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Community Attitudes Toward People with Mental Illness:  
The Effects of Time, Location and Demographic Variables

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AMBER WAKEFIELD

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## Abstract

Deinstitutionalisation in New Zealand followed the worldwide trend of transferring mentally ill patients from psychiatric institutions into community-based care. The closure of psychiatric hospitals in favour of community care relied on positive and accepting attitudes of community members. At the time of the closure of Lake Alice psychiatric hospital in 1995, the remaining 12 chronically mentally ill patients were transferred into a community mental health facility in Wanganui. The present study investigated whether community attitudes towards mental illness change over time and if attitudes are influenced by geographical proximity to community mental health facilities. The study also investigated the influence of demographic variables, and prior contact, awareness and agreement with the community mental health facility on attitudes. Attitudes among the Wanganui community were measured by survey using the Opinions about Mental Illness scale (OMI, Cohen & Struening, 1959) and the Comfort in Interaction Scale (CI, Beckwith & Mathews, 1994). There were two samples used in the present study, one taken in 1995 comprising of one hundred and fifty seven respondents, and one taken in 1996 comprising of one hundred and forty-one respondents. Time was found to be a partially significant influence on attitudes among the respondents. Geographical proximity was not found to be significant. The results were consistent with the hypothesis that time, awareness of the community mental health facility, occupation and prior contact with people who have a mental illness produced a significant effect on attitudes toward people with mental illness among community members. Overall, attitudes as measured by the OMI and CI were positive and accepting of people with a mental illness.

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## CHAPTER ONE

### INTRODUCTION

#### *General overview*

Historically, the public have viewed mental illness negatively. Institutions were established in the early 1800s in areas well away from the community to house, medicate, and treat individuals with mental health problems. In the 1950s there was increasing evidence to suggest that traditional methods of psychiatric treatment were ineffective (Barton, 1976). It was also recognised that people with psychiatric illnesses could be afforded a better quality of life within the community with less costs to the government (Shadish, Lurigio, & Lewis, 1989). People with mental illness once viewed as too impaired to deal with the rigors of community life were then considered ready for community integration (Fraser, 1999; Sullivan, 1992). The closure of institutions and the transfer of patients with mental illness to community care represented the start of a new direction in the rehabilitation and treatment of people with mental illness (Holden, Lacey, & Monach, 2001).

The process of deinstitutionalisation recognised that recovery from mental illness needed to take into account a variety of contributing factors. These included responsive mental health services, sufficient opportunities for support from family, employment, leisure activities, and other aspects of lifestyle enjoyed by people without mental illness (Ministry of Health, 2003). Community-based care required continuing care for discharged patients, the restructuring of mental health services to community settings, and community acceptance of people who have a mental illness (Schulberg, Becker, & McGrath, 1976). However, few mental health

professionals had considered the readiness of the community to respond to and accept a greater responsibility for people with mental illness (Haines & Abbott, 1986). Furthermore, few had considered the public's acceptance of people with mental illness into their community and its impact on community care (Ingamells, Goodwin, & John, 1996; Lemkau & Crocetti, 1962; Madianos, Madianou, Vlachonikolis, & Stefanis, 1987; Roman & Floyd, 1981). Deinstitutionalisation was based on the assumption that community presence would be enough to foster integration from a psychiatric hospital to the community (Sullivan, 1992). However, deinstitutionalisation was reported to have a profound negative impact on the quality of community integration and treatment of those people with psychiatric illnesses (Bennie, 1993).

The structure of community mental health services continued to change and develop over the subsequent decades. Community mental health services are now under pressure to provide services for which they are under-resourced to provide. There is an ongoing need for acute inpatient beds, experienced staff, and adequate resources to provide successful treatment and support in the community (Bennie, 1993). Some people with mental illness while under community care have become violent towards others which has resulted in media attention and negative attitudes among the general public.

Community hostility and negative attitudes toward people with mental illness often thwart the establishment of community-based mental health facilities. The hostility and negative attitudes partly motivated by a general regard of people with mental illness as something to fear, distrust, and dislike (Cumming & Cumming, 1957; Nunnally, 1961). People with mental illness are also considered dangerous and unpredictable (Link et al., 1986; Monahan, 1991; Nunnally, 1961; Steadman

1981; Woff & Stuber, 2002). Studies of community attitudes suggest that change in attitudes towards mental illness over time has been minimal (Ojanen, 1992).

However, community attitudes towards mental illness are not universally negative. Positive attitudes toward people with mental illness has occurred through a combination of education and contact (e.g., Arens, 1993; Halpert, 1965; Ingamells, Goodwin, & John, 1996; Sellick & Goodear, 1985). In particular, positive attitudes have been documented among the general community. Jorm et al. (1999) conducted a nationwide household survey of the Australian public ( $N = 2031$ ) in 1995, as well as a postal survey of general practitioners ( $N = 872$ ), clinical psychologists ( $N = 454$ ), and psychiatrists ( $N = 1128$ ) in 1996. Jorm et al. (1999) found that the public were more positive toward the prognosis following treatment than the combined practitioners group. In addition, other factors such as education about mental illness (Singh et al., 1988), contact with persons with mental illness (Callaghan, Siu Shan, Suk Yu, Wai Chung, & Kwan, 1997), or a personality attribute that relates to career choice may also effect the attitudes of professionals and the general community.

Other holistic concepts may also impact on attitudes toward people with mental illness. Of particular reference to New Zealand is the fact that Maori have a different view of health. The most widely accepted conceptualisation of health among Maori is Mason Durie's *whare tapa wha* model (Durie, 1998). The *whare tapa wha* model consists of four cornerstones of health likened to the four walls of a house bringing strength and symmetry (Durie, 1998). The cornerstones; *Taha wairua* (spiritual side), *taha hinengaro* (thoughts and feelings), *taha tinana* (physical side), and *taha whanau* (family) are interacting and considered to exist with each other. Moreover, poor health is regarded as manifesting from a breakdown in the

relationship between the individual and their wider environment (Durie, 1998). Existing, research on community attitudes toward mental illness among different groups have not considered a holistic viewpoint.

The label of “mental illness” can also have extensive consequences in the face of community care. The way that disorders are defined is reported to affect community perceptions of illness (Disley, 1997). Stigmatisation from the label of mental illness can be detrimental to the individuals concerned and their families, friends, and the mental health professionals supporting them (Read & Baker, 1996). Literature indicates that the label of mental illness can be a burden even after treatment has been successful. In particular, individuals often find it difficult to become employed (Corrigan, River, & Lundin et al., 2000), find adequate housing, or be treated equally as stipulated in the Human rights Act 1993, (Details on relevant government legislation for Mental health are included in Appendix A.).

Employment is reported to be a major contributor to mental wellbeing (Ministry of Health, 1999). Therefore, improving access to employment opportunities for people with mental illness may assist in reducing the prevalence and the impact of mental disorders (Ministry of Health, 1999).

The shift away from institutionalised care in New Zealand was supported by the Mental Health (Community Assessment and Treatment) Act 1992 (Ministry of Health, 2003, Community-based care section, para. 2). The Mental Health Act (1992) was legislated to protect individuals with mental illness from both themselves and others whom might take advantage of their current state of mind. It also allowed patients whom were not subjected to compulsory treatment the right to refuse treatment via therapy or medication or both (Ministry of Health, 2000). *Mental*

*disorder* is defined by the Mental Health Act (Compulsory Assessment and Treatment) 1992, under interpretations in section two as:

In relation to any person, means an abnormal state of mind (whether of a continuous or an intermittent nature), characterised by delusions, or by disorders of mood or perception or volition or cognition, of such a degree that it: poses a serious danger to the health or safety of that person or others; or seriously diminishes the capacity of that person to take care of himself or herself. (p. 3).

This definition although not characteristic of all people with a mental illness plays an important role in their life as a consumer of mental health services. It is important to note that there are clear guidelines in place for what constitutes a mental disorder under the definition provided for the legislation. Deinstitutionalisation spawned a number of legislations to protect the privacy and rights of individuals with mental illness that were implemented alongside community care (Cumming, 2003).

### *Present Study Direction*

Community attitudes toward people with mental illness play an important role in determining how effective mental health rehabilitation will be within a community environment. The present study aims to investigate the impact of deinstitutionalisation on community attitudes towards mental illness in a New Zealand township before and after the closure of a psychiatric hospital. In particular, the present study aims to investigate the effects of time, location and demographic variables, including awareness and agreement of a community facility to rehabilitate

remaining patients and the effects of prior contact on community attitudes towards mental illness.

This thesis starts by providing background information and context of deinstitutionalisation to New Zealand. It also outlines legislative documents relevant to the closure of psychiatric hospitals in New Zealand with a focus on Lake Alice. The subsequent introductory chapters provide a synopsis of prior empirical research both within and outside of New Zealand, rationale, patterns, and trends of research on community attitudes toward mental illness. The methodological issues and limitations of prior research and the present study's aims and method are also outlined. Results and discussion of the findings from the present study survey's of community attitudes towards mental illness are then discussed. Finally, limitations of the design and suggestions for further areas of research are presented.

## CHAPTER TWO

### A NEW ZEALAND CONTEXT

#### *Overview*

This chapter aims to provide background information on deinstitutionalisation in New Zealand. It highlights relevant legislative material and information on the closure of *Lake Alice Psychiatric Hospital* and its *Intensive Learning Centre (ILC)*. The present study was designed to survey attitudes among the Wanganui community, before and after the transfer of former Lake Alice and ILC unit patients to a purposely-built community mental health facility.

#### *Oakley investigation*

In 1971, the government commissioned an inquiry into the treatment of mental illness, generating one of the founding documents of deinstitutionalisation in New Zealand. The inquiry was based on the treatment and services at Oakley Psychiatric Hospital in Auckland. At the outcome of the inquiry a number of recommendations were made. One main recommendation was that communities be involved in the care and treatment of the mentally ill; in that outpatient services and day hospital's would be established, community consultation and education services would be carried out alongside other changes being made to the way that psychiatric hospitals were run internally (Report of the Commission of Inquiry, 1971). The introduction of community programs to educate and manage those with mental illness in their community was not the first of its occurrence in New Zealand (i.e.,

Lake Alice ran a community service), but it did set precedence for the wider public and other existing Institutions at the time.

### *Deinstitutionalisation*

Deinstitutionalisation refers to the transfer of patients from institutional care to that of a community-based care program. The policy of deinstitutionalisation has been implemented in New Zealand's mental health system since the 1950s (Haines & Abbott, 1986). Although, it was the Oakley investigation in 1971, that instigated the closure of the last of the psychiatric hospitals that governed New Zealand's Mental health system, namely Oakley and Lake Alice psychiatric hospitals. The Oakley investigation played an instrumental role in deinstitutionalisation. Institutional-based care was becoming particularly expensive (Haines & Abbott, 1986), and psychiatric hospital administrations were under scrutiny for psychiatric services and staffing levels (Report of the Commission of Inquiry, 1971). Initially, community based care for people with mental illness was poorly organised. There was insufficient community facilities and staff to provide adequate care and adjustment to previously institutionalised patients (Hoult, 1986). Funding for the community services was minimal, and as a result was publicly deemed as a Government cost-cutting exercise (Cumming, 2003).<sup>1</sup> Overseas similar attitudes resulted from the introduction of community facilities (Wolff & Stuber, 2002).

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<sup>1</sup> Government funding for mental health services was 9% of the total health expenditure, reaching \$426 million in the year ending 30 June 1997 of the health budget (Ministry of Health, 1997). In 2000, an additional \$142 million per annum was made available, for the purchase of new and additional mental health services over a five-year period (\$17.8 million for 2000/2001, \$26.6 million for

For New Zealand, the process of deinstitutionalisation was consistent with how mental health services were changing in North America and Europe. It was noted in the Oakley inquiry (Report of the Commission of Inquiry, 1971) that, “public attitudes are unlikely to change while psychiatric hospitals continue to function primarily as places of asylum” (p. 20). It was assumed that deinstitutionalisation would allow patients to lead a more normal life by integrating them more into the community or into community care.

An overarching goal of deinstitutionalisation was to reduce the stigma attached to the diagnostic label of mental illness, being a patient of a psychiatric hospital or receiving psychiatric care. In addition, deinstitutionalisation aimed to provide a more flexible service to the many presentations of mental illness (Mental Health Commission, 1997). It was agreed that those members of the community in need of psychiatric help should be given reasonable access to such help, and the opportunity to receive treatment within their community rather than in isolation from the community (Report of the Commission of Inquiry, 1971). It seems logical to community members when asked, to treat non-dangerous patients in a community care setting rather than in a hospital or institution (Wilmoth, Silver, Severy, & Lawrence, 1987). Although in principle there still tends to be a general negative attitude of the public toward people with mental illness, and an “exaggerated community distrust and gear of mentally ill people roaming our streets because of major service failures and media hype” (Mental Health Commission, 1997, p. 33).

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2001/2002, \$26.6 million for 2002/2003, and \$17.8 million for 2003/2004, GST exclusive), after the release of the Mason, Johnston and Crowe Report to the Ministry of Health in 1996.

Community placements that are said to be unsuccessful have been associated with deficits in funding and management, combined with patients lacking in social skills, and the absence of basic living skills (Anthony, Cohen, & Vitalo, 1978; Presly, Grubb, & Semple, 1982). It is important to note that the decision of moving patients from an institution to community based care programs, was not intended to ensure that the quality of life would be better than that of the institution, but to provide more natural rehabilitative surroundings (Ministry of Health, 1995).

Community mental health facilities are based on a flexible system. They provide stability, regulation, as well as a higher probability of community integration, a combination that the psychiatric institutions lacked. Community care provided smaller homes with limited numbers of residents creating a family environment. It ensured more direct care, free from the overcrowding often observed in the psychiatric hospital settings. The process of deinstitutionalisation did offer an improvement in living conditions and treatment but also required that the residents were functioning at a higher level in many aspects of their lifestyle (see Huzziff, 1995). The organization of institutions, by providing food, shelter, and daily activities, left little opportunity to restore patient autonomy, individual responsibility, and the ability to manage independently. Attributes which are the primary aim of therapy and rehabilitation of persons with mental illness (Dowland, 1986). Over a period of time the loss of social and vocational skills impair the ability of a person to adapt and function adequately outside of the hospital setting (Kiesler, 1982).

Research suggests that community based rehabilitation is beneficial for both the person with a mental illness and their families. Efficacy studies on the treatment

of mental health patients in community care have reported positive results. Kiesler (1982) conducted a review of 10 studies, which had randomly assigned psychiatric patients to either inpatient care or a number of outpatient care services. The study concluded that, outpatient care resulted in more favourable outcomes than did inpatient care with regard to the likelihood of employment, independent living arrangements, staying in school, and psychiatric evaluations. Community-based care was also reported to be more cost-effective.

Overall, despite the risk of relapse in some patients living in community mental health facilities people with mental illness have reported to be significantly more satisfied with their community environment than hospital services previously endured (Huzziff, 1995). Given these empirical findings along with others, it appears that there is a strong case for the success of community based treatment services for many people with less severe forms of chronic mental illness. Moreover, provided that there is regulation and monitoring of behaviour (see Appendix B for information relating to community placements in New Zealand), community placements seem optimal over institutionalisation.

#### *Lake Alice Psychiatric Hospital 1950-1995*

Lake Alice Psychiatric Hospital was located in Marton, in the lower part of the North Island of New Zealand. It opened in August of 1950 to house and treat the chronically mentally ill from a wide catchment area that included, Hawkes Bay, Manawatu, Taranaki, and Wanganui. Patients of Lake Alice Psychiatric Hospital were expected to be chronic, long-term residents, who were middle-aged and predominately without visitors (Baird, 1991). A chronic psychiatric patient was

defined as being unresponsive to medication and lacking in general social and living skills. An acute psychiatric patient was used to describe those who responded to psychiatric medication quickly and were able to return to their families, and jobs in the community (Shadish, Lurigo, & Lewis, 1989).

