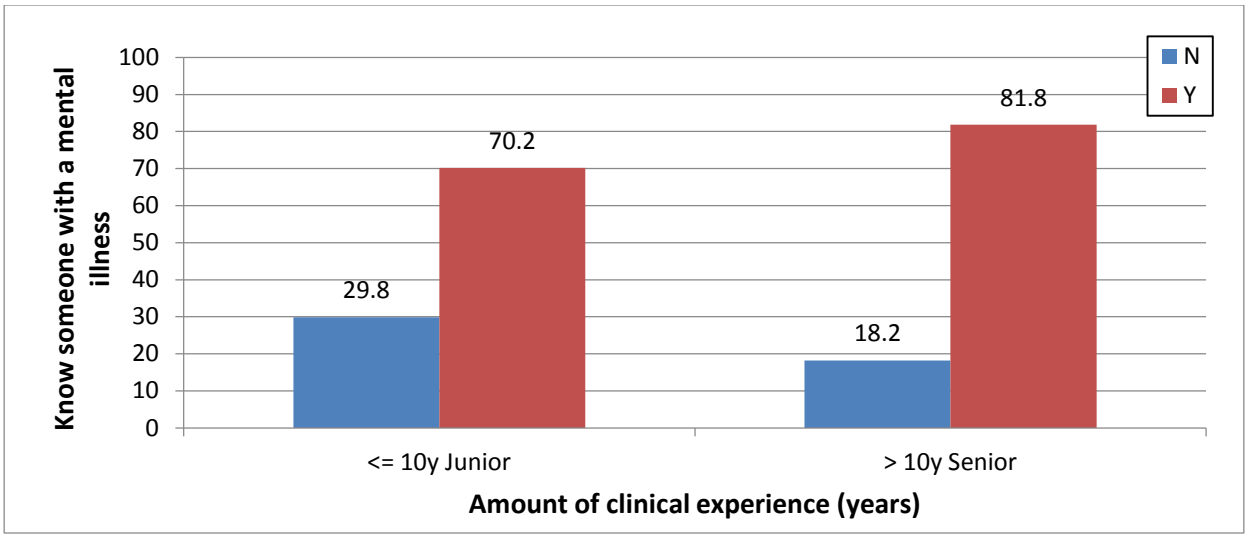

Figure 3.11 Association between amount of clinical experience and knowing someone with a mental illness

3.3.8 Psychiatric experience

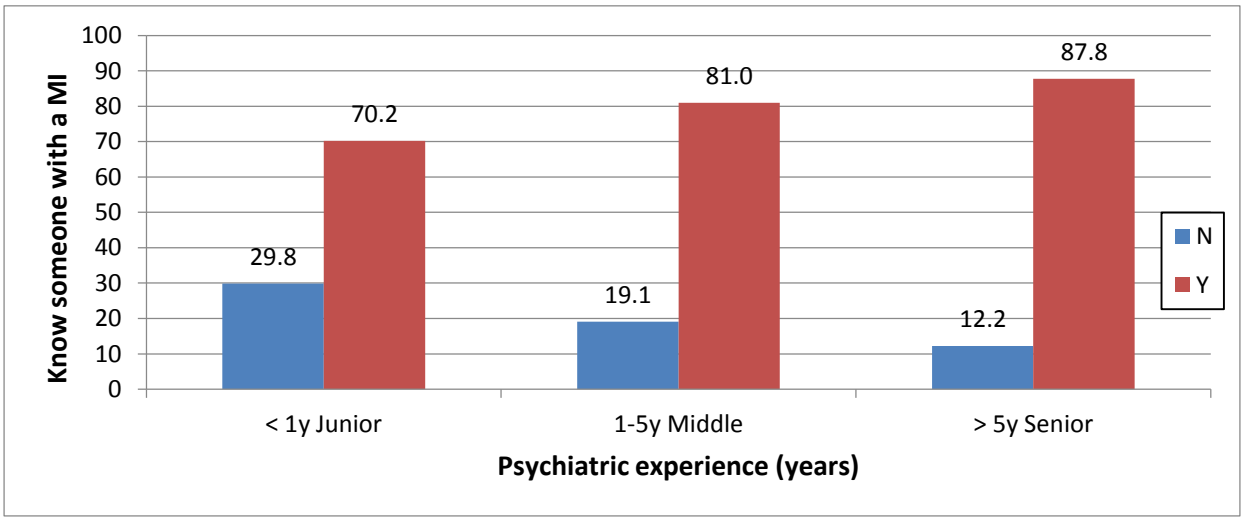

Figure 3.12 Association between amount of psychiatric experience and knowing someone with a mental illness

- There was a significant association between psychiatric experience and knowing someone with a mental illness (p=0.011; Cramer's V=0.13: weak association), Figure 3.12. Those

with more psychiatric experience were more likely to know someone with a mental illness (Table 3.4).

Table 3.4 Significant associations between independent variables

	Age	Sex	Race	University	Doctor Group	Doctor Specialty	Clinical Experience	Psychiatry Experience	Know
Age									
Sex	0.17**								
Race	0.12*	0.11							
University	0.17*	0.12	0.23**						
Doctor Group	0.15**	0.23**	0.11	0.12					
Doctor Specialty	0.17*	0.29**	0.14*	0.17**	n/a				
Clinical Experience	**0.68****	0.06	0.10	0.15*	0.11*	0.17*			
Psychiatric Experience	0.18**	0.13*	0.15**	0.12	**0.77****	**0.56****	0.28**		
Know someone	0.14*	-0.01	0.14*	0.10	0.10*	0.18*	0.11**	0.13*	

(Cramer's V values depicted in table; * $p<0.05$; ** $p<0.001$)

3.4 Doctors' attitudes towards mental illness

3.4.1 Depression

More than 90% of respondents agreed that persons with depression would improve with treatment, however only 30% felt they would eventually recover fully (Figure 3.13). The majority of the respondents disagreed that depressed persons have only themselves to blame (92.7%) and that they could pull themselves together (71.6%). Respondents were more ambivalent in their attitudes towards depressed persons being hard to talk to and feeling the way we all do, with almost half of the respondents agreeing with these statements and approximately 20% responding neutrally.

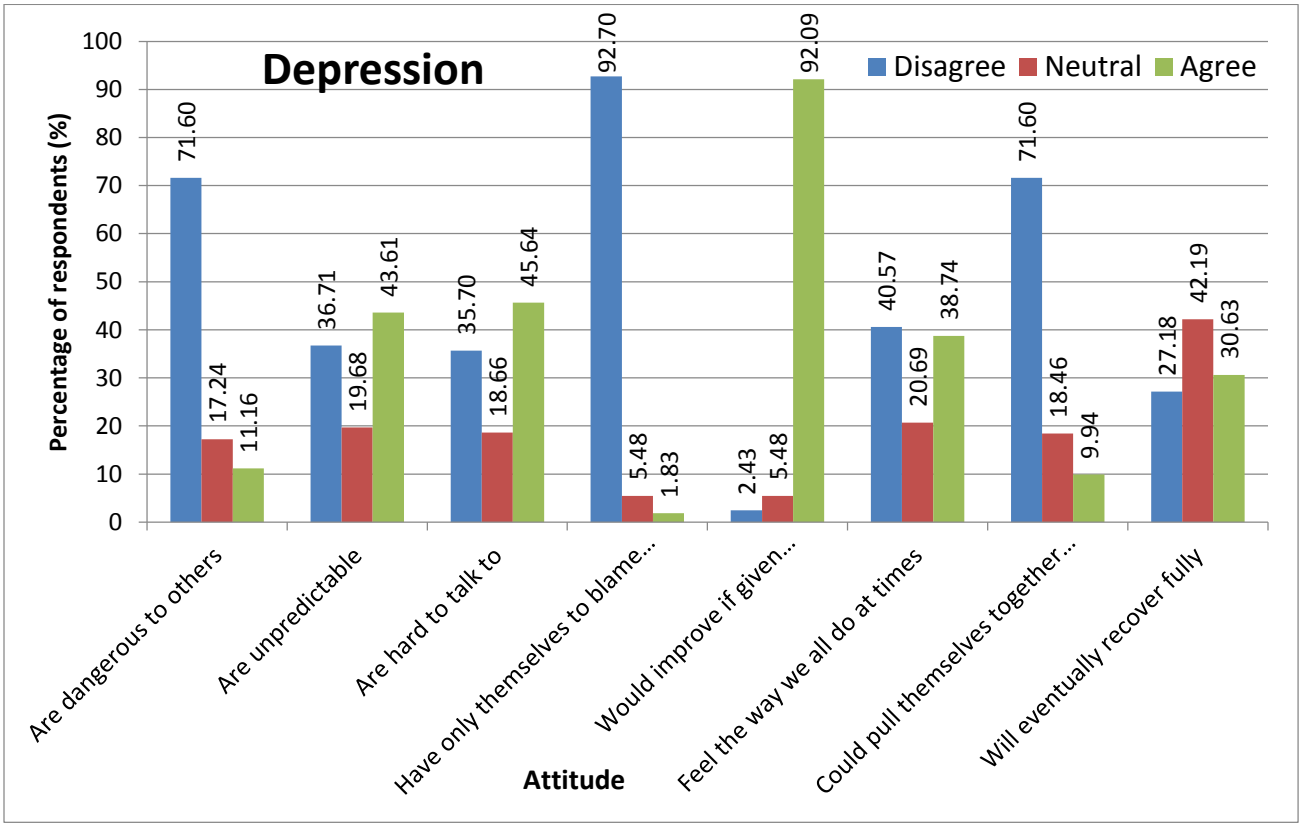

Figure 3.13 Attitudes of total study sample towards persons with depression

3.4.2 **Schizophrenia**

The majority of the doctors felt that persons with schizophrenia are unpredictable (82.6%), but that they don't have themselves to blame (94.5%) and they can't pull themselves together (88.24%), Figure 3.14. More than half of the doctors also considered persons with schizophrenia to be dangerous (58.4%), hard to talk to (54.8%) and that they don't feel the way we all do (65.1%). However, most of the respondents felt that they would improve with treatment (86.2%) but only 6% thought that they would recover fully.

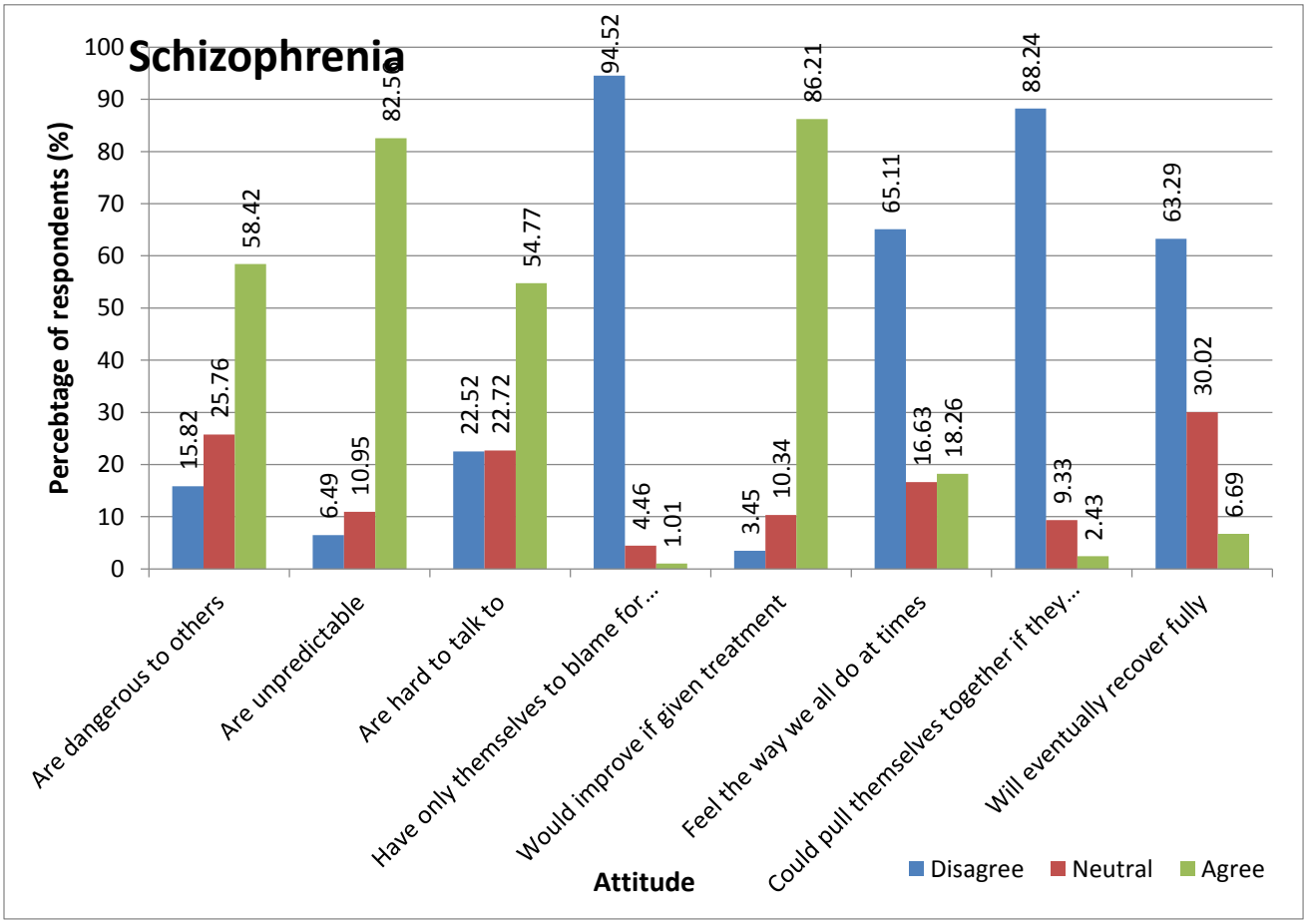

Figure 3.14 Attitudes of total study sample towards persons with schizophrenia

3.4.3 **Borderline Personality Disorder**

Almost half of the doctors felt that persons with borderline personality disorder are dangerous (40.97%), don't feel the way we all do (47.26%) and are hard to talk to (45.84%). The majority reported that they are unpredictable (78.90%). Almost one fifth of the respondents felt that such persons were capable of pulling themselves together (18.46%), however only 5% felt that they had themselves to blame for their condition. Half of the doctors felt that these persons would improve with treatment (50.91%) but only 10% felt that they would recover fully.