During the development and use of Lake Alice Psychiatric Hospital a number of deinstitutional processes were in place. In 1968 a home visiting service similar to a community outpatient setting, was established and carried out. The home visiting service was established for the purpose of following up patients in the community after being discharged from Lake Alice, as well as to keep those patients who would normally be admitted, out of the hospital (Baird, 1991). In 1980, a record number of 1594 visits were made to the mentally ill residents in the community. However for unknown reasons, the outpatient service was dissolved, leaving only the inpatient psychiatric hospital service available (Baird, 1991).

At the end of 1950, the first year of its opening, Lake Alice Psychiatric Hospital had a total of 51 patients. The patient count continued to increase, peaking in 1980 with a record number of 433 people admitted and hospitalised. However, after 1980 the number of people admitted and hospitalised started to show a steady decline. In 1990, 169 people were admitted and hospitalised, with a further 149 discharged. The decision to close Lake Alice Psychiatric Hospital was made in 1990, after a series of reviews by the Manawatu-Wanganui Area Health Board, and in response to the commissioned inquiry into mental health services. It was estimated to take five to seven years to phase out the patients into the community and existing community services (Baird, 1991). In 1992 an official closure plan was

implemented and over the following year, the majority of patients were discharged into the appropriate levels of community care (Baird, 1991).

The last twelve patients to be discharged from Lake Alice Psychiatric Hospital had chronic mental illnesses and were deemed long-stay patients. Prior to their discharge, the 12 patients underwent an intensive behavioural-based program at Lake Alice, which commenced in 1993 for twelve months. The program named the Intensive Learning Centre (ILC) was established in order to make the patients more suitable for placement in the community. Lake Alice Psychiatric Hospital was officially closed in September 1995, following the transfer of the 12 patients from the ILC Program at Lake Alice to the community facility based in Castle Cliff, Wanganui.

#### *Intensive Learning centre (ILC) program*

The intensive learning centre established a behavioural-based program that was used in part to help those with chronic mental illness at Lake Alice, be able to adapt and adjust to a community environment (Hall, 1995). It was rationalised that, learning skills that would enable those with chronic mental illness to Integrate or adapt to a community environment, would lessen the chance of discrimination due to their abnormal behaviour (Hall, 1995). The behavioural training also meant that those with chronic mental illness could lead more independent lives, by having to care for themselves, and become to a certain extent self-sufficient (Hall, 1995).

The chronic mentally ill patients that were included in the intensive learning centre program, were those who were unresponsive to medication, uncooperative, and assaultive, often acting unacceptably and lacked in most social and self-care

skills (Hall, 1995). The typical patient, who was deemed as chronically mentally ill, was for example a, "schizophrenic male, in there 30's with either medical or drug abuse problems" (Bigelow, Cutler, Moore, McComb, & Leung, 1988, p. 184). It is quite possible that these features of clinical presentation, made the transition to a community care facility from a psychiatric hospital unlikely to be successful, and more likely to be harmful to the patient and community opinions about mental illness.

The ILC behavioural program based its treatment on the learning of skills aimed at independent living. Under the program patients were expected to cook meals for themselves, wash, and dress themselves, and were taught through behavioural intervention. Behaviour intervention also targeted the inappropriate behaviours carried out such as, yelling, head banging, screaming, and violent behaviours toward others.

Hall, Deane, and Beaumont (1996) investigated the ILC program (which provides background information to chapters six, seven, and nine). Findings from the study showed a short-term improvement in the general functioning of behaviour over a 5-month period. At the 10-month follow-up the initial gains made had lessened, though it was found that improvement did occur in some behavioural areas under the program. In particular, untrustworthy behaviour, self-abusive behaviour (e.g., head banging), and withdrawal. The study aimed to increase the level of functioning of those with chronic mental illness to a level that more closely resembled the behaviour experienced by those already existing in outpatient settings in the community (Hall et al., 1996). Prior research suggests that the

behaviour of people who have a mental illness influences community attitudes toward mental illness (i.e., Rabkin et al., 1979).

On the closure of Lake Alice Psychiatric Hospital, the transfer of the remaining 12 long-stay patients from the ILC program to a community facility was met with considerable hostility and opposition from residents in the neighbouring area to the facility (see Appendix G for community reactions via newspaper clippings in 1995 prior to the establishment of the facility).

### *Conclusions*

Deinstitutionalisation in New Zealand has been largely successful, and well documented. The transfer of psychiatric patients into community care has been a bold move, and one that has been faced over time with considerable hostility and fear from community oppositional groups. Lake Alice Psychiatric Hospital located in Marton, was the last psychiatric institution to close in New Zealand. The transfer of its last remaining patients to a community facility was met with considerable hostility from the Wanganui community. The primary aim of the present study is to investigate the attitudes of the wider Wanganui community toward people with mental illness.



## CHAPTER THREE

### SYNOPSIS OF RESEARCH ON COMMUNITY ATTITUDES TOWARD MENTAL ILLNESS

#### *Overview*

The purpose of this chapter is to provide background material on the large body of research that has been conducted on community attitudes toward mental illness. The chapter starts by describing the patterns and trends in the broad research area and is followed by a rationale for research on community attitudes toward mental illness.

#### *Rationale for research*

Public behaviour and attitudes can have both an indirect and direct impact on the rehabilitation process for the mentally ill living in community settings. The most beneficial environment for successful rehabilitation is a supportive community (Ingamells, Goodwin, & John, 1996). Communities that are not supportive and provide a hostile environment have been reported to lead to increased relapses in the state of mental illness (Dear & Taylor, 1982). Relapse has previously been associated with poorer prognosis of mental illness with less chance of employment and general increase of stigma attached to mental health problems (Phillips, 1964).

Research on community attitudes plays a key role in the planning of future outpatient services, and in the planning of educational programs about persons with mental illness (Mino, Koderá & Bebbington, 1990; Salokangas & Wing, 1986). Community members often recognise that a person is mentally ill prior to this being acknowledged by a health professional. It thus becomes important to have an understanding of the attitudes and perceptions that community members have of mental illness to help define, provide, and establish, adequate mental health services (Bhugra, 1989). An implication of this is a continued need to study community attitudes toward mental illness.

#### *Patterns and trends of research*

A large body of research in the area of community attitudes toward mental illness has been carried out. Although, the most commonly cited articles in the research are those published around the 1970s and 1980s. More specifically literature searches of the PsycINFO electronic database were conducted using the keywords *mental illness* in combination with *community attitudes*. A total of 104 published articles were located. Twenty-four articles were found between 1970 to 1980, 40 between 1981 to 1990, and 36 between 1991 to 2003. Only five articles of which were published in the last three years. Review of the articles from the literature search shows, that the majority of studies investigating community attitudes toward mental illness have been conducted outside of New Zealand, and most extensively in Europe and North America. The more significant studies in research on community attitudes have been

those studies that have involved community samples (e.g., Arens, 1993; Brockington et al., 1993). Such studies provide potential information about how the public will act in a situation that involves interaction with people who have a mental illness (Wolff, Pathare, Craig, & Leff, 1996a).

Attitude surveys have continued to be instrumental in the research. This is based on the premise that attitudes are precursors of behaviour and that measures of attitudes toward those with mental illness, would reflect intention to accept responsibility for people with mental illness in their community (see Antonak & Livneh, 1989; Walkey et al., 1981). Attitude surveys have been used to investigate attitudes over time, variables that influence attitudes, and for examining attitudes as a predictor of behaviour toward people with mental illness.

Initially, research on attitudes focussed on the attitudes of medical professionals treating those with mental illness within inpatient facilities (e.g., Cohen & Struening, 1962; Ojanen, 1992; Rabkin, 1972). Aims of these studies, focussed on the influence of health professionals attitudes toward their patients with mental illness. As well as the level of care these patients received in order to deliver better treatment approaches. The Cohen and Struening (1962) study also provided data to suggest that mentally ill patients were more sensitive to the attitudes of the health professionals that treated them. However, the move to community-based facilities from institutions has been mirrored by a change in research direction to investigate the attitudes of the wider community. Initial research on community attitudes involved university student samples (e.g., Green et al., 1987; Walkey et al., 1981), which have continued to be used in

recent research (e.g., Coverdale, 2002; Mino, Yasuda, Tsuda, & Shimodera, 2001; Read & Law, 1999). However, university samples are limited in the way that findings can be generalised to community populations. As a result there has been an increase in research involving community samples, focussing on community preparedness, knowledge and awareness of mental illness, and other variables that influence attitudes toward people with mental illness.

Research carried out between 1960 and the mid 1970s, predominately investigated community preparedness and ability of the community to cope with the responsibility for those with mental illness in their community (e.g., Nunnally, 1961). A large number of studies focussed on predictors of attitudes toward people with mental illness. Such as, demographic variables, age, education, and socio-economic status of respondents. Research into the variables that influence community attitudes toward mental illness, has found inconsistencies in the findings, and continues to be investigated.

Research into community awareness and knowledge of mental illness has investigated variables that influence awareness and knowledge of mental illness. The increased opposition and negative attitudes toward mental health facilities has also been investigated, that arises from community members when mental health facilities are proposed for their neighbourhood (e.g., Wenocur & Belcher, 1990). Research into the hostile attitudes people have toward mental illness, has produced a number of articles over the last couple of years. Limited nationwide studies have been conducted on awareness of mental illness (e.g., Huxley, 1993; MORI, 1979). Other studies have

typically involved community facilities rather than random samples from the general public (e.g., Brockington et al., 1993).

Despite the large body of research that has developed, research into community attitudes toward mental illness has typically progressed without a sound guiding theoretical framework. The majority of studies have been replicated on the grounds of predictor variables without regard to the development of a theory. Overall, research findings can be placed into a number of sub-categories. That is, research on community knowledge and awareness, hostility toward proposed mental health facilities, media depictions or mental illness, and variables that influence attitudes toward mental illness (the sub-categories are described in more detail in chapter four).



## CHAPTER FOUR

### EMPIRICAL RESEARCH ON COMMUNITY ATTITUDES TOWARD MENTAL ILLNESS

#### *Overview*

Chapter three explored the patterns and trends, including the rationale of research on community attitudes toward mental illness to date. The purpose of this chapter is to review the empirical research that has been conducted on community attitudes toward mental illness. This chapter provides support for the aims, objectives, hypotheses and subsequent covariates used in the analysis of the present study. The chapter has been divided into three sections. The first section covers community knowledge, awareness and hostility toward community mental health facilities, and media depictions of mental illness. The second section covers the two main variables of interest in the present study, the effects of time and geographical proximity on attitudes toward mental illness. The third section covers variables that influence community attitudes toward mental illness and includes a subsection specific to empirical research conducted in New Zealand.

*General findings in the literature on attitudes toward mental illness*

*Community knowledge of mental illness.* People today know more about mental illness than they did thirty to forty years ago (Rabkin, 1980). Although literature indicates that this knowledge is yet to reach an optimal level that is of benefit to people with mental illness (Rabkin, 1980). Knowledge and education about mental illness is reported to have a positive influence on attitudes among community members in several studies (i.e., Brockington et al., 1993; Read & Law, 1999; Roman & Floyd, 1981; Trute & Loewen, 1978).

In the nationwide survey by Jorm et al. (1999) the public were found to be more positive toward likely treatment outcome and long-term prognosis of persons with schizophrenia and depression than health professionals. Specifically, the study found that the public and clinical psychologists were more likely to predict a positive outcome for the person with depression than general practitioners and psychiatrists. The public were also more likely to predict a positive outcome for the person with schizophrenia than psychiatrists, general practitioners and to some extent psychologists. However, it is important to note that the study employed two different sampling methodologies; mail and door-to-door interviews. The later of which may have been affected by social desirability.

In addition, other nationwide survey's have found that the general public are often not well informed about the etiology of mental illness (e.g., Huxley, 1993; Market and Opinion Research International, 1979). A large nationwide survey conducted in England investigated public attitudes toward mental illness (Market and Opinion Research International, 1979). Findings from the study showed that 56% of people

surveyed considered mental illness to be something that few or no people were able to recover from, 89% thought people with mental illness should be embarrassed by mental illness, while only 29% of respondents were personally embarrassed by their own mental illness. Huxley replicated parts of the study in 1993, with a sample of 154 residents in England. The survey was carried out over three local community areas, one area of which contained an existing mental health day unit. Findings of the study paralleled the 1979 survey despite the fourteen-year gap between the two surveys demonstrating attitudes to be stable over time.

In sum, research reflects the idea that community knowledge of mental illness is not yet beneficial to people who have a mental illness. There are still gaps in the knowledge about mental illness, in particular surrounding what it means to have a mental illness, its course and prognosis, treatment and rehabilitation. It is possible that increased knowledge about mental illness is likely to increase the readiness of the communities to accept mental illness.

*Media depictions of people with mental illness.* Literature reports that most knowledge of mental illness comes from mass media depictions (Borinstein, 1992; Granello & Pauley, 2000; Philo, 1994). Mass media depictions are predominately found to be negative toward people with mental illness and provide a singular concept of mental illness (i.e., Fracchia, Canale, Cambria, & Ruest et al., 1975; Nunnally, 1961; Thornton & Wahl, 1996). The common depiction of a person with mental illness as being violent are in fact depictions of isolated cases that gain undue public attention via the media (Brennan, 1964). In media depictions, mental illness is a term often used to

frame all diagnoses of mental illness failing to reflect to the public the difference between acute and chronic cases of mental illness (Brennan, 1964).

In a media survey covering depictions of mental illness, 436 articles out of 600 articles reviewed depicted people with mental illness negatively (Coverdale, Nairn, & Classen, 2002). The most common negative depiction of those with mental illness was as a *danger to others* (368 out of 436 mental health related clippings). A 1986 Canadian study (Matas, el-Guebaly, Harper, Green, & Peterkin, 1986) that reviewed 90 mass media publications over a 20 year period between 1961 to 1981, found that front page articles of newspaper tended to cover items portraying the mentally ill as more dangerous than the general population.

However, despite media impressions about people with mental illness as being dangerous and violent persons with mental illness are unlikely to be of danger to others. Statistics show that an estimated 4% of those with mental illness in New Zealand are likely to harm others (Monahan, 1992). Those people with mental illness—part of the 4% statistic who do harm others, are more likely to harm a family member or flatmate, rather than a stranger, compared to those unaffected by mental illness (Simpson, 2003).

In sum, recent research that has studied the role of media in predicting attitudes toward mental illness indicates that newspaper articles have influenced and contributed to a negative perception of mental illness among the general public. It is possible that negative media attention about people with mental illness has contributed to the general fear and negative attitude the public have toward people with mental illness, and general hostility toward proposed facilities for the mentally ill in their neighbourhood.

*Community awareness of treatment facilities for the mentally ill.* Research has consistently found that the majority of people living in neighbourhoods with established mental health facilities are largely unaware of their existence (Dear & Taylor, 1982; Heinemann, Perlmutter, & Yudin, 1974; Huxley, 1993; Morrison & Libow, 1977). In a study that surveyed 180 individuals living across 12 residential neighbourhoods, of the 6 neighbourhoods that were in the vicinity of a mental health facility, 77% of respondents were unaware of its existence (Rabkin et al., 1984).

Edgerton and Bentz (1969) studied attitudes and opinions of rural people toward mental illness and program services in two rural North American counties in America. The study found that 94% of respondents were unaware of mental health services in the community. However, that those who were aware were supportive of such facilities. The study concluded that not all communities are opposed to the presence of mental health facilities despite being unaware of their general existence in their community. It is important to note however, there have been no further studies conducted on the differences between rural and urban attitudes toward mental health facilities in order to compare findings. In contrast, surveys on community attitudes toward mental illness consistently report that the majority of respondents would oppose the building of mental health facilities in their neighbourhood (Rabkin et al., 1984). People who oppose community mental health facilities have also been found to be opposed to other social service facilities in their area (Rabkin et al., 1979).

In summary, the majority of people are unaware of existing mental health facilities in their area compared to the awareness of proposed mental health facilities for their area. It is also possible that a difference among attitudes exists between urban and rural

areas toward people with mental illness, and further possibilities that differences may be influenced by the number of treatment facilities in an area.

*Community hostility toward mental health facilities in their community.* Following the establishment of community mental health services and facilities, there has been an increase in active community opposition and negative attitudes toward the proposed mental health facilities in the community (Bord, 1971; Cowan, 2002; Phillips, 1964; Sigelman, Spanhel, & Lorenzen, 1979; Solomon, 1983; Wenocur & Belcher, 1990; Wolff, 2002). Community members will engage in protests, verbal attacks, petitions and other activities in order to stop the establishment of a mental health facility in their area (Solomon, 1983).

Several studies have reported that over 50% of proposed community facilities are never bought into fruition, and that this is in part due to political reasons (Rutman, 1976; Schonfeld & Pepper, 1990), and in part due to the hostility toward the facility from community members. Research suggests that the hostile and negative attitudes toward the proposed mental health facilities stems from a fear for the safety of respondents lives and their children, of crime rates increasing in the area, and concern that the facility will cause a decrease in property values (Arens, 1993; Aviram & Segal, 1973). Despite there is no empirical support for such concerns and fears.

Some studies investigating negative and hostile attitudes toward community mental health facilities report a Not In My Backyard (NIMBY) attitude (Lake, 1993; Popper, 1987). Research comments that several factors influence community attitudes toward facilities. For example, type, severity, visibility and responsibility of the disability. Appearance and even name of the facility can have an impact on community attitudes

(Dear, 1992). People who host the NIMBY attitude typically believe in deinstitutionalisation, but would rather facilities be established away from where they live (Fraser, 1999).

In sum, community hostility toward proposed mental health facilities in their area has continued to be a problem, in the establishment of facilities to house and rehabilitate people with mental illness in the community. There is evidence to suggest however that the opposition to the facilities does subside with time, and that changes in the appearance of the facility, even the facility name can impact community attitudes.

*Research on the impact of time and geographical proximity on attitudes toward mental illness.*

*Time and attitudes toward mental illness.* Research has not directly investigated the effect of time on attitudes toward people with mental illness. However, the effect of time on attitudes continues to be reported indirectly. Attitudes toward people with mental illness appear to be stable and consistent over the last three decades. Research has consistently reported the general public have negative attitudes toward people with mental illness, and that this has held over time (e.g., Green et al., 1987; Rabkin et al., 1984). In contrast some articles have reported that attitudes are becoming more positive or accepting over time (e.g., Gething, 1986; Halpert, 1969; Dohrenwend & Chin-Shong, 1967). Changes in attitudes over time is suggested by the finding that people are more willing to identify themselves as having a mental illness compared to a decade earlier (Huxley, 1993). It is possible that further research would reach similar conclusions. However, investigating attitudes over time has not featured as a significant part of research design. Factors such as contact with people who have a mental illness

are also reported in the literature to influence the effect of attitudes over time (i.e., Arens, 1993).

*Geographical proximity on attitudes toward mental illness.* Research that has examined the relationship between geographical proximity to the mental health facility and attitude is reported to be a valuable determinant of attitudes toward people with mental illness (Rabkin et al., 1984). However, research in this area has produced inconsistent findings. Several studies report that closer proximity to a community mental health facility is associated with an increase in negative attitudes toward those with mental illness, and fear of safety (Huxley, 1993; Rothbart, 1973; Smith, 1981; Wolf & Stuber, 2002). In contrast, other studies have found no evidence to suggest that such a relationship exists (e.g., Rabkin et al., 1976).

Brockington, Hall, Levings, and Murphy (1993), conducted a study on community attitudes toward mental illness, involving 2000 subjects in two community areas of England; Malvern which held a community based service and Bromsgrove which had a traditional hospital setting. The study found that respondents living in Bromsgrove were more tolerant of people with mental illness than those in Malvern. Contrary to hypothesis, the study found that more favourable views toward people with mental illness were toward those living in an inpatient setting rather than a community setting where contact with those with mental illness would be increased due to integration. Similar findings were found in the Market and Opinion Research International (1979) survey. The study concluded that the type of facility that people had in their area and the level of security that it might involve might play an important role in attitudes toward mental illness.

In sum, research investigating the impact of geographical proximity to mental health facilities is limited by contrasting findings. It is possible that geographical proximity and attitudes could be affected by other unmeasured variables such as perceived threat from the type of facility and level of security involved as indicated in the findings of Brockington et al (1993). Rabkin et al (1984) noted that findings of geographical proximity might also be influenced by other variables such as social class, age and occupational interests of residents that draw a person to live in a particular area.

#### *Variables that influence community attitudes toward mental illness*

A large body of research has investigated variables influencing attitudes toward mental illness. Variables that influence attitudes toward mental illness included in studies are, age, education, and more recently previous contact made with people with mental illness. Other predictors include occupational status, profession and ethnicity, but have been less researched. Limited research has been provided on both the effects of gender and the effects of income on attitudes toward mental illness, therefore a limited review of the variables is reported in the present chapter.

*Age, and education.* Research on age, education and other demographic variables have been frequently examined in community attitudes towards mental illness. Earlier research in the 1970s and 1980s reported that there was no significant relationship between age and education in predicting attitudes toward mental illness (e.g., Green et al., 1987; Nunnally, 1961; Walkey et al., 1981). However the majority of

studies conducted since the 1990s have consistently demonstrated that there is a relationship.

The majority of studies have found that positive attitudes toward people who with mental illness diminishes as people age (e.g., Brockington et al., 1993; Madianos et al., 1987; Ojanen, 1992). A study that investigated the relationship between age and attitude, found that those participants aged 17 to 20 years held more liberal attitudes than those aged 50 to 84 years (Clark & Binks, 1966). However, there have been studies that have found older adults have more positive attitudes (e.g., Sellick & Goodear, 1985).

Other studies, have suggested that education not age is more influential on attitudes toward mental illness (Eker & Arkat, 1991; Matas, el-Guebaly, Peterkin, Green, & Harper, 1985). Wolff, Pathare, Craig and Leff (1996b) found that negative attitudes in older people were influenced by lack of knowledge about people with mental illness. Brockington et al., (1993), found that people who had higher educational attainment were less fearful of people with mental illness. An early study by Rabkin et al., (1974) found that people with higher levels of education were able to distinguish between normal behaviour and behaviour that is associated with mental illness. This finding is supported in other studies (Blizard, 1968) that have used vignettes of people with mental illness (e.g., Eker & Arkar, 1991).

In sum, research consistently reports age and education to have a significant influence on attitudes toward people with mental illness. People who are younger and people who have higher levels of educational attainment are consistently reported to hold more positive attitudes toward people with mental illness. Older aged people are

more likely to have negative attitudes toward people with mental illness. It is possible that other factors such as, contact and the type of education or training that the person receives about mental illness influence the effects of age and education on attitudes toward people with mental illness.

*Gender.* A number of studies have investigated the effects of gender on attitudes toward mental illness, although contrasting findings have been found. A number of studies indicate that there is no gender differences (e.g., Farina, 1981; Nunnally, 1961; Read & Harre, 2001; Siegel, 1975; Walker & Read, 2002; Wolf et al., 1996). Other studies have found that females tend to have more positive attitudes toward people with mental illness (e.g., Leong, 1999; Taylor & Dear, 1981). To sum up, there is more evidence to suggest that gender does not influence attitudes toward people with mental illness.

*Ethnicity.* Research on ethnicity and attitudes toward mental illness although not extensive, does suggest that ethnicity is not significant in influencing attitudes toward people with mental illness (i.e., Madianos et al., 1987; Westbrook, Legge, & Pennay, 1993). Studies that have investigated the impact of ethnicity on attitudes have predominately involved countries in North America. In New Zealand, research has found ethnicity to have an effect on attitudes toward mental illness. In a study carried out by Read and Harre (2001), Maori and European participants were found to have more positive attitudes toward people with mental illness than Asian participants. A similar finding was also found in research conducted a year later by Walker and Read (2002), which again found that Asian participants had more negative attitudes than European participants. However, Maori have a different conceptualisation of health such as

illustrated in Mason Durie's Whare Tapa Wha model referred to in chapter one (p.4). Furthermore, the extent to which Maori conceptualisation of health has been incorporated into New Zealand research is limited.

In contrast to New Zealand studies, a North American study that compared Chinese undergraduate students with a sample of America undergraduate students found no cultural differences in attitudes (Shokoohi-Yekta & Retish, 1991). More specifically, the study found both samples had positive attitudes towards mental illness. However, the study did find the American sample to be less authoritarian, less socially restrictive and more benevolent towards people with mental illness when compared to Chinese sample (Shokoohi-Yekta & Retish, 1991).

In summary, attitudes towards mental illness appear to be consistent across countries and cultures. What is less clear is what determines the effect that ethnicity has on attitudes is. Furthermore, most studies investigating attitudes across different ethnic groups have only studied ethnic groups within one country, as opposed to between countries. Therefore, the generalisation of findings is limited to the country to which the sample was taken from.

*Income, occupation status, profession, and attitudes.* Research on the influence of income on attitudes toward mental illness has been minimal. Wolf et al., (1996) found income to be a significant influence on attitudes and significantly related to occupation. However, generally income has not been a variable studied in research on attitudes toward the mentally ill. Although income has often been used to ascertain socio-economic status for comparison areas in studies using control groups (e.g., Dear & Taylor, 1982).

Research on occupation and attitudes toward mental illness has typically involved nursing samples or samples that involve other health professionals working in the area of mental health. Findings from these studies indicate that medical students have positive attitudes toward people with mental illness (Eker & Arkar, 1991; Huitt & Elston, 1991; Roth, Anthony, Kerr, & Downie, 2000). However, one study found that medical students and doctors tended to have more negative attitudes toward specific mental illnesses such as schizophrenia (Mukherjee et al., 2002).

To summarize the research on income and occupation is limited by its sampling strategy. Samples have exclusively involved mental health professionals. Therefore, generalisation of the findings is limited to mental health professions that have regular contact or specialised training with people with mental illness. Nonetheless, the samples that have involved nursing or other mental health professionals have found both positive and negative attitudes toward people with mental illness. Research findings suggest that overall, mental health professionals working in the area of mental health are more likely to have positive attitudes toward their patients. Moreover, it is possible that occupation does influence attitudes toward mental illness.

*Contact.* Some recent studies, have investigated the impact of contact on attitudes toward people who have a mental illness (e.g., Arens, 1993; Roper, 1990; Wolff, Pathare, Craig, & Leff, 1996b). Findings suggest that contact leads to more positive attitudes. However, it is noted that not all contact is beneficial (Farina, 1981). There is emerging evidence to suggest that the nature of contact plays an important factor in producing positive attitudes (Ingalmells, Goodwin & John, 1996; Roper, 1990). In most cases positive attitudes toward people with mental illness arises from a

combination of education (Nunnally, 1961) and contact (Holmes, 1968; Pryer, Distefano, & Merry, 1969).

Research that involved community samples have found that attitudes do become more positive with increased contact with persons who have a mental illness (e.g., Arens, 1993). Contact has lead to respondents to perceive people with mental illness as less dangerous (Link, Cullen, & Francis, 1986; Wolff, Pathare, Craig, & Leff, 1996b). Furthermore, studies report and that the facilities originally opposed by community members, are viewed more favourably after contact is established between members of the neighbourhood and residents of the mental health facility (Arens, 1993). It was concluded that the change in attitudes to become more positive was associated with neighbours having made contact with the residents.

In summary, there are still inconsistencies in the research to date regarding contact and its ability to lead towards a positive change in attitudes. In particular it is not well understood if quality of contact or the amount of contact that is significant in influencing attitudes toward people with mental illness. There is evidence to suggests that prior contact with people who have a mental illness can be a significant influence regardless of being educated about mental illness (e.g., Arens, 1993).

#### *Studies conducted in New Zealand.*

A large amount of research has been conducted on community attitudes in New Zealand (as indicated on Index NZ and the National Bibliographic Database). However, these studies have mainly been on community attitudes towards road safety,

environmental and economic policies. Only a small number of community attitude studies have examined attitudes towards mental illness in New Zealand.

Early research in New Zealand reported that the public held negative attitudes toward persons with mental illness (e.g., Green et al., 1987; Walkey et al., 1981). However, some more recent studies indicate that New Zealand attitudes have become more positive (e.g., Ng, Martin, & Romans, 1995; Rowe, 2001). Initially, research followed methodological trends in Europe and America. Samples were drawn from nursing and medical populations, and from universities to assess attitudes toward mental illness among the community (e.g., Walkey et al., 1981). Study aims focussed on finding predictors of attitudes toward mental illness, such as age, education and occupation. More recently, research has started to examine how mental illness is portrayed to the public through media. In particular, the impact of newspaper articles on attitudes toward mental illness (e.g., Coverdale et al., 2002). Other New Zealand university studies have re-examined Nunnally's (1961) conceptual framework for predictors of attitudes toward mental illness and health professionals working in the area of mental health.

Nunnally (1961) researched attitudes toward mental illness at the university of Illinois, North America, over a six-year period from 1954 to 1959. The results from Nunnally's study raised important questions about the need to address and prepare the community prior to the release of psychiatric inpatients into community settings. From the findings, Nunnally (1961) proposed three propositions about community attitudes toward mental illness. Firstly, that people attach stigma to the mentally ill; secondly, that the public holds moderately favourable attitudes toward the mental health professionals

such as psychiatrists and psychologists; and thirdly, that in general mental health attitudes are not strongly related to variables age, gender and education. Nunnally's propositions are consistent with other attitude studies conducted in New Zealand (e.g., Blizard, 1968; Walkey, 1981). Although, inconsistent with the findings from studies conducted in Europe and America, indicate that a relationship exists between age, level of education and attitudes toward persons with mental illness.

In contrast to overseas research, most New Zealand studies have found that demographic variables are unable to predict attitudes toward people with mental illness, regardless of the sample used. Ng, Martin, and Romans (1995) conducted a randomised survey of 300 hundred residents in Dunedin, New Zealand. Results of the study found that socio-demographic variables (i.e., age, income, and gender) were unable to predict attitudes toward mental illness. The study also found that having known a person with mental illness facilitated more intimate relationships with people who have a mental illness. It was concluded, that communities both need and welcome information about mental illness, and that the outlook of community-based rehabilitation of people with mental illness was positive.

A study conducted by Walkey et al (1981) using 215 New Zealand University students, found results consistent with Nunnally's third proposition, that demographic variables such as age and gender and education, were unable to predict attitudes toward people with mental illness. The study also found attitudes toward people with mental illness were predominately negative, a finding that is supported in a study by Blizard (1983). This result is in contrast to the studies prediction of positive attitudes based on recent education campaigns, increasing the awareness of mental illness. For

example, advertising for volunteers for self-help groups such as Samaritan's, lifeline, youthline and teen-aid telephone counselling services, and a telethon to help raise awareness and money for such services.

More recently, studies conducted in New Zealand have investigated the relationship between the media and negative attitudes toward mental illness (e.g., Coverdale et al., 2001). Findings are consistent with North American and European research (e.g., Monahan, 1991; Mukherjee et al., 2002; Nunnally, 1961; Patton, 1992; Woff & Stuber, 2002) that report media depictions of people with mental illness influence negative attitudes toward people with mental illness.

Research thus far has not included Maori health conceptualisations or other holistic concepts. The most widely accepted conceptualisation of health among Maori is Durie's *whare tapa wha* model (Durie, 1998) involves four cornerstones; *Taha wairua* (spirituality), *taha hinengaro* (thoughts and feelings), *taha whanau* (family) and *taha Tinana* (physical) (Durie, 1999). Each cornerstone is interacting and therefore one does not exist without the other (Durie, 1999). The underlying aim of the model is integration, and to link the individual to the wider environment (Durie, 1999). This is a key concept that is illustrated through *Te Reo O Maori* where most words have dual meanings. For example, *Whenua* can mean both placenta and land, and *Kapo* can mean blind as well as a species of eel. Cornerstones such as *Taha wairua* are considered paramount to good health (Durie, 1998). Which is considered as having the capacity to understand the link between people and the environment, to have spiritual awareness and a *mauri* (life-force). Without this an individual cannot be healthy and is more prone to illness or misfortune (Durie, 1998). Such conceptualisations contrast to the Western emphasis on

the physical aspects of health and biological constructs. It is possible that holistic conceptualisations of health are likely to impact on research on attitudes.