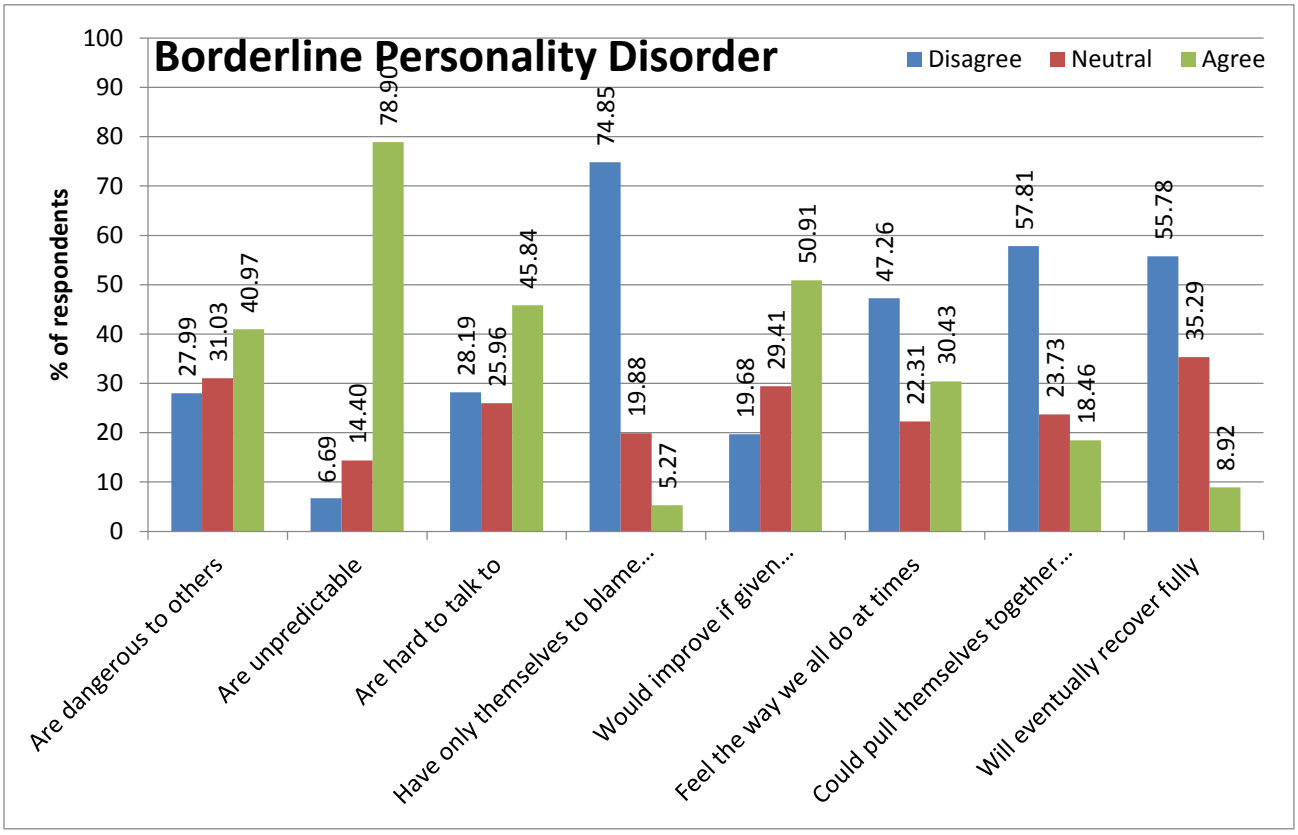

Figure 3.15 Attitudes of total study sample towards persons with borderline personality disorder

3.5 Significant associations between various demographic variables and doctors' attitudes towards mental illness

Certain demographic and work related variables were noted to have a statistically significant impact on the respondents' attitudes towards the various mental illnesses. Age was omitted as an independent variable since it was strongly associated with clinical experience and clinical experience is likely to be a better indicator of attitudes. The reference category for the attitude or dependent variable was the "disagree" option. Thus, in the comments below the neutral and agree categories are always compared to the disagree category. The reference categories for each of the independent variables will be stated in the relevant results section.

3.5.1 Associations between gender and doctors' attitudes towards mental illness

The reference category for the "gender" demographic was the female group, the reference category for the attitude/dependent variable was the 'disagree' category.

(1) Depression

- Male doctors were 2.28 times more likely to respond neutral than to disagree that persons with depression had only themselves to blame than the female doctors (OR 2.28, 95% CI 1.03-5.05).
- The odds of male doctors agreeing that persons with depression could pull themselves together if they wanted was 2.47 times that of the female doctors. (OR 2.47, 95% CI 1.30-4.67).

(2) **Schizophrenia**

- The odds of the female doctors responding neutral rather than disagreeing that persons with schizophrenia are unpredictable was 0.33 times that of the male doctors (OR 0.33, 95% CI 0.12-0.94).
- Male doctors were 3.36 times more likely to respond neutral to the statement that persons with schizophrenia have only themselves to blame for their condition than the female doctors (OR 3.36, 95% CI 1.27-8.85).
- There was a 4.08 times higher likelihood that the male doctors would respond neutral rather than disagree with the statement that persons with schizophrenia could pull themselves together if they wanted when compared to the females (OR 4.08, 95% CI 2.05-8.13).
- The odds of the male doctors agreeing that persons with schizophrenia feel the way we all do at times was 2.13 times that of the female doctors (OR 2.13, 1.30-3.51).

(3) **Borderline Personality Disorder**

- The likelihood of the female doctors agreeing that persons with borderline personality would improve with treatment was 0.60 times that of the male doctors (OR 0.60, 95 % CI 0.36-0.98).

3.5.2 **Associations between race and doctors' attitudes towards mental illness**

After preliminary statistical analysis of the independent variable race, the reference variable was assigned to all of the races other than African. "Disagree" response was once again the reference variable and was compared to the neutral and agree responses.

(1) **Depression**

- The odds of African respondents agreeing that persons with depression are dangerous was 3.90 times that of the Caucasian respondents (OR 3.90, 95% CI 1.86-8.17) and 3.30 times that of the Indian respondents (OR 3.30, 95% CI 1.36-8.00). The odds of Caucasian respondents agreeing that persons with depression are dangerous was 0.21 times that of the Coloured respondents (OR 0.21, 95% CI 0.05-.094).
- African respondents were 2.50 times more likely to agree with the statement that persons with depression are unpredictable than the Caucasian respondents. (OR 2.55, 95% CI 1.49-4.18).
- The odds of African respondents giving a neutral response to patients with depression being hard to talk to was 0.30 times that of the Asian respondents, thus there was an increased likelihood that Asian respondents would respond neutral than disagree to this statement as compared to the African respondents (OR 0.30, 95% CI 0.10-0.94).

  The odds of the Asian respondents giving a neutral response to the statement that persons with depression are hard to talk to was 3.1 times that of the Caucasian respondents (OR 3.1, 95% CI 1.00-9.04).
- African respondents were 4.26 times (OR 4.26, 95% CI 1.08-16.78) more likely than the Coloured respondents and 3.60 times (OR 3.60, 95% CI 1.28-10.15) more likely than the Asian respondents to agree that persons with depression feel the way we all do at times. However, the Caucasian respondents were 2.03 times more likely to give a neutral response to this statement (OR 2.03, 95% CI 1.08-3.80) than the African respondents.
- African respondents were 2.60 times more likely than the Caucasian respondents to agree with the statement that persons with depression could pull themselves together (OR 2.60, CI

95% 1.13-5.99). The odds of Asian respondents agreeing that persons with depression could pull themselves together was 5.15 times that of the Caucasian respondents (OR 5.15, 95% CI 1.36-19.55). The odds of Caucasian respondents agreeing with this statement was 0.30 times that of the Indian respondents (OR 0.30, 95% CI 0.12-0.73).

- African respondents were 2.76 times (OR 2.76, 95% CI 1.52-5.01) more likely than Caucasian respondents and 9.20 times (OR 9.20, 95% CI 1.76-48.18) more likely than Coloured respondents to agree with the statement that persons with depression will eventually recover fully. The odds of the Indian respondents agreeing or giving a neutral response to this statement was 0.12 (OR 0.12, 95% CI 0.02-.068) and 0.14 times (OR 0.14, 95% CI 0.03-0.61), respectively, than that of the Coloured respondents.

(2) **Schizophrenia**

- The Asian respondents were 12.36 times (OR 12.36, 95% CI 2.87-53.20) more likely, the Caucasian respondents 2.54 times (OR 2.54, 95% CI 1.26-5.11) more likely and the Indian respondents 2.48 times (OR 2.48, 95% CI 1.08-5.69) more likely to give a neutral response to the statement that patients with schizophrenia are dangerous than what the African respondents were. The Asian respondents were 4.87 times (OR 4.87, 95% CI 1.19-20.00) more likely than the Caucasian respondents and 4.99 times (OR 4.99, 95% CI 1.14-21.76) more likely than the Indian respondents to respond neutral to the statement that patients with schizophrenia are dangerous.
- The odds of the Caucasian respondents giving a neutral response to the statement that patients with schizophrenia only have themselves to blame was 0.21 times that of the Indian respondents (OR 0.21, 95% CI 0.06-0.72).

- African respondents were 3.59 times more likely to respond neutral to the statement that persons with schizophrenia could pull themselves together than the Caucasian respondents (OR 3.59, 95% CI 1.46-8.80). Asian respondents were 8.14 times more likely than Caucasian respondents to respond neutral to the statement that persons with schizophrenia could pull themselves together (OR 8.14, 95% CI 2.01-32.91). The odds of Caucasian respondents giving a neutral response to this statement was 0.27 times that of the Indian respondents (OR 0.27, 95% CI 0.10-0.77).
- African respondents were 4.16 times (OR 4.16, 95% CI 1.64-10.56) more likely to agree with and 2.05 times (OR 2.05, 95% CI 1.23-3.42) more likely to respond neutral to the statement that persons with schizophrenia would eventually recover fully than the Caucasian respondents. The African respondents were 3.58 times more likely to agree with this statement than the Indian respondents (OR 3.58, 95% CI 1.10-11.67). The odds of the Caucasian respondents giving a neutral response to this statement was 0.52 times that of the Indian respondents (OR 0.52, 95% CI 0.29-0.91).

(3) **Borderline Personality Disorder**

- The odds of Caucasian respondents giving a neutral response to the statement that person with BPD are dangerous was 2.17 times that of the African respondents (OR 2.17, 95% CI 1.21-3.89). Indian respondents were 2.69 times (OR 2.69, 95% CI 1.32-5.46) more likely to agree with and 3.17 times (OR 3.17, 95% CI 1.50-6.71) more likely to give a neutral response to this statement than the African respondents.
- The odds of Caucasian respondents giving a neutral response to persons with BPD being hard to talk to was 0.50 times that of the Indian respondents (OR 0.50, 95 % CI 0.25-0.99).

- Asian respondents were 3.11 times (OR 3.11, 95% CI 1.20-8.02) more likely than African respondents to agree that persons with BPD only have themselves to blame than the African respondents. Asian respondents were also 2.91 times more likely than Caucasian respondents to give a neutral response to this statement (OR 2.91, 95% CI 1.17-7.21).
- The odds of African respondents agreeing that person with BPD would improve with treatment was 2.54 times (OR 2.54, 95% CI 1.36-4.74) that of the Caucasian respondents and 2.36 times that of the Indian respondents (OR 2.36, 95% CI 1.14-4.88).
- The African respondents were 2.68 times (OR 2.68, 95% CI 1.38-5.20) more likely and the Caucasian respondents 1.98 times (OR 1.98, 95% CI 1.05-3.75) more likely to agree that persons with BPD feel the way we all do at times than the Indian respondents.
- The odds of the Asian respondents responding neutral to the statement that persons with BPD could pull themselves together was 3.48 times that of the Indian respondents (OR 3.48, 95% CI 1.17-10.34).
- The odds of the African respondents agreeing that persons with BPD will recover fully was 3.58 times (OR 3.58, 95% CI 160-7.97) that of Caucasians and 6.69 times (OR 6.69, 95% CI 1.87-23.93) that of Indian respondents. The odds of African respondents giving a neutral response to this statement was 2.52 times that of the Caucasian respondents (OR 2.52. 95% CI 1.55-4.11).

3.5.3 **Associations between graduate university and doctors' attitudes towards mental illness**

In this analysis WITS was the reference category for the independent variable with "disagree" being the reference category for the dependent variable.

(1) **Depression**

- The odds of respondents from the UCT group responding neutral to the statement that persons with depression feel the way we all do at times was 2.31 times that of the WITS group (OR 2.31, 95% CI 1.05-5.05).

(2) **Schizophrenia**

- The odds of Pretoria University respondents agreeing that person with schizophrenia are dangerous was 0.30 times that of the Wits respondents (OR 0.30, 95% CI 0.09-0.97).
- The odds of respondents from UCT responding neutral to the statement that persons with schizophrenia will recover fully was 0.48 times that of the Wits group (OR 0.48, 95% CI 0.24-0.96).

(3) **Borderline Personality Disorder**

- The odds of the International group responding neutral to the statement that persons with borderline personality feel the way we all do at times was 3 times that of the Wits group (OR 3.00, 95% CI 1.21-7.41).
- Respondents from the Pretoria Group were 1.99 times more likely to agree that persons with BPD could pull themselves together than the Wits group (OR 1.99, 95% CI 1.01-3.93

3.5.4 **Associations between amount of clinical experience and doctors' attitudes**

Senior clinical experience (defined in this study as more than 10 years) was the reference category for the independent variable with "disagree" being the reference category for the dependent variable.

- The odds of respondents with less than 10 years of clinical experience agreeing with the statement that patients with borderline personality were hard to talk to was 1.83 times that of their colleagues with more than 10 years of experience (OR 1.83, 95% CI 1.11-3.04).

3.5.5 **Association between amount of psychiatric experience and doctors' attitudes**

The reference category for the independent variable psychiatric experience was the senior category (more than 10 years), with "disagree" being the reference category for the dependent variable.

- The odds of respondents with mid-level psychiatric experience responding neutral that persons with schizophrenia are dangerous was 0.21 times that of their senior colleagues (OR 0.21, 95 % CI 0.04-0.98).
- No other significant differences were noted based on amount of psychiatric experience.

3.5.6 **Association between personally knowing someone with a mental illness and doctors' attitude**

In this analysis the yes option (those who knew someone with a mental illness) was used as the reference category, with "disagree" being the reference category for the dependent variable.

(1) **Depression**

- Respondents who didn't know someone with a mental illness were 1.92 times more likely to agree that persons with depression are hard to talk to as compared to those that did know someone with a mental illness (OR 1.92, 95% CI 1.20-3.07).

- The odds of respondents who didn't know someone with a mental illness giving a neutral response to the statement that persons with depression feel the way we all do at times was 2.14 times that of those who did know someone with a mental illness (OR 2.14, 95% CI 1.24-3.68).

(2) **Schizophrenia**

- Respondents who didn't know someone with a mental illness were 3.70 times (OR 3.70, 95% CI 1.59-8.63) more likely to agree and 3.24 times (OR 3.24, 95% CI 1.34-7.84) more likely to give a neutral response to the statement that persons with schizophrenia are dangerous, than those that did know someone with a mental illness.

(3) **Borderline Personality Disorder**

- The odds of respondents who didn't know someone with a mental illness agreeing that persons with borderline personality disorder are dangerous was 1.76 times that of those who didn't know someone with a mental illness (OR 1.76, 95% CI 1.04-2.97).