In sum, few studies conducted in New Zealand have researched community attitudes toward mental illness compared to the large volume of research that has been spawned from North American and Europe over the same time period. Research that has been conducted in New Zealand has generally produced results consistent with the prevailing literature.

### *Conclusion*

Attitudes toward people with mental illness have been influenced by a number of demographic and socio-economic variables, including variables such as awareness and knowledge of mental illness, and depictions of mental illness through the media. Trends in research design, and sampling strategy from studies in North America and Europe have continued to impact on research conducted in New Zealand. Overall, research suggests that attitudes toward people with mental illness have become more positive over time. Attitudes are reported to be indicative of the general public's degree of acceptance. The success of deinstitutionalisation is dependent on treatment outcome and acceptance of people with mental illness into the immediate communities lives.

The present study is specifically designed to control for the possible influence of demographic and socio-economic variables. For example, age, gender, ethnicity, and occupation. Other variables such as, prior contact with people who have mental illness, awareness of, and agreement with the community mental health facility will also be controlled for. The main aim of the present study is to investigate the impact of time and

geographical proximity to a community mental health facility on community attitudes toward mental illness. The present study aims to evaluate these factors using a community sample that has existing and proposed psychiatric services.



## CHAPTER FIVE

### METHODOLOGICAL ISSUES IN CONDUCTING RESEARCH ON COMMUNITY ATTITUDES

#### *Overview*

Research on community attitudes towards mental illness has typically developed without a guiding theoretical framework. As a result research has been broad and a number of methodological issues have arisen. This chapter is designed to provide an overview of the methodological issues and limitations of prior empirical research that have arisen from conducting research on community attitudes towards mental illness.

#### *Methodological Issues*

Three main methodological issues continue to prevail in research on community attitudes towards mental illness: the measures used, sampling and surveying strategies. A broad range of measures have been used in research on community attitudes towards mental illness. Some researchers have used already well-established measures such as the Opinions about Mental Illness scale (OMI, Cohen & Struening, 1959), and the Community Mental Health Ideology scale (CMHI, Taylor & Dear, 1981; 1982). Others have developed questionnaires (e.g., Rabkin et al., 1984; Shera & Delva-Taullili, 1996), or used vignettes. Vignettes are more commonly used in research after the mid 1980s (e.g., Brockington et al., 1993; Ingamells et al., 1996; Teft, Segall, & Trute, 1987) that aim to assess respondent's

knowledge about mental illness. Diversity in measures limits the ability to generalise a study's findings to the sample population. Findings are still valid but more constrained to other studies that have used the same measure and measured the same construct (Coolican, 1999).

Furthermore, a range of surveying techniques have been used. For example, telephone surveys, door-to-door interviews, and mail box delivery. Diversity in survey techniques produces differences in the way data is collected and inconsistencies in the way material in the questionnaire is perceived by the respondents/participants (Frazer & Lawley, 2000). Problems with low response rates and limited diversity of samples and sampling conditions have been limitations of the research on attitudes towards mental illness.

A number of studies have typically used homogeneous samples comprised of hospital personnel or student health studies populations. The homogeneity of the samples limits the ability to compare findings to a community population. Furthermore, samples are predominately non-randomly chosen in the majority of research. Lack of randomised sample selection makes it difficult to control for a range of variables such as demographic variables gender and age, which are reported to influence attitudes.

Attitudes have also been investigated using a number of different settings. Some studies have involved clinical settings, university settings, and other studies have involved communities living near hospitals or community mental health facilities. Findings of such studies are therefore limited to other studies that have used similar designs.

Moreover, as noted in chapter four limited research has been carried out comparing different cultures using the same measure. Studies that have investigated attitudes towards mental illness among different ethnic groups have typically used ethnic groups within the same country. This type of sampling strategy is limited in that the respondents no longer living in their country of origin may have adopted the host country values and opinions. Findings are therefore limited in the ability to be generalised to different cultures and countries. Studies that have translated a measure in order to survey attitudes across a number of languages, raises concerns about the retention of internal consistency and item validity (e.g., Madinanos et al., 1987).

Another limitation of the research on community attitudes towards people with mental illness is that, the majority of research has been carried out in North America and Europe. A limited number of studies have been conducted in New Zealand. Therefore, caution is required when interpreting findings from North American and European studies to the New Zealand population. Furthermore, the most commonly cited articles in overseas research are studies that have been conducted in the 1960s and 1970s. It is a possibility that some of the findings and conclusions have become outdated over time.

In summary, studies reviewed from the literature on attitudes towards mental illness are found to be limited in the following ways, (a) studies have been limited by their samples and sampling strategy. The samples used in studies have often been limited in their scope, (i.e., often using homogenous samples with particular interests in mental health), (b) samples have typically been non-randomly chosen, which can skew data with outliers, and lack normality, (c) sampling methods have

been varied, creating a number of biases in data collection, (d) a range of measures have been used. Which limits the ability to compare findings across studies. (e) There has been a limited number of studies that have investigated attitudes as a function of culture. Only a few studies (i.e., Read & Harre, 2001; Walker & Read, 2002) have surveyed attitudes among Maori or other ethnic groups in New Zealand. Findings from such studies are useful in determining how educational material on mental illness could be distributed (f) there has been a limited number of research on community attitudes towards mental illness carried out in New Zealand. Findings are therefore limited in their ability to generalise to wider areas of New Zealand community populations, especially if using university samples, (g) the main articles used in research on attitudes towards mental illness have centred on founding articles of the 1970s and 1980s, which may be outdated, (h) changes in attitudes might reflect historical changes that have occurred or recent campaigns that governments support for the awareness of mental illness among nations.

## CHAPTER SIX

### THE PRESENT STUDY

#### *Overview*

The purpose of this chapter is to provide a description of the aims, and hypotheses of the present study. Discussion of the measures, present study design and procedure is presented in Chapter Seven.

#### *Aims and objectives of the present study*

There were three main aims of the present study. Firstly, to assess the impact of geographical proximity to a community mental health facility on attitudes toward mental illness. Secondly, to assess the impact of time on community attitudes toward people with mental illness. A third aim of the study was to assess the influence of demographic and socio-economic variables on attitudes toward mental illness. Including, the effects of prior contact, awareness of and agreement with a community mental health facility on attitudes toward people with mental illness. The aims of the study have been demonstrated to have an impact on attitudes toward mental illness in prior research. It is anticipated, that the findings are likely to provide data on the stability of attitudes are over time, as well as variables that are likely to influence attitudes toward people with mental illness among a community sample.

### *Hypotheses*

The hypotheses of the present study take into account a wide range of factors that are reported to have an influence on attitudes in prior research on community attitudes toward mental illness. The first two hypotheses are in support of the two main aims of the present study. The third and subsequent hypotheses are in support of the third aim of the present study.

One expectation taken from the literature (i.e., Huxley, 1993; Rothbart, 1973; Smith, 1981) regarding geographic proximity to a mental health facility and attitude, was that those living in closer proximity to the community facility would have more negative attitudes toward mental illness. Therefore, in the present study it was hypothesised that, respondents, living near to a proposed community mental health facility (Area 1<sup>1</sup>), would hold more negative attitudes than respondents living in an area where an existing mental health facility was located (Area 2), and respondents living in an area where there was no mental health facility (Area 3) (hypothesis 1).

The second hypothesis of the present study concerned the expectation that attitudes toward mental illness would change over time (hypothesis 2). Specifically, it was hypothesised that attitudes will become more positive over time. For example, a study conducted by Arens (1993) found that after two to three years later, people living within close proximity to a mental health facility held more favourable attitudes in comparison to when they were first surveyed.

In addition the present study aimed to assess the impact of demographic variables on attitudes toward mental illness, in particular the impact of age, gender, ethnicity, and occupation on attitudes toward people with mental illness. Prior

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<sup>1</sup> For a more detailed description of the present study design, see Chapter Seven.

research on community attitudes consistently reports that younger respondents have more positive attitudes toward mental illness than older respondents (e.g., Clark & Binks, 1966; Eker & Arkar, 1991). The combination of younger age and higher educational attainment in some studies is reported to be indicative of more favourable attitudes toward individuals with mental illness (i.e., Madianos, Madianou, Vlachonikolis, & Stefanis, 1987; Cumming & Cumming, 1975). In contrast, early studies conducted in New Zealand around the 1980s have reported that age was not significant in influencing attitudes toward mental illness (Green et al., 1987; Walkey et al., 1981). However, more recently a study has found age to be a significant influence on attitudes toward people with mental illness (e.g., Rowe, 2001). Therefore, a third hypothesis of the present study was that younger respondents would have more positive attitudes toward people with mental illness (hypothesis 3).

Furthermore, research on the effects of gender on attitudes toward mental illness has been limited. One study found that female attitudes were more liberal toward mental illness, than males (Leong, 1999). In contrast, other studies such as a study by Farina (1981) found that there were no gender differences. Overall, more research suggests that gender is a non significant influence on attitudes toward people with mental illness (i.e., see Chapter 4 for review of research on gender). It is therefore hypothesised, that there will be no gender differences on attitudes toward mental illness (hypothesis 4).

In addition, it is also anticipated that there will be difference in attitudes among different cultural backgrounds (hypothesis 5). More specifically, it is hypothesised that there will be significant differences among New Zealand

European, Maori, Asian and Pacific Islander ethnic groups. Research conducted in New Zealand has shown that NZ European and Maori participants have more positive attitudes towards people with mental illness than Asian participants in studies (e.g., Read & Harre, 2001; Walker & Read, 2002). In contrast research conducted overseas such as Eker and Arkar (1991) who conducted a study using Turkish nursing students, and Westbrook, Legge, and Pennay (1993) who conducted a study involving health practitioners from Chinese, Italian, German, Greek, Arabic, and Anglo Australian communities, have found attitudes to be consistent with worldwide trends, showing no cultural differences.

Moreover, studies that have looked at occupation and its effects on attitudes toward mental illness have typically involved homogenous samples from health professions, which do report that occupation influences attitudes toward mental illness (e.g., Eker & Arkar, 1991; Mukherjee et al., 2002; Roth, Anthony, Kerr and Downie, 2000). Based on the literature, it was hypothesised that occupation will influence attitudes toward mental illness (hypothesis 6).

Additional hypotheses were drawn from prior research which suggests that prior contact with people with mental illness, awareness of and agreement with community mental health facilities influence attitudes toward people with mental illness. Contact with people with a mental illness is reported to lead to positive attitudes toward people with mental illness over time (Arens, 1993). Therefore, an additional hypothesis of the present study was that those with prior contact with people with mental illness would have positive attitudes toward people with mental illness (hypothesis 7).

Prior research reports that people are generally unaware of mental health facilities in their community (e.g., Dear & Taylor, 1982; Heinemann, Perlmutter, & Yudin, 1974; Huxley, 1993; Morrison & Libow, 1977). Moreover, it is also reported in prior research that people who are aware of community mental health facilities are more likely to be opposed to such services (e.g., Rabkin et al., 1979, 1984). However, it is unclear if respondent's who are aware of the mental health facilities in their neighbourhood, tend to have more negative attitudes toward people with mental illness. The present study therefore anticipated awareness to be a significant influence on attitudes toward people with a mental illness (hypothesis 8). A non-directional hypothesis regarding awareness and its ability to predict attitudes toward mental illness is anticipated. It was further hypothesised, that people who are aware of the facility would be more likely to disagree with the placement of the facility (hypothesis 9).



## CHAPTER SEVEN

### METHOD

#### *Respondents*

There were two samples obtained in the present study due to the intention of the study to examine change in attitudes over time. One sample was taken in 1995 and a second sample taken in 1996. The 1995 sample provided 53% of the data in the study, and consisted of 157 participants, 100 females ( $M = 44.1$  years,  $SD = 16.0$ ), and 54 males ( $M = 47.5$  years,  $SD = 16.3$ ), three respondents did not specify their gender. Age range<sup>1</sup> in the 1995 sample was 18 to 81 for females, and 22 to 75 for males. Six respondents did not specify their age. One hundred and twenty eight respondents (82%) identified themselves as being New Zealand (NZ) European, 12 (8%) Maori, 1 (1%) Asian, 1 (1%) Pacific Islander, and 11 (7%) respondents did not specify their ethnicity. Seventy-six respondents (48%) identified themselves as employed, 29 (19%) retired, 51 (33%) unemployed, and 1 (1%) respondent did not specify their occupation (see Table 1).

The 1996 sample consisted of 141 participants, 95 females ( $M = 45.1$  years,  $SD = 16.2$ ), and 43 males ( $M = 51.2$  years,  $SD = 17.9$ ). Three respondents did not specify their gender. Age range in the 1996 sample was 18 to 84 for females, and 23 to 86, for males. Four respondents did not specify their age. One hundred and twelve respondents (79%) identified themselves as being NZ European, 9 (6%)

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<sup>1</sup>Due to the range of respondent ages and based on the frequency data, three age categories were developed. The first category placed all respondents 39 years of age and under within the "young" category. The second category placed all respondents aged between 40 years of age and 59 (inclusive) years of age in the "middle-age" category. The third category placed all respondents aged 60 years and above in the "older age" category.

Table 1. Sample Demographic Information

Area	Gender				Age						Ethnicity			
	Male		Female		Young <sup>a</sup>		Middle-age <sup>b</sup>		Older <sup>c</sup>		NZ/European		Maori, Pacific Islander, Asian, other <sup>d</sup>	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
	1995													
Castlecliff	21	13	30	19	22	14	22	14	8	5	35	22	17	11
Gonville	18	11	32	20	27	17	13	8	12	8	43	27	9	6
South														
Williams Domain	15	10	38	24	25	16	15	10	13	8	50	32	3	2
Contact														
Not at all	5	3	2	1	1	<1	2	1	4	3	5	3	2	1
Moderate	39	25	64	41	48	31	34	22	22	14	92	59	12	8
A lot	9	6	30	19	20	13	13	8	6	4	28	18	11	7
Awareness														
Yes	46	29	89	57	63	34	46	29	32	20	115	73	21	13
No	8	5	11	7	14	9	4	3	1	<1	13	8	6	4
	1996*													
Castlecliff	10	8	28	21	19	14	10	8	7	5	28	21	11	8
Gonville	13	10	28	21	14	11	16	12	11	8	33	25	8	6
South														
Williams Domain	18	14	33	25	17	13	19	14	15	11	45	34	7	5
Contact														
Not at all	1	<1	3	2	1	<1	2	1	1		4	3	-	-
Moderate	28	20	61	44	31	22	31	22	26		75	53	14	10
Extensive	14	10	29	21	18	13	17	12	7		32	23	11	8
Awareness														
Yes	35	25	75	54	34	24	45	32	29		92	65	18	13
No	8	6	17	12	17	12	5	4	3		17	12	8	6

Note. Dashes represent data that was not reported.

<sup>a</sup>Young were <39 years old. <sup>b</sup>Middle-age were 40-59 years old. <sup>c</sup>Older were 60+ years old. <sup>d</sup>Maori, Pacific Islander, Asian and other ethnicity groups not specified were placed together due to low sample sizes, which need to be above 6 to assume multivariate normality, and power

\*1996 data has nine missing data values.

Maori, 2 (2%) Asian, 1 (1%) Pacific Islander, and 8 (6%) respondents did not specify their ethnicity<sup>1</sup>. Sixty-two respondents (44%) identified themselves as employed, 26 (18%) retired, 37 (26%) unemployed and 16 (11%) respondents did not specify their occupation.

### *Measures*

There were two measures used to evaluate attitudes towards mental illness among the community. The Opinions about Mental Illness Scale (OMI) by Cohen and Struening (1959), and the Comfort in Interaction Scale (CI) by Beckwith and Mathews (1994). These measures along with demographic information relating to age, gender, ethnicity, and occupation, level of awareness of the proposed facility, agreement of the proposed facility and level of contact with people with mental illness formed the basis of the questionnaire (see Appendix C). The questionnaire took around 20 minutes to complete.

The questionnaire was distributed on two occasions to three areas. The first distribution of questionnaires took place in 1995. The second distribution of questionnaires took place in 1996 approximately one year later. In order to prevent the possibility of order effects occurring from the presentation of the two measures used in the questionnaire, counterbalancing of the measures were carried out, so that in half of the questionnaires the OMI appeared before the CI and the other half of the questionnaires the CI appeared before the OMI (Coolican, 1999). In the second distribution of questionnaires the OMI was presented first, followed by the CI. No counterbalancing of the second questionnaire was used. Results however, showed that an even spread of scores were present in both data collections. This

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<sup>1</sup> Nine cases are missing data from the system

indicates that order effects were not a methodological issue in the present study. In both the 1995 and 1996 questionnaires it was specified that mental illness is indicative of 'the kinds of illness which bring patients to mental hospitals' and that mental patients were mental hospital patients' prior to the presentation of the attitude measures.

#### *Opinions about Mental Illness Scale (OMI).*

The OMI was originally developed by Cohen and Struening in 1959 in order to measure attitudes towards personal characteristics of those with mental illness, along with attitudes and opinions to the etiology and treatment of mental illness. The scale is based on items from, The Custodial Mental Illness Ideology Scale by Gilbert and Levinson (1956), the California F scale by Adorno et al., (1950), and Nunally's (1957) multiple item scale.

The OMI consists of 51-items that were the result of factor analysis carried out on a pool of 100 items in a study of hospital personnel (Cohen & Struening, 1962). The OMI uses a 6-point Likert scale response ranging from 1 (*Strongly Agree*) to 6 (*Strongly Disagree*), and takes around 15 minutes to complete<sup>2</sup>. Higher scores on the OMI generally indicate positive or accepting attitudes towards people with mental illness, however there are some items which are reversed, and therefore on some subscales lower scores are indicative of positive attitudes (Antonak & Livenh, 1988). The OMI targets five factorially derived subscales: (a) Authoritarianism (b) Unsophisticated Benevolence (c) Mental Illness Ideology (d) Social

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<sup>2</sup> The procedure for scoring of the OMI sub-scales was taken from Cohen and Struening (1962).

Restrictiveness and (e) Interpersonal Etiology (Cohen & Struening, 1959, 1962, 1965).

The OMI was chosen for the present study based on its widespread and high rate of use in attitude research to measure attitudes towards mental illness (e.g., Bairan & Farnsworth, 1989; Drolen, 1993; Keane, 1991; Madianos et al., 1987; Shokoohi-Yekta & Retish, 1991) increasing the ability to compare results. Additionally, the OMI measure was used in prior New Zealand research that has examined attitudes towards mental illness among the New Zealand police (Rowe, 2001). The OMI is usually administered to a group, but can also be administered individually (Cohen et al., 1959).

The OMI has sound psychometric properties. The validity of the OMI ranges from .38 (Mental Hygiene Ideology) to .86 (Authoritarianism), with internal consistency reliability ranges of, .77 to .80 (Authoritarianism), .70 to .72 (Unsophisticated Benevolence), .29 to .39 (Mental Hygiene Ideology), .71 to .76 (Social Restrictiveness), and a reliability range of .65 to .66 (Interpersonal Etiology) (Cohen et al., 1962). The OMI is reported to have a satisfactory degree of internal consistency reliability with the exception of the Mental Hygiene Ideology subscale (Antonak & Livneh, 1988). Sellick and Goodear (1985) compared intercorrelations of the OMI factors from five different studies. The study found marked differences in both the magnitude and direction of the relationships. It was concluded that the reliability of the OMI scale might decrease when used with community samples. Therefore, internal reliability of the OMI was carried. Confirmatory factor analysis was used using structural equation modelling (SEM), with the present study sample.

*Factor Analysis of the OMI.* Factor analysis of the OMI was carried out in order to see if the respondents of the survey's attitudes were consistent with the

five factors proposed of the OMI model by Cohen and Struening (1959). A model fit of the present study data with the model proposed by Cohen and Struening (1959), enhances comparability of the present study to other studies that have used the OMI measure. Confirmatory factor analysis (CFA) using structural equation modelling (SEM) was used on the present study, to investigate if the data collected in 1995 and 1996 fits with factor loadings on the five subscales that currently exist on the OMI measure. Two principles of the SEM procedure are implied by its use, (a) that the processes under investigation can be represented by series of regression or structural equations, and (b) that the relationship of the regression or structural equations can be modelled pictorially, providing clear conceptualisations of the theory under investigation (Byrne, 2001). SEM is a hypothesis-testing approach to analysis, which can also be used in the development of measures.

CFA was carried out using the statistical package AMOS (version 4.0). Fit indices statistics used in the confirmatory factor analysis are, the comparative fit index (CFI, by Bentler, 1990, where values greater than .9 indicate an adequate fit to the data), Tucker-Lewis coefficient (TLI, by Tucker & Lewis, 1973, where values greater than .9 indicate adequate fit), and root mean square error of approximation (RMSEA, by Browne & Cudeck, 1993, where values of less than .07 indicate an adequate fit to the data) (Byrne, 2001).

Missing data in the OMI measure was overcome by using estimation of means and intercepts in the calculation analysis (Arbuckle et al., 1999). AMOS computes the full maximum likelihood (FIML) estimation when missing data is present, as opposed to using data imputation, pairwise deletion, or listwise deletion. SEM analyses are based on variance and covariance, and therefore means

imputation is not recommended. FIML is less biased and able to produce more consistent and efficient results (Arbuckle et al., 1999). The OMI factors were uncorrelated in the model which is supported by the authors of the measure Cohen and Struening (1959). All significant factor loadings above .30 were included in the model.

Results from the confirmatory factor analysis on the Opinions about Mental Illness scale ( $n = 300$ ), showed that the model fit was good and supported item loadings on the five existing subscales; Authoritarianism, Unsophisticated Benevolence, Mental Hygiene Ideology, Social Restrictiveness, and Interpersonal Etiology, with an exception of two items, item 12 and item 22 which had poor loadings on the Unsophisticated benevolence subscale. Items 12 ( $p > .05$ ) and 22 ( $p > .05$ ) were removed, producing a higher correlation of the measure ( $\chi^2_{1126} = 3039.436, p < .001$ ). Fit statistics showed the Comparative Fit index to be (.95), Tucker-Lewis coefficient (.95) and the Root Mean Square Error of Approximation to be (.075), supporting a good model fit. This factor analysis supports the ability of the OMI measure to be used among community samples. Antonak et al., (1988) note that a limitation of the OMI is that there has been no recent factor analysis of the OMI items. Internal reliability of the OMI was also conducted, using Cronbach's Alpha. Cronbach's Alpha was chosen based on its ability to measure individual variances on items, relative to overall variance on the test (Coolican, 1999). Results from the analysis showed that the OMI had high internal consistency ( $r = .84$ ), indicating that the items of the OMI measure a similar construct.

*Authoritarianism.* The first subscale of the OMI, Authoritarianism, included 11 items that denotes submission, and views of patients as inferior and a threatening subgroup of society (Cohen & Struening, 1962). Authoritarianism included items

advocating a more forceful handling of mental patients, such as needing high fences, guards, and locked doors. The Authoritarianism sub-scale scores range from 1-56, high scores on the Authoritarianism subscale indicating a belief that people with mental illness are inferior to people without mental illness (Cohen & Struening, 1962). Low scores indicate a more positive attitude towards people with mental illness.

*Unsophisticated Benevolence.* The second subscale, Unsophisticated Benevolence, consisted of 14 items. The items are based on the view that mental patients are not failures in life but individuals that require care (Cohen & Struening, 1962). Unsophisticated Benevolence includes items such as "Our mental hospitals seem more like prisons than like places where mentally ill people can be cared for," and "more tax money should be spent in the care and treatment of people with severe mental illness." The items are based on an understanding that people with mental illness are similar to children in their needs. Some questions on this subscale are reversed, sub-scores range between 1 to 66, with higher scores reflecting positive attitudes towards people with mental illness.

*Mental Hygiene Ideology.* The third subscale, Mental Hygiene Ideology, has nine items. The items, are to reflect principle beliefs of trained people working in the area of mental health, and is positive in its orientation (Cohen & Struening, 1962). The main connotation of the Mental Hygiene Ideology subscale is that people with mental illness differ slightly from those without mental illness and is represented by the item "mental illness is an illness like any other". This subscale, covers the capability of those with mental illness to perform many tasks required of those who are not mentally ill. For example, willingness to work, ability to carry out skilled

labour, and ability to be trusted as a babysitter. Mental Hygiene Ideology has a sub-score range between 1 to 46, with a higher score reflecting a positive attitude towards people with mental illness.

*Social Restrictiveness.* The fourth subscale, Social Restrictiveness, has ten items. The items denote patients and ex-patients, as being a threat to their families and society. Social Restrictiveness includes items about people with mental illness and their subsequent actions after leaving a hospital setting, and is the view that people who a mental illness should have human rights taken away. For example, this subscale includes the items “people with mental illness should not be allowed to marry,” “should be easily divorced upon hospitalisation,” and “children should be restricted from visiting their mentally ill parents,” and that “people with mental illness should be made sterile.” The sub-score range for Social Restrictiveness ranges between 1 to 51. Lower scores would indicate support for less restrictive care environments, and therefore lower scores are reflective of positive attitudes towards mental illness.

*Interpersonal Etiology.* The fifth subscale of the OMI, Interpersonal Etiology of mental illness, consists of seven items that denote deprivation of parental love and attention in childhood (Cohen & Struening, 1962). Interpersonal Etiology is the understanding that mental illness arises from interpersonal experience, and that abnormal behaviour is motivated by an avoidance of problems. It covers items such as, “mental patients come from homes where the parents took little interest in the children,” and “if patents loved their children more, there would be less mental illness.” It also includes items such as, “people who are successful in their work seldom become mentally ill,” and “although they are unaware of it, many people become mentally ill to avoid the difficult problems of everyday life.” The sub-score

range for Interpersonal Etiology, ranges between 1 to 36. Higher scores indicate that mental illness is related to personal choices in life, and more negative attitudes, minimising the bio-medical model of causes for mental illness.

*Comfort in Interaction Scale (CI).*

The present study used the OMI in conjunction with the Comfort in Interaction scale (Beckwith & Mathews, 1994), which measures similar constructs to the OMI. The use of additional measures in the present study enabled the evaluation of a wider range of characteristics involved in attitudes towards people with mental illness. The comfort in interaction scale was originally developed by Beckwith and Mathews in 1994, to measure interaction among disabled populations where the identified target is people with intellectual disabilities. The CI scale is based on the Interaction with Disabled Persons (IDP) scale, which was originally developed to assess underlying non-accepting or negative attitudes that people had towards people with disabilities (Gething & Wheeler, 1992). Beckwith and Mathews (1994) developed the Comfort and Interaction (CI) scale as a slightly modified version of the IDP, improving the psychometric properties of the CI over the IDP (CI has a coefficient alpha  $r = .88$ , and test-retest reliability of  $r = .91$ ). The CI measures the comfort level of individuals interacting with people who have disabilities. Internal consistency of the CI was carried out on the present study data, using Cronbach's Alpha. Results from the analysis showed that the CI had high internal consistency ( $r = .75$ ), indicating that the items measure a similar construct.

The CI consists of 20 items, using a 6-point likert scale, it does not have a neutral point, and thus pushes respondents to indicate some level of commitment

to a particular response. The CI takes five minutes to complete (Beckwith et al., 1994). Fourteen of the original IDP items are included from Gething's 1991 measure, an additional four IDP items are reversed, and two new items were introduced by Beckwith and Mathews (1994) to the CI measure. The range of scores on the CI using a 6-point likert scale are between 20 and 120. Higher scores indicate greater comfort in interaction with people who have a disability. This is in contrast to the original IDP scale where higher scores indicated higher discomfort in social interactions (Loo, 2001). The CI items were slightly modified in order to fit the aims of the present study, by substituting the words "intellectual disability" for the words "mental illness" where applicable.

The modified CI used in the present study aims to represent comfort in interaction with people with mental illness, therefore the CI includes items such as, "I would feel comfortable going out in public with people with mental illness", and "if I was with a person with mental illness I would feel comfortable and relaxed". The CI also includes several reversed items in the present study such as, "I am grateful that I do not have the burden of a mental illness", and "I would feel frustrated being with a person with a mental illness, because I wouldn't know how to help."

There are six-factorially derived subscales, factor I through to factor VI. Factor I and factor II address items of competence and knowledge respectively (Beckwith & Mathews, 1994). Factors III, IV, and V address aspects of self-consciousness in relation to mental illness, and factor VI addresses ease of social interaction with people with mental illness (Beckwith & Mathews, 1994). However, due to the lack of labels denoted to the subscales and with regard to the high internal consistency of its items, it has been suggested by the authors that a total

summative score of the items should be used as an overall index of comfort in interactions with people with mental illness (Beckwith et al., 1994).

### *Design and Procedure*

The present study utilised a community sample<sup>3</sup> in the interests of providing a more reliable and valid indication of community attitudes towards people with mental illness (Repper & Brooker, 1996; Rabkin et al., 1984). A stratified sampling process was employed, that was dependent on socio-economic status (SES)<sup>4</sup> of the residential areas in the Wanganui district (see Table 2). It involved three (non-randomly chosen) residential areas (see Appendix D for map of areas included in present study).

The first area (Area 1) was the focus of the study and included a proposed community outpatient facility to be located on grounds, used in the past for the community care of the Intellectually Handicapped. The second area (Area 2), had an existing mental health facility as part of the hospital inpatient service, and was chosen due to its socio-economic similarities to Area 1. The third area (Area 3), was closely located to both the proposed facility in Area 1, and the inpatient service in Area 2. Area 3 was also matched on socio-economic status to Area 1. Information on income from Statistics New Zealand (1991) census data was used to determine socio-economic similarity among the three Areas<sup>5</sup> (see Table 2). The three areas included in the present study design are defined as low to medium income areas

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<sup>3</sup> In 1995 at the outset of the study design and data collection no ethical approval was sort or obtained. For the purposes of the writer completing the thesis it was concluded that ethical approval did not need to be sort.

<sup>4</sup> SES has been used to determine compatibility of multiple areas in prior community attitude research (e.g., Dear & Taylor, 1982).

<sup>5</sup> Areas 2 and 3 were matched to Area 1 based on socio-economic status of residences, see Appendix E for comparisons of 1991, 1996, and 2001 census data.

(Statistics New Zealand, 1991). The proposed community mental health unit (Area 1) is located in a light industrial area with relatively low socio-economic status (Statistics New Zealand, 1991).

**Table 2.** Socio-economic Characteristics of Income Per Area

Income Annual income (\$)	1991 Census Data		
	<u>Area 1</u>	<u>Area 2</u>	<u>Area 3</u>
Nil or Loss	5.4%	3.4%	3.7%
1,000 – 10,000	36.6%	36.8%	37.8%
10,001 - 20,000	33.0%	28.8%	33.6%
20,001 - 40,000	18.4%	23.1%	18.7%
40,001 and over	1.7%	3.6%	1.6%
Not specified	4.9%	4.3%	4.6%

Note. Values, expressed as percentages, represent the percent of people in each income bracket in that area. Table has been adapted from Statistics New Zealand, 1991 census information for Taranaki/Manawatu-Wanganui region, Sex by total income for population resident in New Zealand aged 15 years and over.