3.6 Attitude of non-psychiatric doctor group towards mental illness

3.6.1 Depression

Approximately one in ten of the non-psychiatric doctors considered persons with depression to be dangerous (11.1%) and able to pull themselves together (10.1%). Whereas almost half felt that persons with depression are unpredictable (46.2%), hard to talk to (47.9%) and don't feel the way others do (40%). The majority of the non-psychiatric doctors didn't consider persons with depression to be to blame for their illness (92.1%) and thought that they would improve with

treatment (91.2%). However, only a third agreed that persons with depression would ever recover fully (30.5%), Figure 3.16.

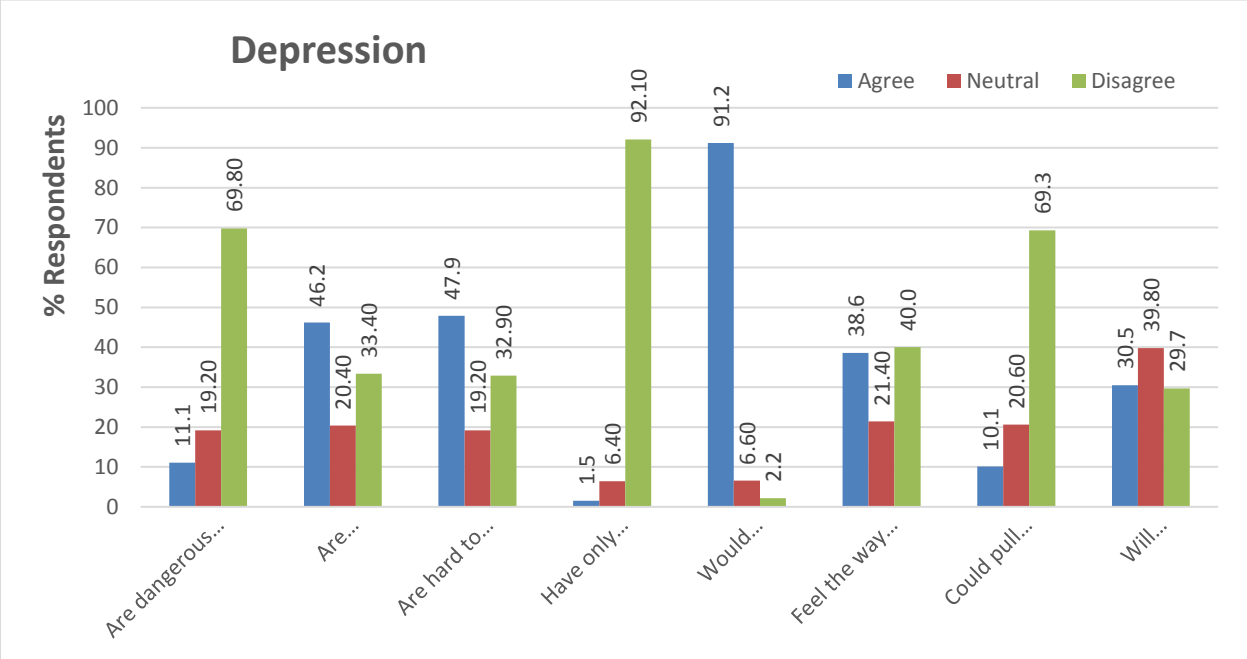

Figure 3.16 Attitude of non-psychiatric doctor group towards persons with depression

3.6.2 **Schizophrenia**

Approximately two thirds of the non-psychiatric doctor group reported that persons with schizophrenia are dangerous (64.6%), hard to talk to (60.9%) and don't feel the way that others do (65.6%). The majority of the non-psychiatric doctor group felt that persons with schizophrenia are unpredictable (88.5%), but very few thought that they could pull themselves together (2.9%) or were to blame for their condition (1.2%).

With regards to treatment, most of the non-psychiatric doctor group agreed that persons with schizophrenia would improve with treatment (84.8%) however only 6% felt that they would ever make a full recovery, Figure 3.17.

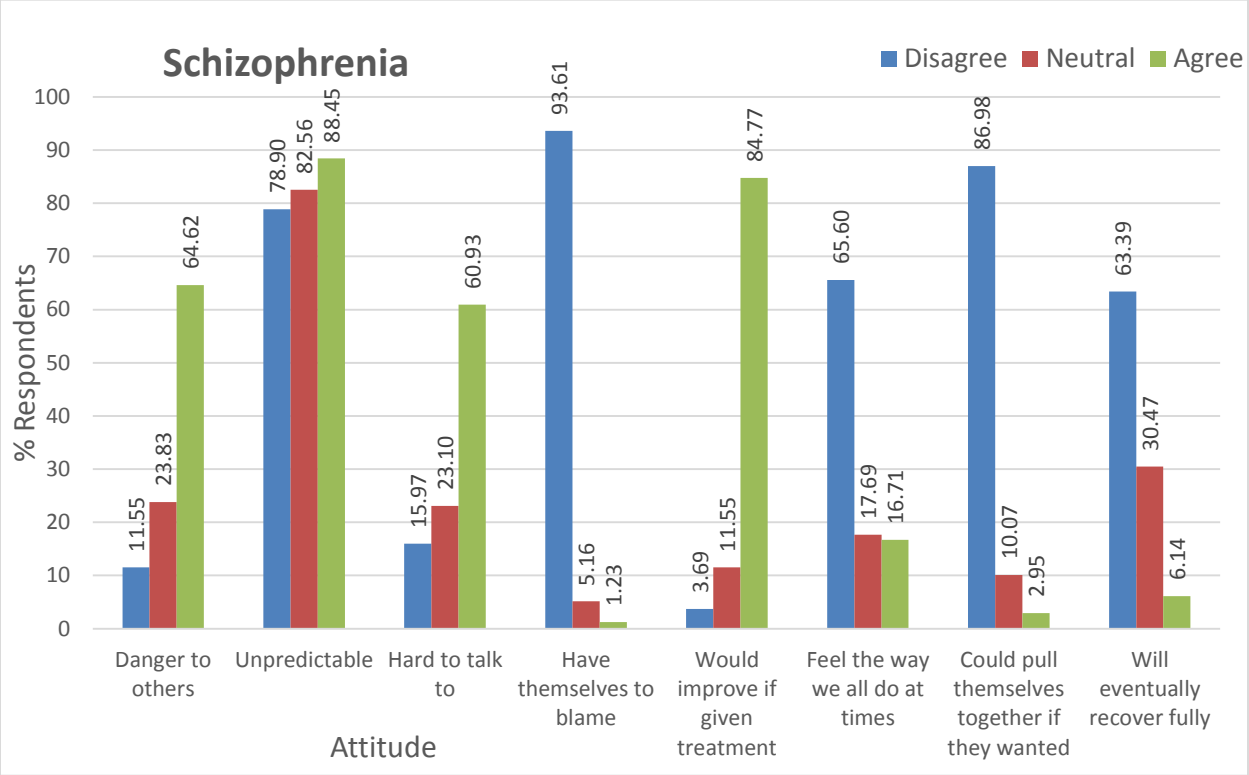

Figure 3.17 Attitude of non-psychiatric doctor group towards persons with schizophrenia

3.6.3 **Borderline Personality Disorder**

The non-psychiatric doctor group was most negative in their opinion regarding persons with borderline personality disorder being unpredictable (78.6%). Furthermore, approximately half of the non-psychiatric doctor group considered persons with borderline personality disorder to be dangerous to others (44.5%) and hard to talk to (47.7%). A similar percentage also felt that

persons with borderline personality disorder don't feel the way that we all do (46.7%), Figure 3.18.

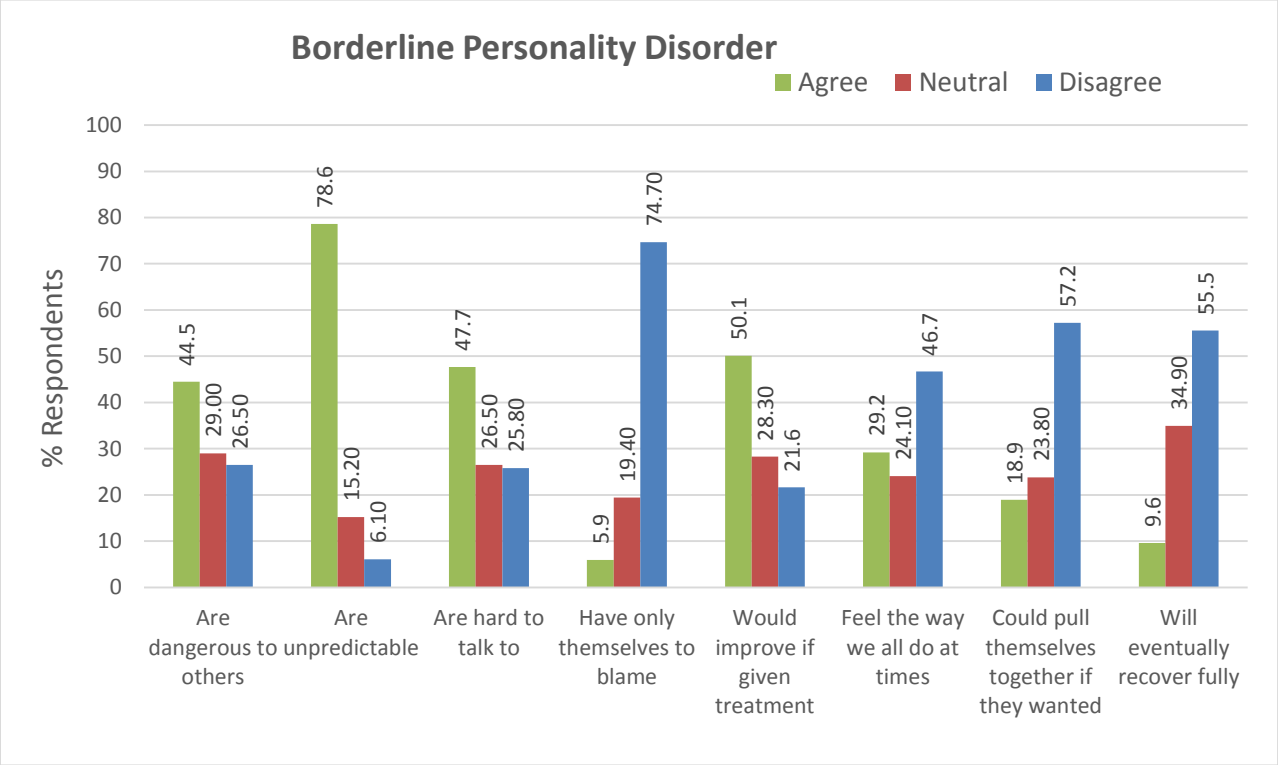

Figure 3.18 Attitude of non-psychiatric doctor group towards persons with borderline personality disorder

A relatively large number of the non-psychiatric doctor group thought that persons with borderline personality, could pull themselves together (18.9%), however the majority did not feel that they were to blame for their illness (74.7%). Only half of the non-psychiatric doctor group thought that persons with borderline personality disorder would improve with treatment (50.1%), whilst less than ten percent were optimistic about them making a full recovery (8.9%).

3.7 Attitude of psychiatric doctor group towards metal illness

3.7.1 Depression

The vast majority of the psychiatric group disagreed with the statements that persons with depression are dangerous (80.23%), have only themselves to blame (95.35%) and could pull themselves together (82.56%). However, approximately one third agreed that persons with depression are unpredictable (31.40%) and hard to talk to (34.88%). Almost all of the psychiatric group agreed that persons with depression would improve with treatment (96.51%), however less than one third agreed that such persons would eventually recover fully (31.40%), Figure 3.19.

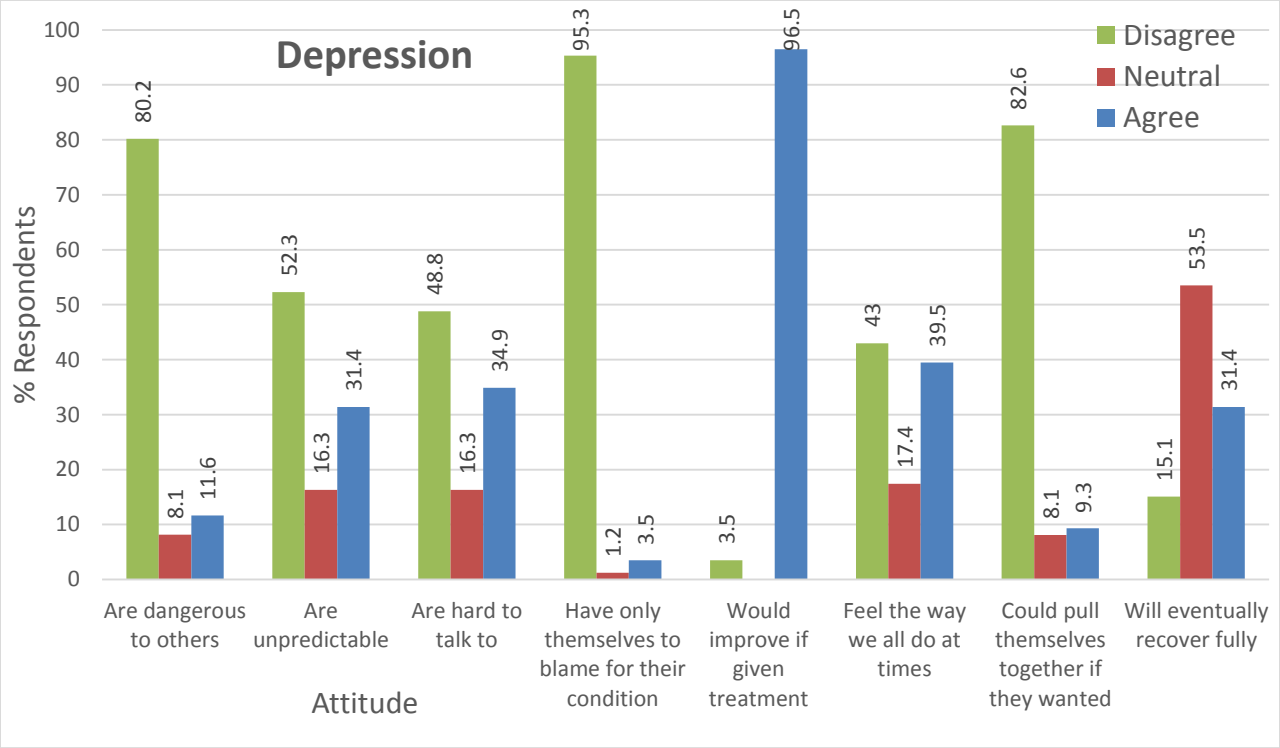

Figure 3.19 Psychiatric doctor groups' attitudes towards persons with depression

3.7.2 **Schizophrenia**

The views towards persons with schizophrenia were split across the neutral (34.88%), agree (29.07%) and disagree (36.05%) options; with approximately one third of the responses in each of these categories. More than half of the psychiatric group felt that persons with schizophrenia are unpredictable (54.65%) and that they didn't feel the way we all do (62.79%). However, the majority disagreed that persons with schizophrenia are hard to talk to (53.49%). Almost all of the psychiatric group disagreed that persons with schizophrenia have only themselves to blame (98.84%) and that they could pull themselves together if they wanted (94.19%). More than 90% of the psychiatric group agreed that persons with schizophrenia would improve with treatment (93.02%) however less than 10% felt that they would ever recover fully (9.27%), Figure 3.20.

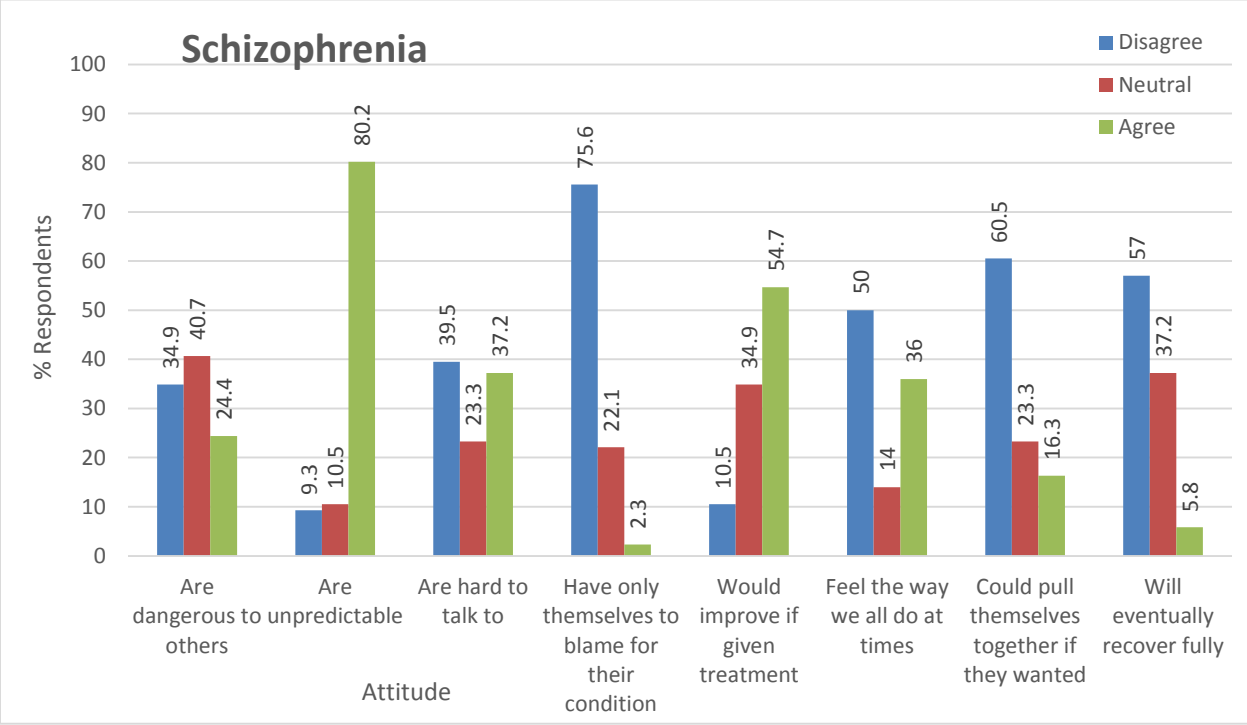

Figure 3.20 Psychiatric doctor groups' attitudes towards persons with schizophrenia

3.7.3 **Borderline Personality Disorder**

More than three quarters of the psychiatric group agreed that persons with borderline personality disorder (BPD) are unpredictable (80.23%) and approximately one quarter agreed that persons with BPD are dangerous (24.42%). The majority disagreed that persons with BPD could pull themselves together (60.47%) and had only themselves to blame for their illness (75.58%). However, a large percentage agreed that persons with BPD don't feel the way we all do (50.00%) and are hard to talk to (37.21%). Approximately half of the psychiatric group agreed that person with BPD would improve with treatment (54.65%), however half of the doctors were also of the opinion that such persons would never recover fully (56.98%), Figure 3.21.

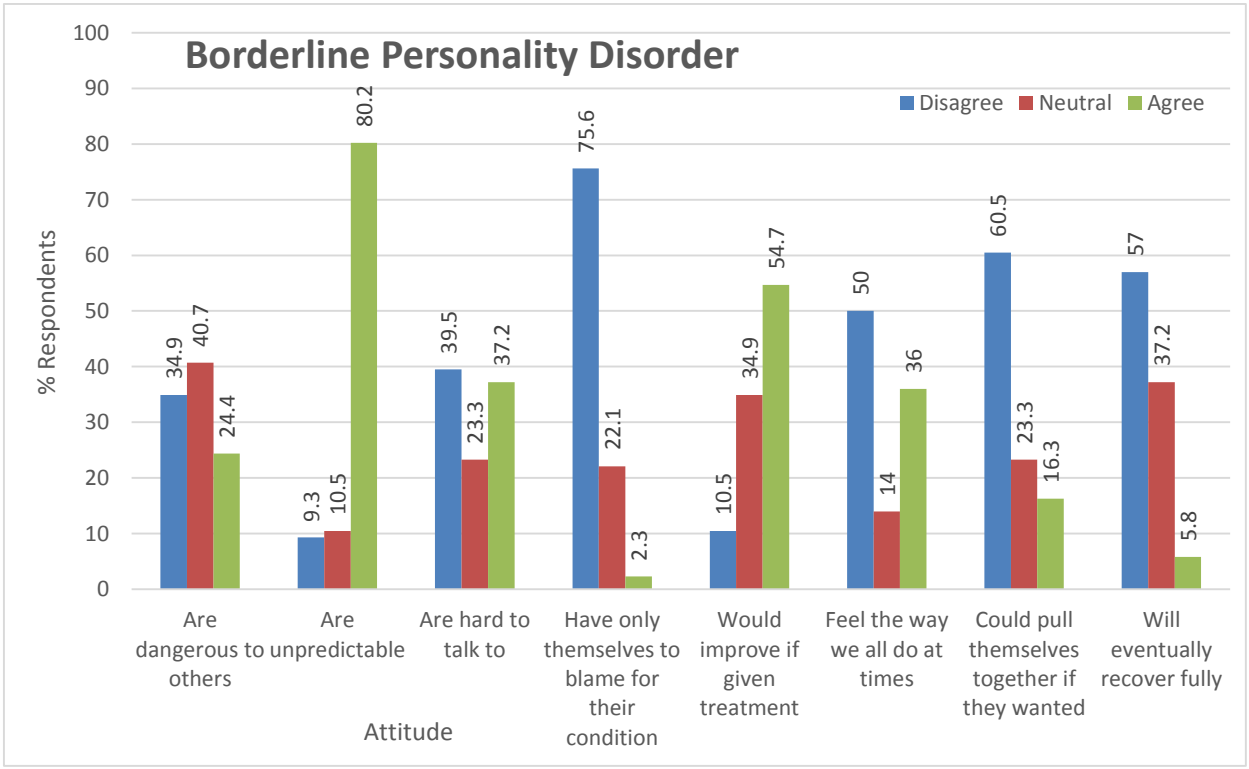

Figure 3.21 Psychiatric doctor groups' attitudes towards persons with borderline personality disorder

3.8 Differences in attitudes between psychiatric and non-psychiatric doctor groups

3.8.1 Depression

(1) A similar percentage of doctors in the psychiatric (11.6%) and non-psychiatric groups (11.1%) agreed that persons with depression are dangerous. However, the psychiatric group were more likely to disagree (80.2%) with this statement than their non-psychiatric colleagues (69.8%). The odds of the non-psychiatric group responding neutral to this statement was 2.64 times that of the psychiatric group doctors (OR 2.64, 95% CI 1.14-6.12). Thus, there was a significant difference between the groups with regards to this statement (p-value 0.034), Figure 3.22.

(2) The non-psychiatric group doctors were 2.2 times more likely to agree that persons with depression are dangerous than the psychiatric group doctors (OR 2.2, 95% CI 1.26-3.90). A significant difference was found between the two groups in their responses to this statement (p-value 0.0017).

(3) The odds of the non-psychiatric group agreeing that persons with depression are hard to talk to was 1.84 times that of the psychiatric group (OR 1.84, 95% CI 1.06-3.18; p-value 0.019).

(4) The two groups were found to hold similar views towards the statements that persons with depression have only themselves to blame, would improve if given treatment and feel the way we all do at times. Thus, no significant difference was found between the two groups with regards to these statements.

(5) A similar number of psychiatric (9.3%) and non-psychiatric group doctors (10.1%) agreed with the statement that persons with depression could pull themselves together. However, the odds of the non-psychiatric doctor group responding neutral to this was

2.47 times that of the psychiatric group (OR 2.47, 95% CI 1.06-5.75), who were more likely to disagree with this statement (p-value 0.014).

(6) The odds of the non-psychiatric doctor group agreeing and responding neutral that persons with depression would eventually recover fully was 0.47 times (OR 0.47, 95% CI 0.22-0.98) and 0.32 times (OR 0.32, 95% CI 0.16-0.64) that of the psychiatric doctor group, respectively (p value 0.011), Figure 3.22.

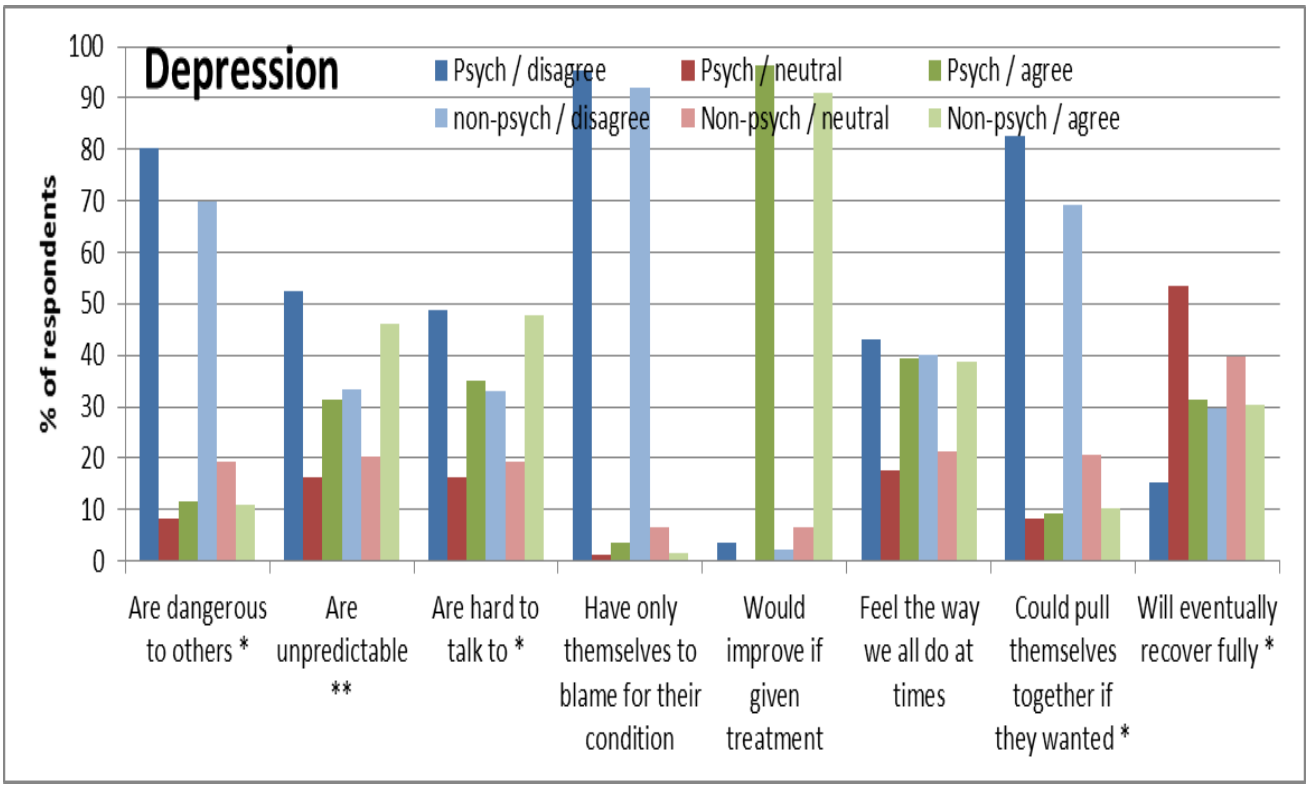

Figure 3.22 Comparison of psychiatric and non-psychiatric doctor groups' attitudes towards persons with depression

3.8.2 **Schizophrenia**

(1) More than double the number of non-psychiatric group doctors (64.6%) than psychiatric group doctors (29.1%) agreed that persons with Schizophrenia are dangerous. Thus, the odds of the non-psychiatric doctors agreeing and responding neutral to this statement was 7.02 times (OR 7.02, 95% CI 3.61-13.63) and 2.21 times (OR 2.21, 95% CI 1.14-4.28) that of the psychiatric group doctors, respectively. These differences resulted in a significant difference between the 2 groups in respect of this statement (p value <0.0001).

(2) Just over half of the psychiatric respondents agreed that persons with schizophrenia are unpredictable, whereas almost 90 % of the non-psychiatric doctor group agreed with this statement. Thus, the odds of the non-psychiatric doctors agreeing and responding neutral to this statement was 17.72 times (OR 17.72, 95% CI 7.27-43.16) and 4.08 times (OR 4.08, 95% CI 1.47-11.36) that of the psychiatric group doctors, respectively. These differences resulted in a significant difference between the two groups in respect of this statement (p value <0.0001).

(3) More than double the number of non-psychiatric doctors (60.9%) than psychiatric group doctors (25.6%) agreed that persons with schizophrenia are hard to talk to. Thus the odds of the non-psychiatric doctors agreeing and responding neutral to this statement was 9.03 times (OR 9.03, 95% CI 4.82-16.93) and 5.75 times (OR 5.75, 95% CI 2.83-11.67) that of the psychiatric group doctors, respectively. These differences resulted in a significant difference between the two groups in respect of this statement (p value <0.0001).

(4) A similar number of doctors in the psychiatric (62.8%) and non-psychiatric groups (65.6%) disagreed with the statement that persons with schizophrenia feel the way we all do at times. However, the odds of the non-psychiatric doctors responding neutral to,

rather than disagreeing with, this statement was 0.44 times that of the psychiatric group doctors (OR 0.44, 95% CI 0.24-0.82), Figure 3.23.