Questionnaires were delivered to an estimated 300 residential homes in each of the three areas. The distribution of questionnaires was in a centrifugal pattern, starting in the centre of each area and moving outwards in all directions until all questionnaires allocated to each area were delivered. All of the residents in Area 1 included in the questionnaire drop were within one kilometre of the proposed site. Two and a half kilometres separated Area 1 from Area 2 three kilometres between Area 2 and Area 3, and five and a half kilometres separated Area 1 and Area 3.

The questionnaires were distributed at two separate times in order to assess change in attitudes, before and after the establishment of the community mental health facility. Consequently, the first questionnaire distribution took place mid-year in 1995 when the facility had been proposed, and the second set of questionnaires

were distributed one year later in mid 1996, after the establishment of the facility. In 1995, 977 questionnaires were distributed to the mailboxes of residential homes, in Areas 1, 2, and 3. Data was collected via a post paid envelope addressed to Massey University, School of Psychology<sup>6</sup>. One hundred and fifty-seven questionnaires were returned, yielding a response rate of 16%. The 1996 distribution of questionnaires obtained a similar result. Nine hundred and thirty questionnaires were distributed to the mailboxes of residential houses, 141 questionnaires were returned, yielding a response rate of 15%.

To evaluate the representativeness of the sample to the wider community, the sample was compared with socio-demographic characteristics from Statistics New Zealand (1991) census data<sup>7</sup>. In addition, sample characteristics were compared with 1996 and 2001 census data (Statistics New Zealand) (See Appendix E for a comparison table), in order to ascertain similarity of the sample to the present day. A stable and consistent pattern of income and demographic data has emerged over the ten-year period. This suggests that the findings of the present study can be generalised to residents in Wanganui between 1995 and 1996 to 2001.

#### *Statistical Analysis Procedure*

Analysis was conducted using the Statistical Package for the Social Sciences (SPSS) version 11. Multiple-regression, analysis of covariance (ANCOVA), analysis of variance (ANOVA) and parameter estimates of the variables were carried

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<sup>6</sup> The current author was not involved in the distribution or data collection of the present study. This was carried out in 1995 by Nik Kazantzis and in 1996 by Frank Deane.

<sup>7</sup> At the time of the first questionnaire distribution in 1995 only 1991 census data was made available.

out as part of the data screening and inferential analysis. Confirmatory Factor Analysis (CFA), using structural equation modelling (SEM), was carried out using AMOS version 5.0, on the items of the OMI measure to examine the reliability of the measure with the current sample. It is important to note that the data from both the 1995 and 1996 data collections was pooled for the analysis, in order to analyse the effects of one of the main hypotheses time on attitudes. In addition, data screening was also carried out prior to analyses (details are mentioned at the end of this section).

In the first instance, multivariate analysis of covariance (MANCOVA) a statistical procedure that controls the influence of variables (i.e., covariates), on one or more independent and dependent variables (Aron & Aron, 1994), was chosen to analyse the data of the present study. MANCOVA was chosen over conducting several univariate analysis of covariance (ANCOVA) tests for each dependent variable, as due to the number of dependent variables used in the present study, it is likely that an inflation of type I error would occur (Cronk, 2002). Type I error is the rejection of the null hypothesis, in favour of the alternative, when in fact the null hypothesis is true (Bobko, 2001). However, a number of assumptions of MANCOVA were violated, such as multivariate normality, and unequal sample sizes. Therefore, MANCOVA was discarded in preference of ANCOVA (see Appendix F for more detail).

Analysis of covariance is an extension of analysis of variance. The main effects and interactions of the independent variables are assessed after adjustments are made to the dependent variable scores by one or more covariates (Coolican, 1999). Prior research that has investigated the effects of time and different discrete groups, have exclusively used ANOVA as an analytical test when using the OMI

measure (e.g., Drolen, 1993). Other studies that have used the OMI measure have used between-subjects t-tests, or multiple ANOVA's (i.e., Bairan & Farnsworth, 1989; Drolen, 1993; Madianos et al., 1987; Rowe, 2001). As indicated earlier, in order to prevent type I error, the present study aimed to use MANCOVA, but the assumptions were violated, so retained use of ANCOVA. As in MANCOVA, the following assumptions of ANCOVA are made, covariates are correlated to the dependent variable, but not to each other, there are no outliers, normality of sample sizes, homogeneity of variance, linearity, and homogeneity of regression.

Multiple-regression was used to assess the variables and covariates used in ANCOVA and their influence on the dependent variables used in the present study analyses (Tabachnick & Fidell, 1996). The method of stepwise multiple-regression was chosen based on its ability to develop a subset of independent variables that are useful in predicting the dependent variable, and its ability to eliminate those IVs that do not provide any addition prediction in the equation (Tabachnick & Fidell, 1996). Multiple-regression was also chosen as the analysis is not dependent on the size of variance-covariance matrices (Tabachnick et al., 1996).

The order of the variables in stepwise multiple-regression are based on statistical criteria, and decisions about which variables are included and excluded from the equation are based entirely on the statistics computed from the sample data (Tabachnick et al., 1996). As research on community attitudes towards mental illness has not been driven by a guiding theoretical framework, the inclusion of independent variables was based on prior research that supports a relationship exists. Independent variables used in the multiple regression equation included the demographic variables of age, gender, ethnicity, occupation, and contact,

awareness and agreement. The dependent variables used in the multiple regression equation were the OMI subscales, Authoritarianism, Unsophisticated Benevolence, Mental Hygiene Ideology, Social Restrictiveness and Interpersonal Ideology, along with the Comfort in Interaction scale score. A limitation of Multiple-regression over ANCOVA is the inability to partial out variables that might influence the IVs on the DV therefore there is room for more interpretation. Another limitation of multiple-regression is that the inclusion of IVs is often grounded in theory (Tabachnick et al., 1996).

Outliers can also impact the regression solution. Therefore SPSS frequency test was run prior to analysis, which found there to be no outliers present in the data. ANCOVA is relatively robust against the violation of homogeneity of variance, as long as the ratio of largest to smallest sample size is not greater than 4:1 (Tabachnick et al., 1996). Using the 4:1 ratio as a guideline, ethnicity was excluded from the present study analysis. In the main analysis, the effect of time and area on attitudes towards mental illness, only age and gender were included as covariates, as awareness, agreement and occupation had a higher than 4:1 ratio. Contact was analysed by excluded cases which were in the 'no prior contact' matrices, as inclusion of these would have violated the assumption of homogeneity of variance. Separate analyses using ANCOVA were conducted on awareness, and agreement, occupation, and contact, as the cases to DV ratio would have been violated had these variables been included.

### *Data Screening*

Analysis was undertaken on the missing values from certain items of the measures used and found the pattern of missing values to be random. It was decided to keep the cases with missing data, as deleting the cases could result in a wider difference in sample numbers between the two questionnaire distributions, potentially impacting the statistical analysis (Norusis, 1998). Large data sets with randomly missing values pose less serious a risk, than do small data sets with randomly missing values<sup>8</sup>. Missing values were not computed for the demographic variables of the respondents, as it would be presumptuous and statistically flawed to calculate the age of a respondent who chose not to classify this information. There were nine missing values (non-specified demographic information) in the 1996 data and no missing values calculated for the 1995 data.

Missing data from the measures in the 1996 questionnaire was statistically computed via the SPSS package for the main analyses. The missing values were statistically calculated and replaced the missing data, by calculating the means of the available data for an item, prior to analysis. The mean value that is calculated is considered conservative. It reduces the variance of a variable, as the mean is closer to the missing value that it replaces (Norusis, 1998). For this reason a group mean was inserted. A group mean is the mean of all responses to a particular item. The decision to compute the missing values was based on the rationale that, the missing values were random throughout the data, and therefore less likely to pose a serious problem with data analysis (Norusis, 1998). In all analyses conducted with SPSS calculated mean values were used as opposed to data imputation or listwise

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<sup>8</sup> Unfortunately, there is no firm guidelines for how much missing data can be tolerated for a sample of any given size, and no analyses to determine if the missing values compared to the sample size were a risk was carried out (Norusis, 1998).

deletion of the entire data row containing the missing values (Arbuckle & Wothke, 1999; Tabachnick & Fidell, 1996). For confirmatory factor analysis within AMOS missing data was overcome by using estimation of means and intercepts in the calculation analysis (Arbuckle et al., 1999).



## CHAPTER EIGHT

## RESULTS

*Effects of Time on Attitudes*

The analyses of attitudes were divided into three main sections. The first set of analyses was directed at investigating the main aims of the present study, namely exploring the effects of time on attitudes among community members. There were relatively equal groups in the two data sets, but the 1995 data set did have a higher response rate with 16 more cases. Overall, observation of mean scores on the OMI subscales indicated that attitudes have remained relatively stable over time, with a slight increase in mean scores across the two distribution time periods (1995 and 1996 data collections). Mean scores increased on Authoritarianism, Social Restrictiveness and Interpersonal Etiology subscales. There was also an observed increase in total mean scores on the CI measure between 1995 and 1996 (see Table 3).

**Table 3.** Scores of the OMI and CI Measures for 1995 and 1996 Data Collections.

	Wanganui			
	1995		1996	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
OMI Subscales				
Authoritarianism	19.67	7.60	20.74	7.55
Benevolence	46.59	6.92	45.34	7.22
Mental Hygiene	29.60*	5.21	28.23*	4.83
Ideology				
Social	19.55	8.07	20.89	8.29
Restrictiveness				
Interpersonal	11.31	5.11	11.45	4.89
Etiology				
Comfort in Interaction				
CI Total	65.83*	6.37	73.06*	13.09

Note. Recoding has been carried out for negative scores.

\* $P < .05$

*Effects of Location on Attitudes*

Location of the respondents to a community mental health facility was also of interest in the present study. At the 1995 data collection, Area 1 had the highest mean scores on all OMI subscales, except on the OMI subscale Unsophisticated Benevolence. In contrast, Area 3 had the lowest mean scores on all OMI Subscales (see Table 4). At the 1996 data collection, OMI mean scores were lower than those from 1995, and tended to be similar among the three Areas.

**Table 4.** Scores on the OMI and CI Measures by Location and Time

	Area 1		Area 2		Area 3	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
OMI Subscales	1995					
Authoritarianism	21.16	8.60	18.98	7.12	18.87	6.92
Benevolence	45.29	8.71	48.20	5.04	46.28	6.34
Mental Hygiene Ideology	30.37	6.05	29.73	4.42	28.71	5.00
Social Restrictiveness	20.48	9.14	18.42	7.13	19.76	7.85
Interpersonal Etiology	12.13	5.63	11.00	4.94	10.80	4.73
Comfort in Interaction						
CI Total	66.03	5.14	65.48	5.84	65.97	7.89
OMI Subscales	1996					
Authoritarianism	22.06	8.08	21.30	8.57	19.23	6.30
Benevolence	45.04	8.36	44.81	7.00	45.62	6.34
Mental Hygiene Ideology	27.78	5.75	28.11	4.19	28.45	4.80
Social Restrictiveness	21.18	8.75	21.84	8.36	19.97	8.35
Interpersonal Etiology	12.46	5.92	11.59	4.47	10.47	4.29
Comfort in Interaction						
CI Total	72.54	11.24	72.83	14.79	74.13	13.22
OMI Subscales	Pooled 1995 and 1996					
Authoritarianism	21.61	8.34	20.14	7.85	19.05	6.61
Benevolence	45.17	8.54	22.41	6.02	45.95	6.34
Mental Hygiene Ideology	29.08	5.90	28.92	4.31	28.58	4.90
Social Restrictiveness	20.83	8.95	20.13	7.75	19.87	8.10
Interpersonal Etiology	12.30	5.78	11.30	4.71	10.64	4.51
Comfort in Interaction						
CI Total	69.29*	8.19	69.16*	10.32	70.05*	10.56

Note. Recoding has been carried out for negative scores. Pooled 1995 and 1996 data represents data merged into a single data set.

\* $p < .05$

Overall, Area 1 had higher mean scores on the OMI subscales, Authoritarianism, and Interpersonal Etiology. Furthermore, Area 2 had the highest mean score on the OMI subscale Social Restrictiveness. Area 3 had higher mean scores on the OMI subscales

Unsophisticated Benevolence, and Mental Hygiene Ideology. CI mean total scores increased among Area 1, Area 2 and Area 3 between 1995 and 1996 data collections (see Table 4). Similar CI mean scores were observed among the three areas in the 1995 data collection, and again in the 1996 data collection.

#### *Effects of Location and Time on Attitudes*

Multiple-regression was used to assess the reliability of covariates (an assumption of ANCOVA), in the present study. Included in the analysis were the independent variables, time and area, and covariates awareness, agreement, contact and demographic variables, age, ethnicity, gender and occupation. The dependent variables used in each multiple-regression analysis were, the five OMI subscales; Authoritarianism, Unsophisticated Benevolence, Mental Health Ideology, Social restrictiveness, and Interpersonal Etiology, and the Comfort in Interaction Scale. Variables that were found to have statistical significance here will be included in the ANCOVA analysis.

Using stepwise multiple-regression, agreement with the facility was entered first on all five of the OMI subscales. Agreement with the proposed facility was found to influence attitudes towards mental illness. Agreement explained 12% of the variance on the subscale Authoritarianism ( $F(1, 224) = 30.99, p < .001$ ), 11% of the variance on the subscale Unsophisticated Benevolence ( $F(1, 224) = 28.58, p < .001$ ), 15% of the variance on the subscale Mental Health Ideology ( $F(1, 224) = 38.10, p < .001$ ), 23% of the variance on the subscale Social Restrictiveness ( $F(1, 224) = 68.15, p < .001$ ), and 8% of the variance, on the subscale Interpersonal Etiology ( $F(1, 224) = 20.43, p < .001$ ).

The variables awareness and occupation were also entered second ( $F(1, 223) = 18.20, p < .05$ ) and third ( $F(1, 222) = 13.64, p < .05$ ), in stepwise multiple-regression of the OMI subscale Authoritarianism; each explaining a further 2% of the variance.

Occupation was additionally entered second on the OMI subscale Social Restrictiveness, explaining a further 3% of the variance ( $F(1, 223) = 40.19, p < .05$ ). The variable time, was entered second on both the OMI subscale Unsophisticated Benevolence ( $F(1, 223) = 16.94, p < .05$ ), and Mental Health Ideology ( $F(1, 223) = 24.64, p < .05$ ), explaining a further 2% and 4% respectively of the variance.

Other variables that were found to have an effect on the variance of the dependent variables were, area and age. Area was entered third on the OMI Mental Health Ideology subscale ( $F(1, 222) = 18.12, p < .05$ ), explaining a further 2% of the variance. Age was entered fourth on the Mental Health Ideology subscale ( $F(1, 221) = 14.85, p < .05$ ), explaining a further 2% of the variance, and entered second on the Interpersonal Etiology subscale ( $F(1, 223) = 14.50, p < .05$ ), explaining a further 3% of the variance.

On the Comfort in Interaction scale, time was entered first and found to explain 16% of the variance ( $F(1, 224) = 41.62, p < .001$ ). Agreement was entered second, and found to explain a further 7% of the variance ( $F(1, 223) = 32.92, p < .001$ ). Comfort in Interaction was associated with both changes in time, and agreement with the facility in Area 1 of the present study. Demographic variables, gender, ethnicity, and prior contact with people with mental illness were not found to be significantly related to attitudes towards people with mental illness on any of the OMI subscales or the CI scale. Therefore, these variables were excluded from the ANCOVA analyses of time and location on attitudes towards people with mental illness.

A 2 X 3 between-subjects analysis of covariance was performed on the six dependent variables: OMI subscales, Authoritarianism, Unsophisticated Benevolence, Mental Hygiene Ideology, Social Restrictiveness, Interpersonal Etiology, and the Comfort in Interaction scale score. Independent variables were time (1995 and 1996 data collection) and Area (Area 1, Area 2, and Area 3).