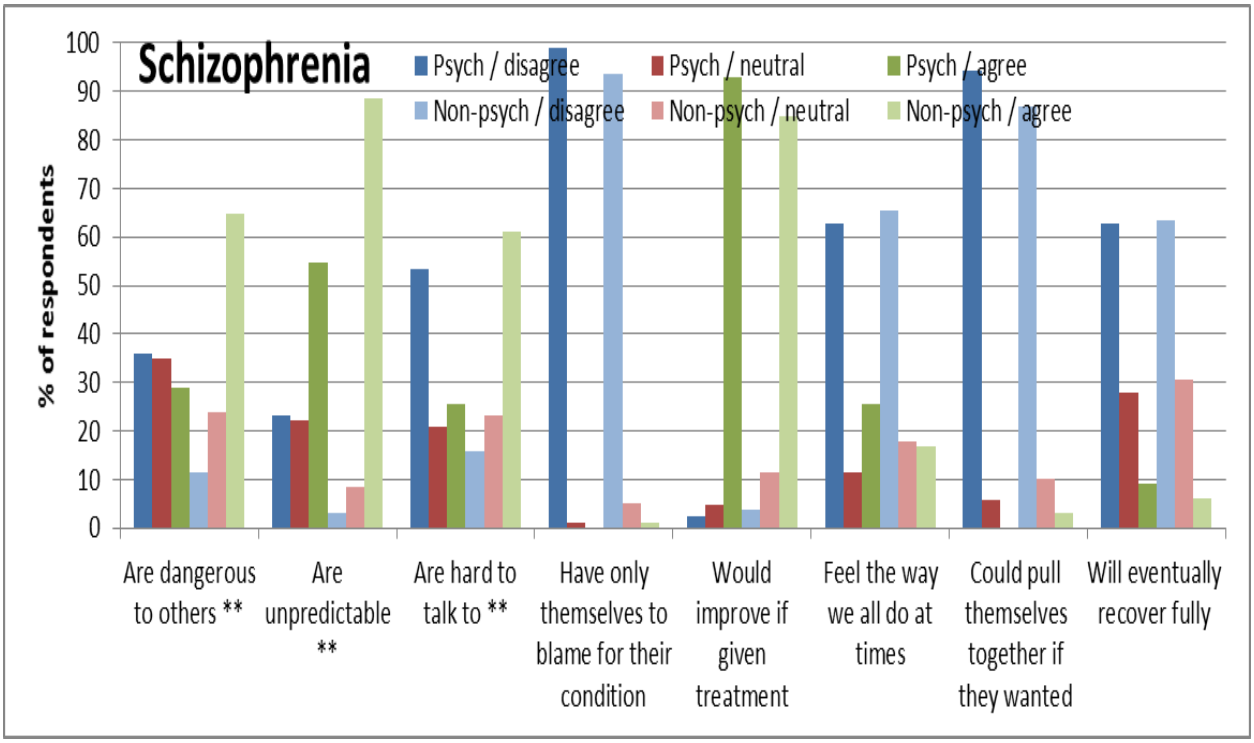

Figure 3.23 Comparison of psychiatric and non-psychiatric doctor groups' attitudes towards persons with schizophrenia

3.8.3 Borderline Personality Disorder

(1) Approximately a quarter of the psychiatric group agreed (24.4%) that persons with BPD are dangerous whereas almost half of the non-psychiatric group agreed (44.5%) with this statement. Thus, the odds of the non-psychiatric doctors agreeing with this was 2.12 times that of the psychiatric group doctors (OR 2.12, 95% CI 1.12-4.04). These differences resulted in a significant difference between the two groups in respect of this statement (p value 0.0032).

(2) A larger percentage of non-psychiatric doctors (21.6%) than psychiatric group doctors (10.5%) disagreed that persons with borderline PD would improve if given treatment, with more of the psychiatric (34.9%) than non-psychiatric group doctors (28.3%) responding neutral to this statement (p-value 0.049), Figure 3.24.

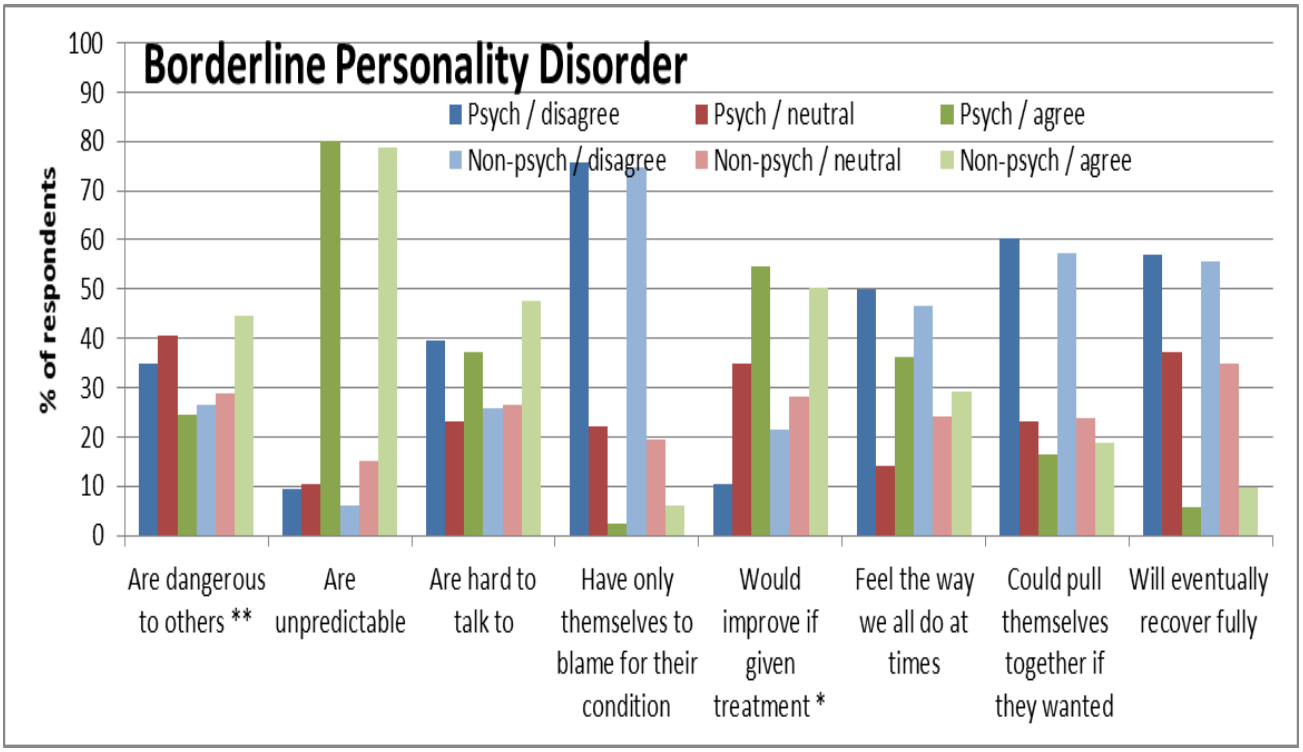

Figure 3.24 Comparison of psychiatric and non-psychiatric doctor groups' attitudes towards persons with borderline personality disorder

Table 3.5 Differences in attitudes of psychiatric and non-psychiatric doctor groups towards depression, schizophrenia and borderline personality disorder (p-values)

	Depression	Schizophrenia	BPD
Are dangerous to others	0.034*	<0.0001*	0.0032*
Are unpredictable	0.0017*	<0.0001*	0.42
Are hard to talk to	0.019*	<0.0001*	0.058
Have only themselves to blame for their condition	0.082	0.13	0.33
Would improve if given treatment	0.10	0.23	0.049*
Feel the way we all do at times	0.73	0.087	0.091
Could pull themselves together if they wanted	0.014*	0.092	0.77
Will eventually recover fully	0.011	0.63	0.40

(Statistically significant p-values of <0.005 are highlighted with *)

The attitudes of the psychiatric and non-psychiatric doctor groups were compared for each of the disorders and each attitudinal statement. The differences between the psychiatric and non-psychiatric doctor groups' attitudes are highlighted with p-values.

Table 3.6 Associations between the type of mental illness and the attitudes of doctors in the psychiatric and non-psychiatric doctor groups

Group	**Non-Psych**		**Psych**	
	p value	More negative MI	p value	More negative MI
Danger				
Depression vs Schizophrenia	<0.0001	SCZ	<0.0001	SCZ
Depression vs Borderline PD	<0.0001	BPD	<0.0001	BPD
Schizophrenia vs BPD	<0.0001	SCZ	0.58	
Unpredictable				
Depression vs Schizophrenia	<0.0001	SCZ	<0.0001	SCZ
Depression vs Borderline PD	<0.0001	BPD	<0.0001	BPD
Schizophrenia vs BPD	<0.0001	SCZ	0.0004	BPD
Hard to talk to				
Depression vs Schizophrenia	<0.0001	SCZ	0.50	
Depression vs Borderline PD	<0.0001	BPD	0.42	
Schizophrenia vs BPD	<0.0001	SCZ	0.16	
Have selves to blame				
Depression vs Schizophrenia	0.33		0.39	
Depression vs Borderline PD	<0.0001	BPD	0.0003	BPD
Schizophrenia vs BPD	<0.0001	BPD	0.0002	BPD
Would improve with treatment				
Depression vs Schizophrenia	0.0004	SCZ	0.23	
Depression vs Borderline PD	<0.0001	BPD	<0.0001	BPD
Schizophrenia vs BPD	<0.0001	BPD	<0.0001	BPD

Feel way we all do				
Depression vs Schizophrenia	<0.0001	SCZ	0.0011	SCZ
Depression vs Borderline PD	0.0003	BPD	0.23	
Schizophrenia vs BPD	<0.0001	SCZ	0.053	
Could pull selves together				
Depression vs Schizophrenia	<0.0001	DEP	0.009	DEP
Depression vs Borderline PD	<0.0001	BPD	0.0003	BPD
Schizophrenia vs BPD	<0.0001	BPD	<0.0001	BPD
Will recover fully				
Depression vs Schizophrenia	<0.0001	SCZ	<0.0001	SCZ
Depression vs Borderline PD	<0.0001	BPD	<0.0001	BPD
Schizophrenia vs BPD	0.0019	SCZ	0.16	

(The attitudes of the psychiatric and non-psychiatric doctor groups towards each mental illness is compared for each attitudinal statement. This comparison is highlighted in the form of p-values in the first column for each doctor group. The second column, for each doctor group, indicates which of the two mental illnesses being compared the doctors held the most negative attitudes towards. If no illness is stated in the second column then the difference between the two illnesses was not statistically significant for that specific attitudinal statement.)

Thus the psychiatric and non-psychiatric group doctors' attitudes were significantly affected by the type of mental illness in question. Overall, the doctors' attitudes were less negative towards depression than towards schizophrenia and borderline personality disorder. The psychiatric group doctors held more negative views towards persons with borderline personality disorder than towards those with schizophrenia.

3.9 Doctors' attitudes towards Psychiatry and Psychiatrists

3.9.1 Psychiatric group doctors' attitudes towards/ perceptions about psychiatry and psychiatrists

(1) Three quarters of the psychiatric group disagreed that non-psychiatric doctors think psychiatry is an important specialty. The odds of the female doctors in the psychiatric group agreeing with this statement was 0.11 times that of the male respondents (OR 0.11, 95% CI 0.01-.088).

(2) The majority of the psychiatric group (80.2%) agreed with the statement that non-psychiatric doctors think they know less. The odds of the female psychiatric group doctors agreeing with this statement was 12.31 times that of the male doctors in the psychiatric group (OR 12.31, 95% CI 1.12-135.53), Figure 3.25.

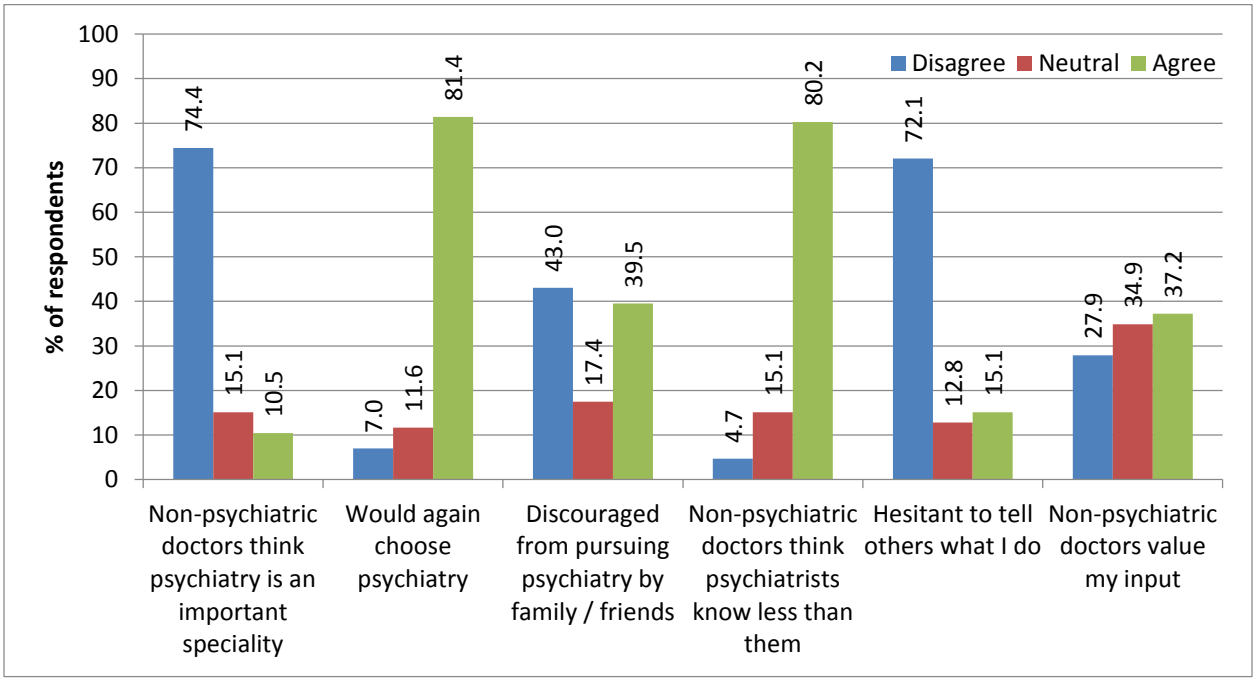

Figure 5.25 Psychiatric doctor groups' attitudes towards and perceptions of psychiatry as a profession

3.9.2 **Non-Psychiatric groups' attitudes towards psychiatry and psychiatrists**

(1) Almost 95% of the non-psychiatric (94.81%) doctors reported that psychiatry was an important specialty.

(2) The majority would not consider specialising in psychiatry. However, the odds of female non-psychiatric doctors agreeing that they would consider specialising in psychiatry was 2.45 times that of the male respondents (OR 2.45, 95% CI 1.21-4.94).

International graduates were 2.52 times more likely to agree with this statement than the WITS respondents (OR 2.52, 95% CI 1.01-6.30).

(3) Non-Psychiatric respondents who did not know someone with a mental illness were 1.84 times more likely to agree that they would discourage family and friends from pursuing a career in psychiatry than the respondents who did now someone with a mental illness (OR 1.84, 95% CI 1.11-3.06).

(4) The odds of UCT graduates agreeing and responding neutral to the statement that referring patients for a psychiatric evaluation is helpful was 0.13 times (OR 0.13, 95% CI 0.02-0.82) and 0.06 times (OR 0.06, 95 % CI 0.01-0.66) that of the Wits graduates, respectively. The odds of the senior clinicians responding neutral to this statement was 10.76 times that of the junior clinicians (OR 10.76, 95% CI 1.35-85.81).

(5) The Indian respondents were 3.34 times more likely to agree with the statement that non-psychiatrists know less than other doctors than the African respondents (OR 3.34, 95% CI 1.30-8.59). The odds of Other SA graduates and UCT graduates agreeing with this statement was 2.86 times (OR 2.26, 95% CI 1.20-6.81) and 2.66 times (OR 2.66, 95% CI 1.05-6.74) that of the WITS graduates, respectively.

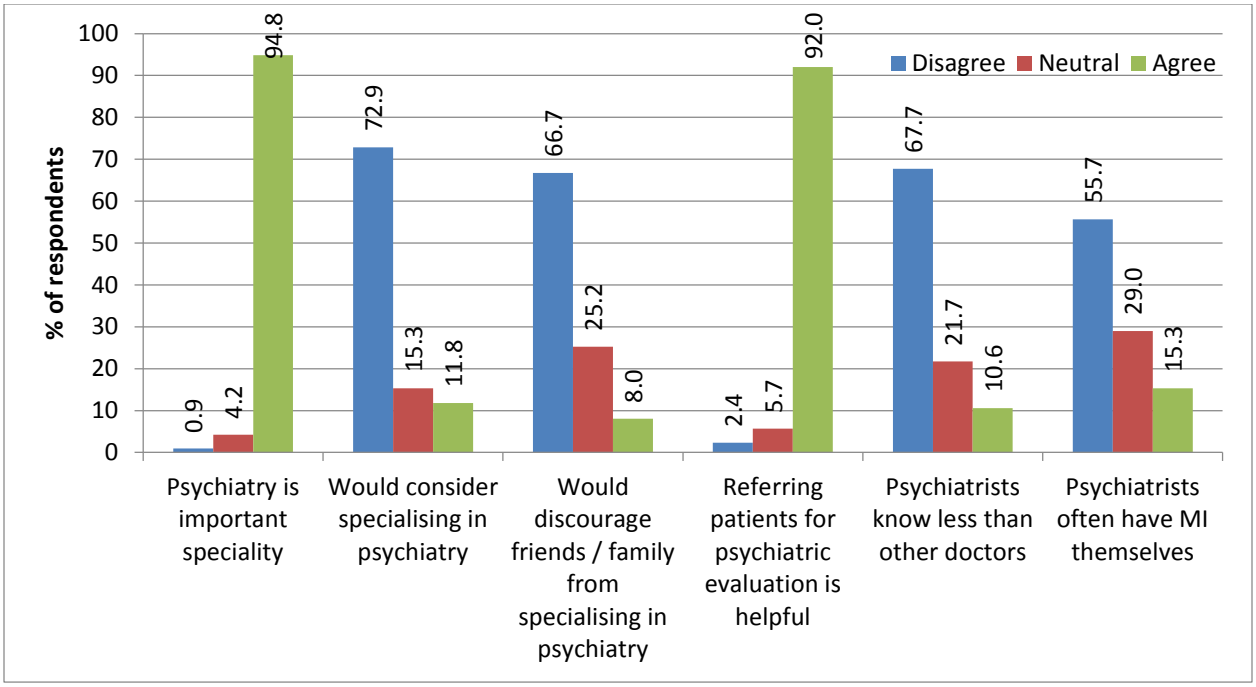

Figure 5.26 Non-psychiatric doctor groups' attitudes towards psychiatry as a profession

3.9.3 Comparison of psychiatric and non-psychiatric doctor groups' attitudes towards Psychiatry

Two different questionnaires were distributed, one to the psychiatric group and the other to the non-psychiatric group (Figure 3.7). The questionnaires differed in the questions that were asked about the doctors' attitudes towards psychiatry and psychiatrists. Despite these differences in the content, four of the six questions asked in this section of the questionnaire were comparable. Thus, the responses given by the psychiatric and non-psychiatric groups were compared, see table. There was a significant difference between the two groups for each of the four questions compared. The vast majority of doctors in the Psychiatric group felt that their non-psychiatric colleagues held negative views of them and their profession. However, the attitudes of the non-psychiatric doctors were much more positive.

Table 3.7 Comparison of psychiatric and non-psychiatric doctor groups' attitudes towards Psychiatry a profession

		Psychiatrists (%)	Non-Psych (%)	**p-value**
Psychiatry is important specialty	**Agree**	10.47	94.81	**<0.001**
	Neutral	15.12	4.25	
	Disagree	74.42	0.94	
Was discouraged / would discourage others from pursuing psychiatry	**Agree**	39.53	8.02	**<0.001**
	Neutral	17.44	25.24	
	Disagree	43.02	66.75	
Psychiatrists know less than other doctors	**Agree**	80.23	10.61	**<0.001**
	Neutral	15.12	21.70	
	Disagree	4.65	67.69	
Psychiatrists' input is valued	**Agree**	37.21	91.98	**<0.001**
	Neutral	34.88	5.66	
	Disagree	27.91	2.36	

(The percentage of doctors and their exact responses to each of the attitudinal statements are depicted. The comparison between the psychiatric and non-psychiatric doctor groups' attitudes is highlighted in the last column, in the form of p-vales.)

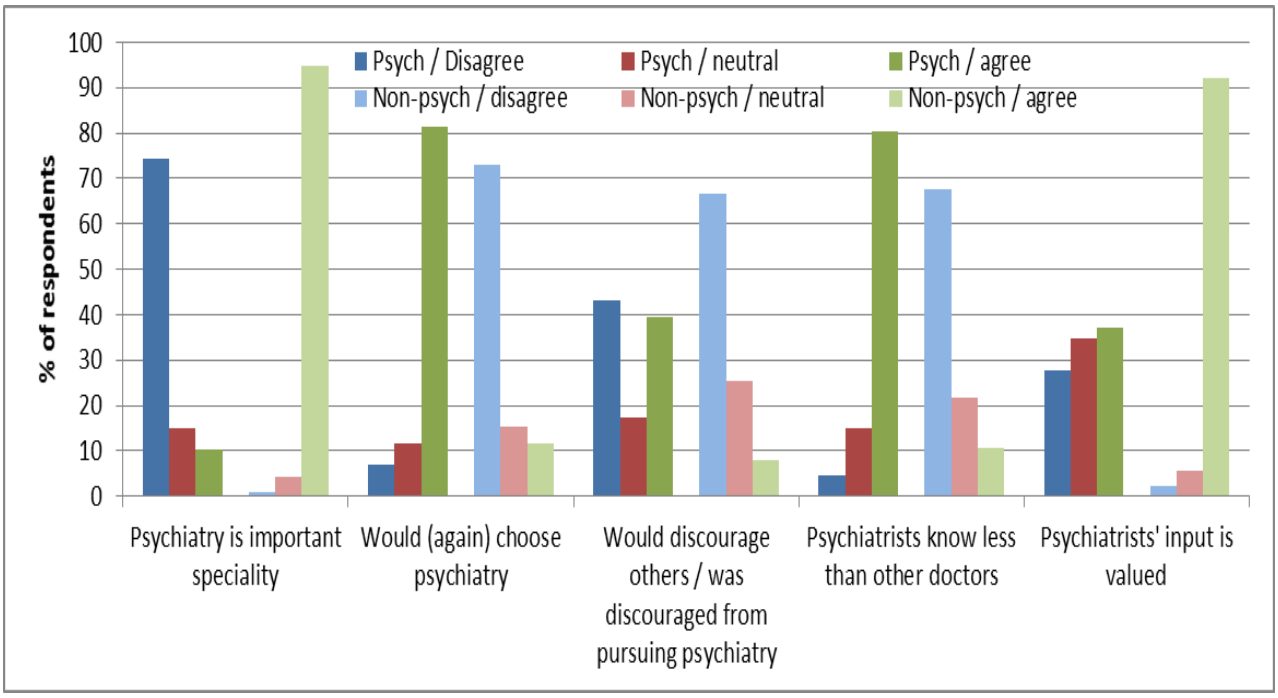

Figure 3.27 Comparison of psychiatric and non-psychiatric doctor groups' attitudes/perceptions of psychiatry as a profession

CHAPTER 4 DISCUSSION

A number of important findings are evident in the results of this study. It has highlighted that South African doctors do hold negative attitudes towards mental illness, which are similar to those of their international counterparts.[28, 66] In this study, these negative attitudes were to a large degree dependent on the type of mental illness. On comparison of the psychiatric and non-psychiatric doctor groups, it is evident that the psychiatric group doctors have similar attitudes towards persons with mental illness as the non-psychiatric doctors. However, there were a few significant differences between the two doctor groups and in these instances the attitudes of the psychiatric group were noted to be significantly more positive that those of the non-psychiatric group. Finally, it is evident that there are huge discrepancies between the psychiatric groups' perceptions of how other doctors view psychiatry and the actual attitudes held by the non-psychiatric doctors towards psychiatry and psychiatrists.

4.1 **Demographics**

The final sample comprised of 519 respondents, the majority of whom were female and between the ages of 30 and 39 years. As can be expected, the age of the respondents was strongly associated with their level of experience; thus given that most of the sample comprised of younger doctors there was a larger number of junior than senior doctors. This is to be expected as the study was undertaken in teaching hospitals where the number of junior doctors does outweigh the number of senior doctors. Almost half of the respondents had graduated from the WITS which is also not surprising as the teaching hospitals included were affiliated with WITS.

The larger proportion of female than male doctors likely indicates the current demographic make-up within the selected teaching hospitals. Of note is that there was a significantly greater number of female doctors in the younger age groups which is likely indicative of the shift in the demographics of doctors that has occurred in South Africa in recent years. This change is also notable in that the older groups comprised mainly of Caucasian males however given political changes this profile has shifted with increased racial diversity noted in the younger age groups.

The majority of the respondents reported that they personally knew someone who suffered from a mental illness (73%). It is interesting to note that more of the doctors in this study reported that they personally knew someone with a mental illness than those in the studies done in London (56%) and Pakistan (57%).[28,66] The reasons for this difference are not entirely clear as one would not expect there to be such a large discrepancy between the different countries. In addition, there were significant associations between clinical experience and doctor group, and knowing someone with a mental illness. The number of psychiatric group doctors who knew someone with a mental illness was significantly greater than the non-psychiatric doctor group ($p=0.027$) and a significantly greater number of those with more clinical experience knew someone with a mental illness ($p=0.0091$).

With regards to the association between clinical experience and knowing someone with a mental illness, it is fair to assume that with increased time the chances of personally encountering someone with a mental disorder would increase. There are a variety of reasons which could explain why significantly more psychiatric group doctors personally knew someone with a

mental illness. Firstly some doctors have chosen a career in psychiatry as they may have personally been affected by or exposed to mental illness in their lives and secondly, persons with a mental illness may feel more comfortable to disclose that they have a mental illness to persons working in the field of psychiatry.

4.2 Doctors' (psychiatric & non-psychiatric groups) attitudes towards persons with mental illnesses

As was hypothesized the doctors who participated in this study did hold negative attitudes towards persons with mental illness. This finding is consistent with the results of studies done in various other countries, including England, Nigeria and Pakistan.[28,66-67] On comparison of the studies cited here, the doctors in this study were the most optimistic in their attitudes towards the treatability of the mental illnesses in question. However, it is important to mention that their attitudes towards treatability were to a large extent dependent on the specific mental illness, with 92% expressing positive attitudes towards the treatment of depression whilst only 57% were positive about the treatment of borderline personality disorder.

This predominantly positive attitude of doctors towards treatment and the benefits thereof is in keeping with the findings of other similar studies.[28,38,66] As has been hypothesized in these studies, doctors' positive views towards treatability is likely due to their involvement in the medical field. Thus, one could assume that as a result of their knowledge and clinical experience they are more likely to consider treatment to be beneficial.[28] Despite the doctors' beliefs in the benefits of treatment their attitudes towards the potential recovery of persons with mental

illnesses was generally quite negative. This was again largely dependent on the mental illness in question, with a larger percentage reporting that persons with schizophrenia (63%) and borderline personality disorder (56%) would not recover fully as compared to those with depression (27%).

As a result of these differences it is possible that due to the doctors' medical knowledge of various psychiatric conditions they are merely being "realistic" in their attitudes towards the long term outcomes of persons with a mental illness. As conditions such as schizophrenia and borderline personality have traditionally been considered to be hard to treat and having a relatively poor prognosis. However, these views appear to be changing and the teaching with regards to the potential for recovery in chronic psychiatric conditions is also likely to become more positive in the years to come.

Another potential explanation for this pessimistic outlook is that doctors more frequently encounter persons with recurrent and treatment resistant mental illnesses, which would likely negatively influence their opinions about potential recovery. This explanation is corroborated by the results of a study by Jorm et al. where health care professionals rated long term outcomes for persons with mental illness more negatively than what the general public did.[38] Similar negative attitudes towards recovery were also noted in a Nigerian study, in which only 9% of doctors reported that persons with mental illness who received treatment would ever recover fully.[67] However, the doctors in the studies done in England and Pakistan were less negative in their opinions about the possibility of recovery than the doctors in this study.[28,66] Thus, the African

doctors (South Africa and Nigeria) are less optimistic about the chances of recovery in persons with mental illness.

This difference may in part be due to various socio-economic and cultural challenges encountered in third world settings which have a negative impact on adherence and recovery. Thus one would expect a difference in attitudes between doctors working in developing and developed countries. However, the attitudes towards recovery were less negative in Pakistan, also a developing nation, than that found in the African studies which indicates that there may be additional factors that have an impact on attitudes towards recovery.[66-67]

The majority of the doctors felt that persons with schizophrenia are dangerous (58%), unpredictable (83%), hard to talk to (55%) and that they don't feel the way we all do (65%). Once again, these results are very similar to those obtained in other studies.[28,66] This could be explained by the fact that doctors are likely to have been exposed to acutely ill psychotic patients who may have been violent and hostile at that point in time. Such persons when acutely psychotic and unwell are often difficult to communicate with given the effects of the psychosis on their thought processes. However, it is important to mention that given such experiences doctors may actually overemphasize these negative aspects associated with schizophrenia. As a result this is likely not a true reflection of persons with schizophrenia as such persons are less likely to be dangerous, unpredictable or hard to talk to when they are well. Also, their negative responses towards the statement that persons with schizophrenia feel the way we all do indicates

that doctors find it hard to relate to persons with schizophrenia, which is also likely influenced by their having been exposed to such persons when they are acutely unwell.

Interestingly, almost as many doctors as for schizophrenia (83%) felt that persons with borderline personality disorder (79%) were unpredictable. This was the most strongly held negative view by doctors towards borderline personality disorder and is likely due to the unpredictability associated with the impulsive behaviours which persons with borderline personality disorder may display. A large percentage of the doctors also agreed that persons with BPD are dangerous (41%) which likely also relates to their impulsivity.