The results from the ANCOVA analyses showed that time and location to a mental health facility was not statistically significant in influencing attitudes towards people with mental illness on the OMI subscales; Authoritarianism ( $F(5, 272) = 0.431, p > .05$ ), Unsophisticated Benevolence ( $F(5, 272) = 1.169, p > .05$ ), Social Restrictiveness ( $F(5, 272) = 0.887, p > .05$ ), and Interpersonal Etiology ( $F(5, 272) = 0.403, p > .05$ ). There is however, partial support for the effect of time on attitudes (hypothesis 1). Time had a significant influence on attitudes towards mental illness on the OMI subscale Mental Hygiene Ideology ( $F(5, 272) = 6.969, p < .05$ ), and a significant influence on the level of comfort in interacting with people with mental illness on the CI scale ( $F(5, 272) = 39.126, p < .05$ ).

#### *Effects of Age on Attitudes*

The second section of analyses examined the effects of demographic variables on attitudes towards people with mental illness, such as age, gender, occupation and ethnicity<sup>1</sup>. Similar percentage of each age group was found across the 1995 and 1996 data collections. Less proportion of total responses in both data collections came from respondents aged 65 and above, which on average consisted of 8% of the response sample.

In both the 1995 data collection and 1996 data collection, the older age group tend to have higher mean scores on the OMI subscales, Authoritarianism, Social restrictiveness, and Interpersonal Etiology (see Table 5). The older age group also have lower mean scores on the Comfort in Interaction scale in both 1995 and 1996 data

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<sup>1</sup> Ethnicity was unable to be included in the analyses due to large unequal covariance-matrices. For example, with both 1995 and 1996 data collections combined, there were a total of 17 Maori, 3 Asian, and 1 Pacific Islander respondents to the survey, compared to 239 NZ/European respondents.

collections. Higher mean scores on the CI scale were observed among the younger age group in the first data collection, and the middle age group in the second data collection.

**Table 5.** Scores on the OMI and CI Measures as a Function of Age

	Young		Middle-age		Older	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
OMI Subscales	1995					
Authoritarianism	19.13	4.14	17.23	6.65	24.16	2.61
Benevolence	46.38	5.44	47.62	5.91	47.00	2.81
Mental Hygiene Ideology	28.30	4.01	31.55	3.64	29.62	1.89
Social Restrictiveness	17.84	4.26	16.87	5.93	23.63	2.73
Interpersonal Etiology	10.83	2.35	10.48	3.70	14.06	2.26
Comfort in Interaction						
CI Total	67.55	3.92	66.17	5.66	64.11	3.10
OMI Subscales	1996					
Authoritarianism	23.24	3.05	17.82	3.76	24.01	2.99
Benevolence	43.59	3.51	47.22	5.26	45.15	3.10
Mental Hygiene Ideology	28.26	3.02	28.51	3.73	28.99	1.30
Social Restrictiveness	21.96	5.26	17.92	4.17	26.11	2.97
Interpersonal Etiology	11.45	2.36	10.44	2.33	12.92	1.93
Comfort in Interaction						
CI Total	72.83	6.83	77.21	8.07	68.08	4.97
OMI Subscales	Pooled 1995 and 1996					
Authoritarianism	16.19*	3.60	17.53*	5.18	24.09*	2.80
Benevolence	44.99	4.48	47.42	5.59	46.08	2.96
Mental Hygiene Ideology	28.28	3.52	30.03	3.69	29.31	1.60
Social Restrictiveness	19.90*	4.76	17.40*	5.05	24.87*	2.85
Interpersonal Etiology	11.14*	2.36	10.62*	3.02	13.49*	2.10
Comfort in Interaction						
CI Total	70.19	5.38	71.69	6.87	66.10	4.04

Note. Recoding has been carried out for negative scores. Pooled 1995 and 1996 data represents data merged into a single data set.

\*  $p < .05$

Results from the ANCOVA analysis, show age to be a significant influence on attitudes towards mental illness on the OMI subscales, Authoritarianism ( $F(5, 272) = 6.63$ ,  $p < .05$ ), Social Restrictiveness ( $F(5, 272) = 11.61$ ,  $p < .05$ ), and Interpersonal Etiology ( $F(5, 272) = 11.05$ ,  $p < .05$ ). Age was not a significant influence on the level of comfort in interacting with people who have a mental illness, as indicated on the Comfort in Interaction scale ( $F(5, 272) = 6.63$ ,  $p > .05$ ).

### Effects of Gender on Attitudes

Over half of respondents to the survey were female (65%), with similar proportions of male and female respondents between the 1995 and 1996 data collections. On average males tended to have lower overall mean scores on the OMI and CI scales in both data collections (see Table 6). Females had slightly higher scores on Authoritarianism, Mental Hygiene Ideology, Social Restrictiveness, and Interpersonal Etiology subscales of the OMI.

**Table 6.** Mean Gender Scores on the OMI and CI Measures.

	Female			Male	
	<i>M</i>	<i>SD</i>		<i>M</i>	<i>SD</i>
OMI Subscales			1995		
Authoritarianism	20.14	7.60		19.18	7.45
Benevolence	45.33	6.30		47.19	7.23
Mental Hygiene Ideology	29.70	4.71		29.53	5.55
Social Restrictiveness	20.94	7.37		18.75	8.30
Interpersonal Etiology	12.22	4.50		10.66	5.30
Comfort in Interaction					
CI Total	66.54	6.11		65.46	6.58
OMI Subscales			1996		
Authoritarianism	21.80	8.47		20.27	7.21
Benevolence	45.86	6.90		45.13	7.49
Mental Hygiene Ideology	29.22	3.60		27.78	5.31
Social Restrictiveness	22.10	8.19		20.33	8.44
Interpersonal Etiology	11.48	4.71		11.40	5.06
Comfort in Interaction					
CI Total	69.49	11.65		75.15	13.31
OMI Subscales			Pooled 1995 and 1996		
Authoritarianism	20.97	8.04		19.73	7.33
Benevolence	45.60	6.60		46.16	7.36
Mental Hygiene Ideology	29.46	4.16		28.66	5.43
Social Restrictiveness	21.52	7.78		19.54	8.37
Interpersonal Etiology	11.85	4.61		11.03	5.18
Comfort in Interaction					
CI Total	68.02	8.88		70.31	9.95

*Note.* Recoding has been carried out for negative scores. Pooled 1995 and 1996 data represents data merged into a single data set.

Results from the ANCOVA analyses, found that gender was not a significant influence on attitudes on any of the OMI subscales: Authoritarianism, ( $F(2, 272) = 1.144$ ,  $p > .05$ ), Benevolence ( $F(2, 272) = 0.461$ ,  $p > .05$ ), Mental Hygiene Ideology ( $F(2, 272) = 0.694$ ,  $p > .05$ ), Social Restrictiveness ( $F(2, 272) = 2.388$ ,  $p > .05$ ), and Interpersonal Etiology ( $F(2, 272) = 0.694$ ,  $p > .05$ ).

0.461,  $p > .05$ ). Gender was also found to be not significant on the CI scale, ( $F(1, 272) = 2.621, p > .05$ ).

### *Effects of Occupation on Attitudes*

Another demographic variables that was of interest in the present study was occupation. More people in the 1995 data collection were employed (48%), than either unemployed (33%), or retired (19%) (see Table 2). A similar distribution was obtained in the 1996 data collection, with a larger number of unemployed respondents (26%) than retired (18%) or employed (44%). Overall, respondents who were retired tended to have higher scores on the OMI in the 1995 data collections (see Table 7). In the 1996 data collection, the employed respondents tended to have higher scores on the OMI subscales.

**Table 7.** Mean Occupation Scores on the OMI and CI Measures

	Unemployed		Employed		Retired	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
OMI Subscales	1995					
Authoritarianism	18.44	6.92	18.80	7.47	23.33	7.12
Benevolence	46.60	7.50	46.82	7.00	46.43	5.35
Mental Hygiene Ideology	30.17	5.28	28.96	5.48	30.17	4.31
Social Restrictiveness	17.62	6.92	18.81	8.30	24.37	7.25
Interpersonal Etiology	10.87	4.91	10.39	4.67	14.06	5.36
Comfort in Interaction						
CI Total	65.60	6.80	66.25	6.29	65.22	6.03
OMI Subscales	1996					
Authoritarianism	19.40	4.03	21.39	7.17	18.66	7.78
Benevolence	45.26	6.44	44.42	6.80	45.66	7.75
Mental Hygiene Ideology	29.02	3.46	27.62	5.31	27.95	5.39
Social Restrictiveness	18.68	6.03	21.08	8.24	19.66	8.91
Interpersonal Etiology	10.85	3.44	13.04	4.98	10.02	4.93
Comfort in Interaction						
CI Total	74.38	17.55	73.14	12.81	74.71	12.10
OMI Subscales	Pooled 1995 and 1996					
Authoritarianism	18.92	5.48	20.10	7.32	21.00	7.45
Benevolence	45.93	6.97	45.62	6.90	46.05	6.55
Mental Hygiene Ideology	29.60	4.37	28.29	5.40	29.06	4.85
Social Restrictiveness	18.15	6.48	19.95	8.27	22.02	8.08
Interpersonal Etiology	10.86	4.18	11.72	4.83	12.04	5.15
Comfort in Interaction						
CI Total	69.99*	12.18	69.70*	9.55	69.97*	9.07

Note. Recoding has been carried out for negative scores. Pooled 1995 and 1996 data represents data merged into a single data set.

\*  $p < .05$

Results from the ANCOVA analyses found that occupation was not significant in influencing attitudes on the OMI subscales; Authoritarianism ( $F(5, 252) = 1.831, p > .05$ ), Benevolence ( $F(5, 252) = 0.017, p > .05$ ), Mental Health Hygiene ( $F(5, 252) = 0.581, p > .05$ ), Social Restrictiveness ( $F(5, 252) = 2.831, p > .05$ ) and Interpersonal Etiology ( $F(5, 252) = 0.002, p > .05$ ). However, occupation was found to be a significant influence in comfort in interaction with people who have a mental illness ( $F(2, 256) = 4.729, p < .05$ ).

### *Effects of Awareness on Attitudes*

The third set of analyses were designed to explore variables such as awareness, agreement, and prior contact with people with mental illness on attitudes. Respondents were also asked about their awareness of the community mental health facility. A large proportion of the respondents in the present study were aware of the community mental health facility (85%). However, awareness did not always indicate that respondents would also agree with the facility. Just under half of the respondents (40%) who were aware of the facility also disagreed with the placement of the community mental health facility (see Table 8).

**Table 8.** Respondents Agreement and Awareness of the Community Mental Health Facility

	Agree		Disagree	
	<i>N</i>	%	<i>N</i>	%
Aware	125	45	111	40
Unaware	26	9	15	6

Higher scores were found on the OMI subscales, Authoritarianism, Mental Hygiene Ideology, and Interpersonal Etiology, between 1995 and 1996 data collections (see Table 9). Mean scores on the CI scale were higher in the 1995 data collection in those respondents that were unaware of the community mental health facility. Comfort in

Interaction scores increased between 1995 and 1996 data collection in both those who were aware and unaware of the community mental health facility.

**Table 9.** Scores on the OMI and CI Scales by Awareness of the Community Mental Health Facility and Attitudes

	Aware of facility			Unaware of facility	
	<i>M</i>	<i>SD</i>		<i>M</i>	<i>SD</i>
OMI Subscales			1995		
Authoritarianism	19.45	7.66		21.05	7.65
Benevolence	46.60	6.97		46.11	6.83
Mental Hygiene Ideology	29.54	5.23		29.88	5.38
Social Restrictiveness	19.61	7.93		19.65	9.42
Interpersonal Etiology	11.22	5.13		11.71	5.27
Comfort in Interaction					
CI Total	65.76	6.41		66.14	6.54
OMI Subscales			1996		
Authoritarianism	20.28	6.86		22.44	10.48
Benevolence	45.39	7.28		45.68	7.73
Mental Hygiene Ideology	28.20	5.05		28.39	4.33
Social Restrictiveness	20.99	8.07		19.61	9.79
Interpersonal Etiology	11.36	4.70		11.68	6.20
Comfort in Interaction					
CI Total	73.72	12.24		73.20	16.37
OMI Subscales			Pooled 1995 and 1996		
Authoritarianism	19.87*	7.26		21.75*	9.07
Benevolence	46.00	7.13		45.90	7.28
Mental Hygiene Ideology	28.87	5.14		29.14	4.86
Social Restrictiveness	30.11	8.00		19.63	9.61
Interpersonal Etiology	11.29	4.92		11.70	5.74
Comfort in Interaction					
CI Total	69.74	9.33		69.67	11.46

Note. Recoding has been carried out for negative scores. Pooled 1995 and 1996 data represents data merged into a single data set.

\*  $p < .05$

### *Effects of Awareness and Agreement on Attitudes*

ANCOVA analyses were carried out on Agreement using Awareness of the facility as a covariate. Agreement with the placement of the community mental health facility was found to be a significant influence on attitudes towards mental illness, on all OMI subscales; Authoritarianism ( $F(1, 275) = 39.15, p < .05$ ), Unsophisticated Benevolence ( $F(1, 275) = 32.66, p < .05$ ), Mental Hygiene Ideology ( $F(1, 275) = 41.19, p < .05$ ), Social

Restrictiveness ( $F(1, 275) = 87.02, p < .05$ ), and Interpersonal Etiology ( $F(1, 275) = 25.89, p < .05$ ).

Agreement was also found to be a significant influence on comfort in interaction with people who have a mental illness, ( $F(1, 275) = 31.047, p < .05$ ). Awareness of the community mental health facility was found to be a significant in influencing attitudes towards mental illness on the OMI subscale, Authoritarianism ( $F(1, 275) = 5.61, p < .05$ ). Awareness was not found to be statistically significant on any other OMI subscale or the CI scale.

#### *Effects of Contact on Attitudes*

Prior contact with people who have a mental illness was also investigated in the present study. The majority of respondents had had prior contact (96%), with people who have a mental illness. Female respondents to the survey had slightly higher levels of contact by proportion, with people with a mental illness than males, by a margin of 3%. Overall, those respondents who had had no prior contact with people with mental illness (4%), tended to have higher mean scores on the OMI subscales in the 1995 and 1996 data collections, and higher CI mean scores in the 1995 data collection (see Table 10). With the exception of those who had had no prior contact with people who have a mental illness, which showed a decrease from 1995 to 1996 in mean scores, scores on the CI increased between 1995 and 1996 data collections.

**Table 10.** Scores on the OMI and CI Measures as a Function of Prior Contact

	None		Levels of Contact Rare to moderate		Often to extensive	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
OMI Subscales	1995					
Authoritarianism	23.51	13.19	19.71	7.45	18.96	7.23
Benevolence	46.46	9.27	46.67	6.33	46.04	8.13
Mental Hygiene Ideology	31.91	3.93	29.48	5.01	29.73	5.89
Social Restrictiveness	25.59	11.28	19.57	7.76	19.21	8.87
Interpersonal Etiology	12.55	7.01	11.47	5.13	11.21	4.61
Comfort in Interaction						
CI Total	67.18	6.18	65.69	6.11	65.42	7.10
OMI Subscales	1996					
Authoritarianism	20.89	9.41	20.47	7.12	21.06	9.99
Benevolence	41.20	6.95	44.55	7.33	47.40	7.57
Mental Hygiene Ideology	29.08	2.12	27.53	4.83	29.79	4.46
Social Restrictiveness	24.14	9.01	21.35	8.38	19.27	8.85
Interpersonal Etiology	13.75	2.22	11.11	4.86	11.99	5.36
Comfort in Interaction						
CI Total	64.50	6.45	70.68	10.99	79.19	15.36
OMI Subscales	Pooled 1995 and 1996					
Authoritarianism	22.20	11.30	20.09	7.29	20.01	8.61
Benevolence	43.83	8.11	45.61	6.83	46.71	7.85
Mental Hygiene Ideology	30.50	3.03	28.51	4.92	29.76	5.18
Social Restrictiveness	24.87	10.15	20.46	8.07	19.24	8.86
Interpersonal Etiology	13.15	10.15	11.29	5.00	11.60	4.99
Comfort in Interaction						
CI Total*	65.84*	6.32	68.19*	8.55	72.31*	11.23

Note. Recoding has been carried out for negative scores. Pooled 1995 and 1996 data represents data merged into a single data set. Significance is indicative of levels of contact, rare to moderate and often to extensive.

\* $p < .05$

ANOVA was used to analyse prior contact and attitudes towards mental illness.

The category none, was excluded from the analyses as cases were low and would have exceeded the less than 4:1 ratio assumption of the test. Degree of contact was found to be a significant influence on interaction with people with mental illness. Results from the analyses found contact to be a significant influence on attitudes towards mental illness on the Comfort in Interaction scale ( $F(1, 310) = 11.53, p < .001$ ). Contact was not found to be significant on any of the OMI subscales.

## CHAPTER NINE

### DISCUSSION

#### *Review of main aims and findings*

The present study had three main aims. Firstly, it aimed to investigate the effects that location had on attitudes toward mental illness among the community. Secondly, the study aimed to investigate if attitudes toward mental illness changed over time. Thirdly, the study aimed to investigate the effects of socio-economic variables, age, gender, ethnicity, and occupation on attitudes towards mental illness, as well as the effects of prior contact, awareness of, and agreement with a community mental health facility, on attitudes toward people with mental illness. The general aims were investigated using two measures of attitude, the Opinions about Mental Illness Scale (Cohen & Struening, 1959), and the Comfort in Interaction Scale (Beckwith & Mathews, 1994).

The first hypothesis of the present study was to examine attitudes based on respondent's location to the community mental health facility. Specifically it was hypothesised that, people who lived in closer proximity to the community mental health facility would have more negative attitudes toward people with mental illness. This hypothesis was not supported. This particular finding is consistent with prior research that has investigated the effects of location on attitudes toward mental illness and found that location does not influence attitudes (e.g., Rothbart, 1973; Smith, 1981). Location was not significant on any subscale of the OMI or on the CI

measure used in the present study. One explanation for the lack of difference in attitudes by location is that residents were made aware of the facility prior to its placement and educated about the community mental health facility, its patients and level of security involved.

Awareness of the facility was included as a covariate in the present study analyses. Prior research indicates that the majority of the public are not aware of mental health facilities in their community (Dear & Taylor, 1982; Heinemann, Perlmutter, & Yudin, 1974; Huxley, 1993; Morrison & Libow, 1977). However in contrast to the literature, the present study found that 85% of respondents were aware of the community mental health facility. The high degree of awareness is likely to be due to the increase in media attention that the facility received prior to its establishment in 1995 (post the closure of Lake Alice psychiatric hospital).

The second hypothesis of the present study was to examine the impact of time on attitudes toward mental illness among community members. Specifically, it was hypothesised that attitudes would become more positive over time. This hypothesis was partially supported. Time was found to be significant on the Mental Hygiene Ideology subscale of the OMI, and Comfort in Interaction scale. This finding indicates that there was an increase in the community's readiness to accept and interact with people who have a mental illness. This finding is similar to another New Zealand study that concluded, New Zealand communities both welcome information about mental illness, and offer a positive outlook for community-based rehabilitation (Ng, Martin & Romans, 1995). In contrast to hypotheses, observation of the OMI scores between the two data collections indicate that attitudes were more positive in the 1995 data collection. Prior research suggests that attitude

scores on the OMI typically increase in a favourable direction over time, rather than decrease as seen in the present study findings (e.g., Drolen, 1993). One explanation is that more respondents were aware of the facility, and agreed with its placement in the community in the 1995 data collection, which possibly lead to the increase in positive attitudes. It also raises the possibility that respondents to the survey in 1995 were of a particular sub-group that had positive attitudes toward people with mental illness. By comparison, to the OMI used in the study, the CI scale showed a significant increase in positive attitudes toward people with mental illness over time. This suggested that over time more people were willing to interact with people who have a mental illness. One possible explanation for the increase in CI scores, could be the increase in level of contact with the mentally ill among the sample in the 1996 data collection. Just over half of the respondents (52%) to the survey in the 1996 data collection had had extensive contact with people with mental illness than in the first data collection.

Even still, the mean scores on the OMI and CI, of the present study suggest that overall, attitudes among community members surveyed were positive toward people with mental illness. This finding supports other studies that have also found attitudes are becoming more positive toward mental illness (e.g., Gething, 1986; Halpert, 1969; Huxley, 1993; Rowe, 2001). However, it was in contrast to the predominate research conducted in Europe and North America, that reports attitudes toward people with mental illness are predominately negative (e.g., Nunnally, 1961; Rabkin et al., 1984; Stuart et al, 2001).

The third hypothesis of the present study, examined the effects of age on attitudes toward people with mental illness. Specifically, it was hypothesised that

younger respondents (under 29 years of age) would have more positive attitudes toward people with mental illness. This hypothesis was not supported. In contrast, the Middle-age group, aged 39 to 64, were found to hold more positive attitudes toward people with mental illness than both the younger and older age groups in the present study. Age was found to be a significant influence on Authoritarianism, Social Restrictiveness and the Interpersonal Etiology subscales of the OMI measure. This finding was consistent with prior research (Rowe, 2001; Sellick & Goodear, 1995), and suggested that middle-aged respondents were more likely to regard people with mental illness as a medically caused illness that is treatable, and in need of support and care.

The fourth hypothesis of the present study, examined the effects of gender on attitudes toward people with mental illness. Specifically, it was hypothesised that there would be no gender differences on attitudes towards people with mental illness. This hypothesis was supported. It was also supported by prior New Zealand community attitude research (Green et al., 1987; Walkey et al., 1981). However, the finding was in contrast to other studies that have used the OMI that have found gender to be a significant influence on attitudes (e.g., Leong, 1999; Rowe, 2001). One possible reason for the contrast in findings using the OMI was that gender was influenced by other variables that were used as covariates in the present study analysis. For example, gender was not found to be a significant contributor to attitudes toward mental illness, when other factors such as age and occupation were controlled for in the present study. Age and occupation were not controlled for in the studies by Leong (1999) and Rowe (2001).

The fifth hypothesis of the present study, examined the effects of ethnicity on attitudes toward people with mental illness. Specifically, it was hypothesised that there would be differences among New Zealand European, Maori, Asian and Pacific Islander ethnic groups, on attitudes toward people with mental illness. This hypothesis was unable to be tested in the present study due to low sample sizes of Maori, Asian and Pacific Islander ethnic groups. Although observation of the mean scores on the OMI and CI measures, indicated that attitudes toward people with mental illness were positive among those respondents to the survey, in both 1995 and 1996 data collections.

The sixth hypothesis of the present study, examined the effects of occupation on attitudes toward people with mental illness among the community. Specifically, it was hypothesised that occupation will influence attitudes toward mental illness. This hypothesis was only partially supported with significance found on the Comfort in Interaction scale. However, as the mean scores were similar across unemployed, employed and retired groups, the results are unable to be clearly interpreted. Although no other studies have examined the effects of occupation among community samples on attitudes toward people with mental illness, prior research supports occupation to be a significant influence on attitudes among various types of health professions (e.g., Eker et al., 1991; Huit & Elston, 1991; Mukherjee et al., 2002). It is possible that further investigation into specific workforces such as corporate versus labouring might produce different attitudes toward people with mental illness.

The seventh hypothesis of the present study, examined the effects of prior contact with people with mental illness on attitudes toward people with mental

illness. Specifically, it was hypothesised that those with prior contact with people with mental illness would have positive attitudes toward people with mental illness. This hypothesis was partially supported. This finding indicated that those respondents who had high levels of prior contact with people who have a mental illness were more comfortable in interacting with people who have a mental illness. This finding is supported by prior research that has consistently reported that contact with people with mental illness influences positive attitudes toward people with mental illness, as well as increases the level of comfort in interacting with people with mental illness (e.g., Arens, 1993; Beckwith & Mathews, 1994; Gething & Wheeler, 1992). One possibility for this finding is that there was a high level of respondents who knew of someone who had a mental illness or had a mental illness themselves, as very few respondents had had no prior contact with people with mental illness. In fact it was interesting to note, that 98% of the sample had had prior contact with people with a mental illness. Female respondents (62%) were found to have had the most contact with people with a mental illness, although gender was found to be a non-significant influence on attitudes in the present study.

The eighth hypothesis of the present study, examined the effects of awareness of the community mental health facility on attitudes toward people with a mental illness. Specifically, it was hypothesised that awareness would be a significant influence on attitudes toward people with a mental illness. This hypothesis was partially supported. Awareness was found to be significant on the CI measure, but none of the OMI sub-scales. This finding indicated that those who were aware of the community mental health facility were more comfortable in interacting with people with mental illness. One explanation for the lack of

significance of awareness on the OMI subscales could be due to the increased media attention of the community mental health facility prior to its establishment, and thus increased awareness.

The ninth hypothesis of the present study, examined the effects of agreement of the community mental health facility based on being aware of such facility. Specifically, it was hypothesised that people who were aware of the community mental health facility would be more likely to disagree with its placement. This hypothesis was not supported. It was found that, of the 85% of people who responded to the survey that were aware of the community mental health facility, slightly less than half (47%) disagreed with placement within the community. In contrast, prior studies suggest that community members who are aware of a community mental health facility tend to disagree with its placement in the community (i.e., Rabkin et al., 1979, 1984). Furthermore, agreement with the facility was found to be significantly correlated on all OMI subscales, influencing positive attitudes toward the community mental health facility. This result suggests that the majority of respondents from the present study are supportive of people with mental illness living in their community. It also supports the finding that respondents of the present study hold predominately positive attitudes toward people with mental illness, in that the majority agreed with the community placement.

### *Limitations to the Present Study*

A number of limitations to the present study have been noted. Firstly, the response rate from the 1995 data collected was 15%, with a 16% response rate

from the 1996 data collection. This is not as high as preferred however, the sample size of the present study is similar in size to other community attitude studies conducted in New Zealand (i.e., Blizard, 1968; Green et al., 1987). Moreover, in survey research there is an expectation of only a 20% response rate from survey's (Frazer & Lawley, 2000), which is similar to the present studies response rate. However, despite, this potential limitation, it is reassuring that the sample sizes were consistent across time and by area.

Secondly, the sampling strategy of the present study was limited, by non-random selection, unequal sample sizes and by controlling for socio-economic status of locations. Non-random selection of both the 1995 and 1996 samples raises the question if independence is different from representativeness, as it is a possibility that some people from 1995 also participated in the 1996 questionnaire. In addition, both data sets were combined to examine the effects of time on attitudes. Therefore, results are likely to be limited in ability to accurately ascertain change in attitudes over time, as attitude research indicates that attitudes are fairly stable and consistent over time (Olsen & Zanna, 1993).

The sampling strategy for the present study did not yield equal sample sizes for the demographic variables, age, gender, occupation and ethnicity, and the covariate contact. Larger more equally distributed data would have been optimal. Large variances in the sample size can inflate type I and type II error (Bobko, 2001; Tabachnick & Fidell, 2001). Sampling strategy could have been improved by over-sampling, for example specific ethnic groups such as Maori, Asian and Pacific Islanders, as other community research has (i.e., Flett, Kazantzis, Long, MacDonald & Millar, 2002). The present study had poor representative samples of Maori, Asian

and Pacific Islander ethnicities, and therefore such groups were unable to be statistically analysed. However, the response rate for New Zealand European, and other ethnic groups was found to be similar to another study investigating community attitudes toward people with mental illness in New Zealand (Ng et al., 1995).

Locations chosen for a comparison to the proposed community mental health facility were limited to socio-economic status, and to areas within the Wanganui Community, in order to draw comparisons among the three areas included in the design. The limitation to the Wanganui Community reflects the limited scope of the present study. An existing community mental health service that was attached to the hospital in Wanganui was used as a comparative location. Ideally, an existing community outpatient unit with residents of the same severity in mental illness would have been used for the comparison, had it been available. Brockington, Hall and Levings (1993) found that attitudes of the community differed depending on being a resident in the area of an existing hospital based community mental health care facility, and being a resident in the area of an existing community outpatient unit.

Furthermore, residents of the community mental health facility were chronically mentally ill. Given that the community mental health facility used as the basis for the present study design, was the first of its kind in Wanganui in 1995 (in the past people who had a mental illness requiring care resided at Lake Alice psychiatric hospital near Marton), it would be reasonable to expect community members to be more concerned about facility. The chronically mentally ill, which resided in the community mental health facility in the present study, is considered

unrepresentative of general residents among community mental health outpatient units (Hall et al., 1995).

Moreover, the present study was timely. The study was carried out before and after the closure of a large psychiatric hospital, as part of the deinstitutionalisation movement. Therefore replication of the present study will be difficult. The success of the community-based rehabilitation depended on a number of factors. For example, support and acceptance, of the 12 remaining Lake Alice psychiatric patients into a community mental health facility in Wanganui. The movement of the chronically mentally ill to a community mental health facility, post the closure of a well established psychiatric hospitals are uncommon circumstances. It further highlights the limited ability to generalise the present research findings to other community attitudes. Ideally, the design of the present study would have benefited if study of similar nature had been carried out in New Zealand, at a similar time period. This would enable wider more extensive conclusions about community attitudes in 1995 and 1996 to be drawn. However, given the rare opportunity of the study, the present study is able to provide a marker point from which further research can compare attitudes with community attitudes post deinstitutionalisation.

Thirdly, the CI measure is not widely used in research on community attitudes toward mental illness, unlike the Interaction with Disabled Persons Scale that the items were derived from. The OMI measure is a widely used measure in research on attitudes toward mental illness, although the wording of the items has been criticised to be out of date (Antonak, 1995). However, internal reliability of the measure using the present study sample suggests that the measure is still able to

be used in future research on community attitudes toward mental illness despite this limitation. Moreover, given that a consistent number of variables investigated in the present study (time, contact, occupation, awareness and agreement) were found to be significant on the CI, but that no variables were consistently significant on the subscales of the OMI, one is led to question the validity of the CI measure in the present sample. By comparison, internal consistency of the CI indicated that the CI would be a useful measure to use in future studies. In particular, in research that investigates the impact of attitudes on behaviour toward people with mental illness. The CI does offer an interpretation that differs from the OMI, in that it potentially indicates how respondents will interact with people with mental illness, based on their level of comfort.

The mean scores of the CI scale were however, lower than those reported by the authors of the scale, Beckwith and Mathews (1994), which averaged around 100. However, their sample did include nursing students, physical education students, and human movement studies students, unlike the community sample used in the present study. The higher scores found in Beckwith and Mathews (1994), could be due to the student population. Level of education was not measured for in the present study questionnaire. This could account for the lower mean scores on the CI, as only 28% of people in Wanganui aged 15 years or over had a post-school qualification, compared with 32% for New Zealand as a whole (Statistics New Zealand, 2001). Prior studies have shown that education has an effect on community attitudes toward mental illness. In particular, when combined with age (e.g., Sellick et al., 1985). The variables age and education have been reported in prior research to demonstrate a similar influence on attitudes as

occupation (e.g., Drolen, 1993; Sellick & Goodear, 1985). In the present study, both occupation and age had a significant effect on a number of the OMI subscales, indicating a strong possibility that education would also have influenced attitudes toward people with mental illness in the present study.

Furthermore, although the level of prior contact was examined in the present study, the present questionnaire did not further explore the extent of prior contact respondents had with people with mental illness. In particular, the questionnaire did not ask respondents if they personally knew someone who had a mental illness, or they themselves had a mental illness. Such questions have been included in prior research that have investigated the effects of contact on attitudes toward people with mental illness, and found to be indicative of positive attitudes (Arens, 1993; Beckwith & Mathews, 1994; Shokoohi-Yekta & Retish, 1991). Therefore, the present study was limited, in its ability to examine