A large percentage of the doctors felt that persons with depression are unpredictable (44%). This percentage is similar to that found in other studies and it may be that such persons are considered unpredictable due to their having an increased propensity for suicidal behaviour than the general population.[28,66] Overall, unpredictability was noted to be strongly associated with mental illnesses and negative attitudes were evident in this regard for all three of the mental illnesses included in this study. Similar attitudes were noted in the Nigerian study, where 86% of the doctors responded that persons with mental illness are unpredictable.[67]

The doctors held similar negative views towards persons with depression (46%) and BPD (46%) with regards to them being hard to talk to and not feeling the way we all do, with almost half of the doctors agreeing with these statements. This result was again comparable to that found in the studies done in England and Pakistan.[28,66] This view that such persons do not feel the way we all

do is again likely because doctors are exposed to persons with mental illnesses when they are acutely ill and this may make it hard for them to relate to and think of such persons as being similar to themselves. Also, a hallmark of persons with borderline personality disorder is their difficulties with interpersonal relationships and this may be another reason why they are perceived as being hard to talk to. Again, as doctors are usually exposed to persons with a mental illness when they are acutely unwell and may not be communicating effectively this would likely also result in doctors perceiving them as being hard to talk to.

The majority of the doctors felt that persons with one of the three illnesses in question were not to blame for their illness and that they were not able to pull themselves together. Thus across the board the doctors felt least negative with regards to persons being responsible for and in control of their illness. In the study conducted in England similar attitudes were noted with regards to blame and being in control in persons with depression and schizophrenia.[28] However, the doctors in the Pakistan study were noted to be more negative in their responses to these.[66]

4.3 **Demographic effects on attitudes**

Certain demographic variables were noted to have a significant effect on the above mentioned attitudes. The male doctors were more negative than the females in their responses to persons with depression and schizophrenia being to blame for their illness and being able to pull themselves together. Thus, the male doctors were seemingly less sympathetic towards such persons and felt that they were in some way responsible for and able to control their illness.

However, more female than male doctors agreed that persons with schizophrenia are unpredictable and that they don't feel the way we all do. This may be because females are more vulnerable when faced with persons who are psychotic and are thus more aware of such persons' unpredictability when they are unwell. The fact that fewer females felt that persons with schizophrenia feel the way we all do indicates that they may struggle to identify with such persons more so than the male doctors. This finding is consistent with the results of the study by Adewuya et al. where a much higher social distance was noted in the female than the male doctors.[67]

The African doctors were significantly more positive in their attitudes towards the potential for full recovery in persons with schizophrenia and depression than their Indian and Caucasian colleagues. Furthermore, the African respondents were significantly more positive with regards to the treatment and recovery of persons with borderline personality disorder than their Caucasian and Indian counterparts. Contrary to what was expected at the start of this study, the level of clinical experience had very little impact on the doctors' attitudes towards mental illness. This is not in keeping with the results of various other studies which have noted a shift in attitudes with increased time spent in medical service, with longer duration and more clinical exposure being associated with more positive attitudes.[28,66-67] However, a study on the attitudes of support workers by Tipper et al.,[41] and another looking at that of mental health care professionals by Lauber et al.,[68] also did not find that age or experience had any effect on attitudes.[38,41,67]

In our study the only significant difference noted in this respect was the doctors' opinions regarding persons with borderline personality disorder being hard to talk to. In this regard, the junior doctors were significantly more negative (OR 1.83, 95% CI 1.11-3.04) and found such persons harder to talk to than what their seniors did. This is likely because more clinical exposure and experience would result in doctors feeling more comfortable and confident when presented with the challenging interpersonal dynamics that are often encountered in borderline personality disorder.

Significant differences were noted between those doctors that knew someone with a mental illness and those that didn't. Significantly more doctors who didn't know someone considered persons with schizophrenia (OR 3.70, 95% CI 1.59-8.63) and borderline personality disorder (OR 1.76, 95% CI 1.04-2.97) to be dangerous. This association between familiarity and reduced perceptions of dangerousness is consistent with that noted in other studies.[9,69] Another significant finding is that more doctors who didn't know someone with a mental illness found it harder to talk to persons with depression (OR 1.92, 95% CI 1.20-3.07).

Overall, these results indicate that exposure to persons with a mental illness on a personal level results in reduced fear of and an enhanced ability to communicate with and relate to such persons. In a study by Corrigan et al[69] it was noted that persons who knew someone with a mental illness were less likely to perceive them as dangerous, which in turn resulted in reduced fear and social distance.[69] Similar findings were noted in the study by Adewuya et al[67] where having a family member with a mental illness was associated with lessened social distance

towards those with mental illnesses.[69] Various other studies have also shown that familiarity with mental illness is associated with less social distance and more positive attitudes.[35] However, in the study by Tipper et al. no differences in attitudes were noted between those who did know someone and those who didn't.[41]

4.4 Differences in attitudes towards mental illness between psychiatric and non-psychiatric doctor groups

Overall, the non-psychiatric and psychiatric doctor groups held similar attitudes towards mental illness, which is consistent with the findings of Gateshill et al.[70] Thus, even though the psychiatric doctors work with persons with mental illnesses on a daily basis they also appear to hold negative attitudes. Similar findings have been noted in various other studies.[38,50,71] However, there were a number of differences between the two groups and in these instances the psychiatric groups' attitudes were noted to be significantly more positive than those of the non-psychiatric doctor group. The psychiatric group doctors were also found to have more positive attitudes than the general public in a study by Kingdon et al.[29] This finding is to be expected for a variety of reasons.

Firstly, psychiatric doctors have chosen a career that involves treating and interacting with persons with mental illnesses and would likely not have done so if they had marked negative attitudes towards such persons. Also, their increased exposure to and experience with such persons is likely to have resulted in a greater understanding of mental illness and the difficulties

such persons are faced with, which would likely result in them being more empathetic and positive in their opinions of them.

Significantly more non-psychiatric doctors felt that persons with depression are unpredictable (p-value 0.0017) and hard to talk to (p-value 0.019). Also, they were significantly more negative than the psychiatric group doctors in their attitudes towards depressed persons being dangerous (p-value 0.034) and capable of pulling themselves together (p-value 0.014). The psychiatric group doctors were also significantly more optimistic about such persons' potential to fully recover than the non-psychiatric doctors (p value 0.011).This difference in attitudes towards potential recovery in depression was also noted in another study by Kua et al.[44]

The largest difference between the non-psychiatric and psychiatric doctor groups was noted in their attitudes towards schizophrenia. The vast majority of the non-psychiatric doctors were of the opinion that such persons are dangerous, unpredictable and hard to talk to, thus their attitudes in this respect were significantly more negative than the psychiatric group doctors (p value <0.0001).

The non-psychiatric doctors were also more negative in their attitudes towards borderline personality disorder with significantly more responding that such persons are dangerous (p value 0.0032) and unlikely to improve with treatment(p value 0.049). These results are consistent with those of various other studies where the attitudes of mental healthcare professionals were also noted to be more positive than that of non-mental health care professionals.[38,44,70] As in our

study, the study by Gateshill et al. specifically noted that non-mental health professionals considered persons with mental illnesses to be significantly more dangerous and unpredictable than what the mental health professionals did.[70]

4.5 **Attitudes dependent on type of mental illness**

Of note, is that both the non-psychiatric and psychiatric groups' attitudes were significantly affected by the type of mental illness in question. This finding is consistent with the results of numerous other studies which also found that health care professionals' attitudes were disorder specific.[38,44,72] Overall, we found that the doctors' attitudes were more positive towards depression than towards schizophrenia and borderline personality disorder. On the whole, the non-psychiatric group doctors held significantly more negative attitudes towards schizophrenia than towards depression. This is consistent with the findings of various other studies which also found that health care practitioners were more negative in their views towards schizophrenia than depression.[38,40,44]

The exception to this was that significantly more non-psychiatric doctors felt that persons with depression are more able to control their illness than what persons with schizophrenia are. These differences in attitudes between depression and schizophrenia are not surprising and are consistent with the results of numerous other studies. There are likely a multitude of reasons for why more negative attitudes are held towards persons with schizophrenia. When the specific questions included in this study are considered a few of the possible explanations are; persons with schizophrenia are likely to be considered more dangerous and unpredictable than those with

depression as the nature of their illness with the associated psychosis increases their likelihood of acting in a dangerous and unpredictable manner when they are unwell. However, depression is less frequently associated with psychosis and hence such persons are likely considered to be less dangerous and unpredictable. Also, non-psychiatric doctors are likely to have encountered persons with less severe forms of depressive illness, either at work or on a personal level, resulting in them being more positive in their attitudes towards depression than schizophrenia. Furthermore, due to the nature of psychotic illnesses such as schizophrenia doctors may find it harder to relate and talk to such persons than persons with depression. It is however comforting to know that the doctors as a whole were quite positive about the benefits of treating both schizophrenia and depression.

In the case of the psychiatric doctor group the differences in their attitudes towards schizophrenia and depression was similar to that of the non-psychiatric doctors. The only difference being that there was no significant difference in their attitudes towards these two illnesses with regards to improving with treatment. This shows that the psychiatric group doctors are a lot more optimistic about the treatability of schizophrenia than the non-psychiatric doctors and are thus of the opinion that it is as amenable to treatment as what depressive illness is. This difference in the two groups is likely the result of psychiatric doctors having had increased exposure to persons with schizophrenia and having thus seen first-hand the beneficial effects of treatment on this illness. The psychiatric and non-psychiatric doctor groups were significantly more negative in their attitudes towards borderline personality disorder than depression in all of the attitudinal statements.

Both the psychiatric and non-psychiatric group doctors felt that persons with borderline personality disorder were more to blame, less amenable to treatment and better able to pull themselves together than those with schizophrenia. In a study by Markham et al which investigated the attitudes of nursing staff towards persons with borderline personality disorder, they also felt that such persons were more in control of their behaviours and were less optimistic about their potential for change than for persons with depression and schizophrenia.[45]

Overall, the psychiatric group doctors were significantly more negative in their attitudes towards BPD than schizophrenia than the non-psychiatric doctors. The psychiatric group doctors felt that persons with BPD and schizophrenia were equally dangerous and that those with BPD were more unpredictable than those with schizophrenia. They also considered BPD as being less amenable to treatment than schizophrenia and that BPD had a similar recovery potential to schizophrenia. Thus the psychiatric group was noted to hold predominantly negative attitudes towards persons diagnosed with borderline personality disorder, which is consistent with the findings of the study by Lewis and Appleby.[46] As in our study, Lewis also found that psychiatrists considered persons with personality disorders to have a poor prognosis and to be in control of their behaviours.[46]

These negative attitudes towards BPD on the part of the psychiatric group doctors could be due to them having been exposed to such persons more regularly and may be related to the countertransference that such persons are likely to evoke. The extent to which they felt that persons with BPD were more dangerous and unpredictable is likely because doctors often come

into contact with such persons at times when they have acted impulsively and unpredictably. At these times it is the psychiatric doctors who treat them and they are therefore more frequently exposed to such unpredictable behaviour and the consequences thereof. Persons with BPD are often recurrently admitted and psychiatric treatment is mainly used to treat their comorbid illnesses, with no one medication being effective at treating the vast range of difficulties such persons experience. This may be why the psychiatric doctor group was significantly less optimistic than the non-psychiatric doctor group about the treatability of such persons. Furthermore, it would also depend on what the psychiatric group doctors interpreted the word treatment as implying, as they may have considered it as implying medication only and not necessarily psychotherapy. Thus, their responses may have been different if alternative therapies had been considered as these form a vital component of the treatment of BPD.

It is however interesting to note that no significant difference was found in the psychiatric doctor groups' attitudes towards the potential for recovery in those with schizophrenia and BPD. Up until recently the literature had shown that persons with schizophrenia have a limited chance of recovery so this view is likely to have been realistic on the part of the psychiatric and non-psychiatric doctors. However, the fact that the psychiatric group doctors feel that persons with BPD have as little chance of recovering as someone with schizophrenia is concerning and indicates the sense of hopelessness that psychiatrists feel when it comes to treating persons with BPD.

4.6 **Attitudes towards psychiatry**

From this part of the survey it was clear that the psychiatric group doctors feel that their non-psychiatric counterparts have negative views of psychiatrists and psychiatry. Three quarters of the psychiatric doctor group felt that non-psychiatrists did not consider psychiatry to be important. This is in accordance with the results of a study by Berman et al, which noted that a large percentage of psychiatrists felt that other medical specialists didn't consider psychiatry to be an important specialty.[53] In addition, our results show that psychiatrists feel that non-psychiatric doctors think they know less than other doctors. These perceptions of the psychiatric doctor group were in stark contrast to the actual attitudes held by the non-psychiatric doctor group. In the case of the non-psychiatric group only 10% felt that psychiatrists know less and 95% felt that psychiatry was in fact an important specialty. In addition, more than 90% of the non-psychiatric group felt that referring patients for a psychiatric opinion was helpful whereas only 37% of the psychiatric group felt that their input was valued by non-psychiatric doctors.

These figures demonstrate the skewed perceptions on the part of the psychiatric doctors and their insecurities around how they are viewed by their colleagues. This is in keeping with the results obtained by Lambert et al. where more than half of the doctors who were previously interested in a career in psychiatry felt that psychiatry has a poor public image and that psychiatry was not sufficiently respected by doctors in other specialties.[60] Another study by Balon et al. showed that students also perceive psychiatry as having a poor public image and a low status among other medical disciplines.[54] However, it is clear that on the whole the non-psychiatric doctors held positive attitudes towards psychiatrists and psychiatry. This is in keeping with other studies

which found that overall non-psychiatric doctors had positive views towards psychiatrists and valued their professional input.[58-59]

However, even though their attitudes towards psychiatry were mostly positive only 12% of the non-psychiatric doctors would consider specialising in psychiatry. This figure is similar to that obtained in studies investigating the interests of students towards pursuing a career psychiatry.[54-55,73] Also, our results showed that significantly more female than male doctors would consider specialising in psychiatry (OR 2.45, 95% CI 1.21-4.94). This is consistent with the findings of Malhi et al where more female than male students reported being interested in a career in psychiatry.[73] This trend of more females being interested in psychiatry is also evident in our demographic results where the number of female psychiatrists outnumbered the males by a ratio of 6:1. Approximately 80% of the psychiatrists stated that they would again specialise in psychiatry, which indicates that the majority of the psychiatrists enjoy their job and do not regret having chosen a career in psychiatry. This is similar to the results of the study by Lai et al., where only 15% of psychiatrists stated that they would not choose the same profession.[16]

However, only 72% of the psychiatric group felt comfortable to openly disclose that they worked in psychiatry, with 15% stating that they were hesitant to tell people what they did. This indicates that a substantial percentage of psychiatric doctors are likely afraid that others might be judgmental of them and their chosen career. Also, such persons may have in the past received negative responses when they told people what they do and thus no longer feel comfortable openly disclosing this. This issue of negative attitudes towards psychiatry as a profession is

highlighted by the fact that more than one third of the psychiatric doctor group was discouraged from specialising in psychiatry by family or friends. This is in keeping with the results of a study by Lai et al. where 30% of mental health professionals reported that they had been discouraged.[16] In another study it was found that students had also been discouraged by family and friends.[54] Furthermore, Scher et al. found that a number of students would not consider psychiatry as a specialty due to the negative attitudes of family, friends and medical professionals towards psychiatry.[52]

The fact that 15% of the non-psychiatric doctors in this study felt that psychiatrists often have some form of mental illness themselves highlights the negative stereotypes associated with psychiatrists and psychiatry. This is similar to the results of other studies which found that students also considered the personalities of psychiatrists to be odd and perculiar.[52,54] With regards to this, it is interesting to note that the non-psychiatric doctors who didn't personally know someone with a mental illness were significantly more likely to state that they would discourage others from pursuing a career in psychiatry. This indicates that those doctors who had personally been exposed to someone with a mental illness were more likely to appreciate the need for and the valuable role of psychiatric doctors in our society. This is consistent with the results of a study by Tucker et al which found that physicians who had a history of mental illness in the family were more positive in their attitudes towards psychiatry.[39]

4.7 **Limitations**

Owing to time and resource constraints a limited number of questionnaires were distributed and as a result the total potential doctor sample was not accessed. Furthermore, for the same reasons, a convenience sampling method was utilised which is less superior to a randomized sampling method. Despite these limitations, a wide range of demographic variables were included, including specialty, race and age in the study sample. Furthermore, all of the doctors attending the various academic meetings were free to participate in the study. Thus the convenience sampling method only limited which academic meetings were accessed and did not select for specific individuals in the meeting, thus limiting the potential negative effects of this sampling method.

The study setting only included hospitals in Johannesburg that were affiliated with one particular academic institution thus the sample may not be truly representative of all medical doctors working in academic hospitals in South Africa. However, the respondents had graduated from a variety of institutions all over South Africa and this would have increased the diversity and representative capacity of the sample.

The pilot study was conducted on a group of doctors, the majority of whom were general practitioners working in private practice and as such they would likely encounter persons with mental illnesses more frequently than some of the non-psychiatric doctors working in an academic setting. Thus, they may have had a better understanding of the questions and disorders included in the survey than some of the non-psychiatric doctors included in the study sample. The pilot group seemed to be familiar with all of the disorders included but owing to the above

there were concerns at the outset about whether the non-psychiatric doctors included in the study would be familiar with the diagnosis of borderline personality disorder. However, this did not appear to be an issue when the questionnaires were completed and most of the doctors completed the section on borderline personality disorder, with only a handful reporting that they were not completely familiar with the diagnosis.

One of the major limitations in the study was the use of a pre-existing questionnaire, which was originally created for use on a public sample. The exact wording and questions from the original questionnaire were used in our study in an effort to ensure that our results would be comparable to those obtained in other countries using the same questionnaire. As a result, some of the questions may not have been specific enough, leaving them open to interpretation. For example, questions around dangerousness and unpredictability didn't specify whether the person was treated or unwell at the time. Also, the question on recovery did not specify whether it was referring to those on treatment or not. In addition, treatment in borderline personality disorder may have been interpreted as only implying medical management and thus the respondents may or may not have considered psychological interventions in their response to that question.

The component of the questionnaire regarding doctors' attitudes towards psychiatrists and psychiatry was newly developed for this study. These questions were based on other studies in the literature which had investigated this topic. This component of the survey was piloted on the focus group to determine whether the questions were clear and understandable however, this was

the first time that this questionnaire had been used. As a result, these questions had not been validated and may not have been comprehensive in their content.

Furthermore, self-report surveys are limited by the fact that one has to take the persons response at face value and there is no way to verify the accuracy or openness with which the participants respond to the questions. This inability to verify responses in an objective manner opens surveys up to the limitation of social acceptability bias. Thus, it is likely that the doctors' in this study may have responded in a more positive manner to the attitudinal statements, which they may have deemed to be more socially acceptable than what their true views were. In keeping with the issue of social acceptability bias, the non-psychiatric doctors' responses may have been affected by their knowing that this was a psychiatric study. Thus, their responses may have been more desirable to the questions about psychiatry and psychiatrists than if the study had been conducted by an independent group, unrelated to psychiatry.

CHAPTER 5. CONCLUSION

The findings of this study show that medical doctors do hold negative attitudes towards persons with a mental illness. The extent of these negative attitudes was dependent on the specific type of mental illness. Overall, the participants were more negative towards persons with schizophrenia and borderline personality disorder, than those with depression. On comparison of the two doctor groups, the psychiatric doctors were noted to be more positive in their attitudes than their non-psychiatric colleagues. Furthermore, those participants that personally knew someone with a mental illness were also noted to hold more positive attitudes. These findings suggest that increased exposure to persons with a mental illness has a positive effect on attitudes. Thus increasing positive exposures to persons with mental illness may be a way of improving the attitudes of doctors in the future.

The study also found that psychiatrists have a poor perception of themselves and their profession. These perceptions were not consistent with the true attitudes of their non-psychiatric colleagues, who were mostly positive in their attitudes towards psychiatrists and psychiatry. We thus recommend that psychiatrists be made aware of these insecurities and that further studies be done to determine the factors contributing to this.

Psychiatrists, other mental health care professionals and doctors need to be at the forefront of the fight against stigma. However, other studies have noted that their attitudes towards mental illness are similar to those of the public which indicates that other factors play a large role in stigma. It

would thus be beneficial if future research investigated the other possible contributors to stigma in a South African setting and how to address them.

5.1 **Recommendations**

The study confirmed that doctors' do have negative attitudes towards persons with mental illnesses, despite their knowledge of, and experience with such conditions. It can thus be deduced that such attitudes are to a large extent dependent on factors other than these. Byrne describes how attitudes towards mental illness are determined by a wide variety of factors, including cultural beliefs, media portrayal, personal exposure and experiences.[74]

As a result, a vast array of interventions have been investigated and implemented in an effort to reduce and combat stigma towards mental illness. Such interventions include education campaigns, media involvement and collaboration with government. Based on the results of our study we have considered additional ways in which the medical field and psychiatry in particular could help with targeting stigma.

Firstly, we found that having had personal exposure to someone with a mental illness was associated with more positive attitudes. Furthermore, in a study by Huxley et al. it was found that direct contact with individuals who had had "helpful treatment for episodes of mental illness" was associated with more positive attitudes.[75] Thus one can deduce that more exposure to, and particularly positive exposures to, those with mental illness may improve overall attitudes.

We recommend that on a practical level it may be beneficial to increase young doctors' and medical students' exposure to persons with mental illnesses, who are well on treatment. This could be achieved by ensuring that they spend more time working in community psychiatric clinics as opposed to large hospitals where they are predominantly exposed to persons who are acutely unwell.

Furthermore, owing to the associated stigma and discrimination, mental illness is often hidden under a veil of shame and secrecy. This secrecy includes health care professionals who often do not disclose mental illness in themselves or their relatives. Thus, if health care professionals took the lead by openly disclosing their own experiences with mental illness this would likely set an example to their patients and their communities. Such efforts to break the silence associated with having a mental illness would undoubtedly go a long way in decreasing shame and stigma. However, our study found that psychiatrists have poor perceptions of their chosen specialist field. We noted that a large percentage of psychiatrists are doubting their professional role and value in the medical fraternity. These negative perceptions of how they and their field are viewed seems to have also resulted in a significant percentage of psychiatrists being ashamed of and secretive about their profession. If this is the case then perhaps we need to start by making psychiatrists aware of these insecurities and encouraging them to be proud of and confident in themselves and their profession. The fight against stigma needs to start with psychiatry. However, it is fair to assume that if psychiatrists are not comfortable with their professions than it is unlikely that they will be comfortable to openly advocate for those that they treat, those with mental illness.

5.2 **Future Research Recommendations**

On the whole, there is limited South African data on attitudes towards mental illness, with the few studies that have been done focusing primarily on community attitudes. These studies investigating community attitudes have used various measurement instruments with marked differences in methodology. It would be interesting to compare the attitudes of health care practitioners to those of the general public in the South African setting, as has been done internationally.[28] In order to facilitate the comparison between such studies it is recommended that a standardised measurement instrument, perhaps the one used in this study, be administered in the future.

Of note is that there is a dearth of South African research on the attitudes of doctors and other health care practitioners towards mental illness. It would thus be helpful to investigate the attitudes of health care practitioners in other areas and settings (private and public) in South Africa so as to expand and compare it to the results of this study. It would also be beneficial to look at the attitudes of medical students towards mental illness and psychiatry so as to get a clearer view of the effects of experience and theoretical knowledge on attitudes towards mental illness and psychiatry.

Lastly, the factors contributing to psychiatrists' poor image of themselves are still unclear. Thus, studies investigating the possible reasons for their poor perceptions would be of great value.

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APPENDICES A-B

APPENDIX A **Questionnaire. Attitudes of doctors towards mental illness and psychiatry**

APPENDIX B **WITS Human Research Ethics Committee – Ethics Clearance Certificate**

APPENDIX A Questionnaire: Attitudes of doctors towards mental illness and Psychiatry

1. Information page

Dear colleague

Please take a moment of you time to read the following document.
My name is Kerry-Leigh Jury, I am a psychiatry registrar currently doing my MMED. The research topic I have chosen to investigate is; "***The attitudes of doctors in South Africa teaching hospitals towards mental illness and psychiatry***".

It would be greatly appreciated if you as a fellow medical doctor could kindly spare a few minutes to take part in the study by completing the attached questionnaire. The questionnaire is comprised of Likert scale questions (tick box type answers) and will take no longer than 5 minutes to complete.

The first page of the questionnaire contains a series of demographic and work related questions. The remainder of the questionnaire is aimed at determining the attitudes of medical doctors towards 3 different mental disorders and, towards psychiatrists and psychiatry.
Participation in the study is completely voluntary and participants may withdraw from the study at any time. There are no risks or benefits involved in taking part in the study. All questionnaires are to be completed anonymously and strict confidentiality will be maintained at all times.

Approval to conduct this study has been granted by the Human Research Ethics Committee of the University of the Witwatersrand, clearance number M120554. They can be contacted via Anisa Keshav on 011 7172165 or at anisa.keshav@wits.ac.za .

I would like to thank you for your time and assistance. Your input will prove invaluable and is much appreciated.

Should you have any further queries please do not hesitate to contact me on 0721764846 or at kerryleighbalson@gmail.com

Kind Regards,

Dr Kerry Jury

2. **Demographic details**

Thank you for choosing to participate in the study. Kindly complete the following questionnaire. Please tick the appropriate option. If you have already completed this survey please refrain from doing so again.

Demographic Details

Age

20-29	30-39	40-49	50-59	60+	Other

Gender

Male	Female

Race

African	Asian	Caucasian	Coloured	Indian	Other

Clinical and Educational Details

Graduate University;

Durban	CapeTown	Free State	Medunsa	Stellenbosch	Wits	Other

If Other, please specify University: _____
Current Clinical Department/Speciality (for example; Medicine, Surgery etc)

Years of clinical experience (after graduation)

< 5 Years	> 5 years	> 10 years	> 20 years

Amount of *Psychiatric* clinical exposure (after graduation)

< 1 year	> 1 year	> 5 years	> 10 years

Do you *personally know* someone who suffers from a mental illness?

Yes	No

3. **Attitude to people with mental health problems**

The following sets of questions measure attitudes to people with mental, nervous or emotional problems.

When thinking of a person/s diagnosed with Depression, what is your attitude to the following statements? (Please tick the appropriate box to indicate your choice)

Persons with Depression:	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
Are dangerous to others					
Are unpredictable					
Are hard to talk to					
Have only themselves to blame for their condition					
Would improve if given treatment					
Feel the way we all do at times					
Could pull themselves together if they wanted					
Will eventually recover fully					

Comments: _____

_____

_____

When thinking of a person/s diagnosed with Schizophrenia, what is your attitude to the following statements?

Persons with Schizophrenia:	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
Are dangerous to others					
Are unpredictable					
Are hard to talk to					
Have only themselves to blame for their condition					
Would improve if given treatment					
Feel the way we all do at times					
Could pull themselves together if they wanted					
Will eventually recover fully					

Comments:

When thinking of a person/s diagnosed with Borderline Personality Disorder, what is your attitude to the following statements?

Persons with Borderline Personality Disorder:	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
Are dangerous to others					
Are unpredictable					
Are hard to talk to					
Have only themselves to blame for their condition					
Would improve if given treatment					
Feel the way we all do at times					
Could pull themselves together if they wanted					
Will eventually recover fully					

Comments:

4. **Attitude towards psychiatry as a profession**

<u>The next set of questions is about attitudes towards psychiatry as a profession.</u>

Now I would like you to think about psychiatrists and Psychiatry as a profession: (Please tick the appropriate box to indicate your choice)

PSYCHIATRY:	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
Psychiatry is an important specialty					
I would consider specialising in psychiatry					
I would discourage friends or family from pursuing a career in psychiatry					
Referring patients for a psychiatric evaluation is helpful					
Psychiatrists generally know less than other doctors					
Persons who specialise in psychiatry often have some form of mental illness themselves					

<u>Comments:</u>

Have you completed **<u>this</u>** survey before? YES NO

5. **Perceptions of other doctors' attitudes towards Psychiatry and to psychiatrists**

<u>The next set of questions is about attitudes towards psychiatry as a profession</u>

Now I would like you to think about Psychiatry as a profession and your perceptions of others' attitudes towards Psychiatry and you as a Psychiatrist:

	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
Non-psychiatric doctors think that psychiatry is an important specialty					
If given the chance, I would again choose Psychiatry as a specialty					
Family and friends discouraged me from pursuing a career in Psychiatry					
Non-psychiatric doctors think psychiatrists know less than them					
I am often hesitant to tell others what I do					
When consulting, non-psychiatric doctors value my professional input					

<u>Comments:</u>

Have you completed **<u>this</u>** survey before? YES NO

APPENDIX B WITS Human Research Ethics Committee – Ethics Clearance Certificate

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG
Division of the Deputy Registrar (Research)

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)
R14/49 Dr Kerry-Leigh C Balson

CLEARANCE CERTIFICATE	**M120554**
PROJECT	The attidues of Doctors in South African Teaching Hospitals Towards Mental Illness and Psychiatry
INVESTIGATORS	Dr Kerry-Leigh C Balson.
DEPARTMENT	Department of Psychiatry
DATE CONSIDERED	25/05/2012
DECISION OF THE COMMITTEE*	Approved unconditionally

Unless otherwise specified this ethical clearance is valid for 5 years and may be renewed upon application.

DATE 03/07/2012 **CHAIRPERSON** .....
(Professor PE Cleaton-Jones)

*Guidelines for written 'informed consent' attached where applicable
cc: Supervisor : Dr G Del Fabbro

DECLARATION OF INVESTIGATOR(S)
To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10004, 10th Floor, Senate House, University.
I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to a completion of a yearly progress report.**

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES...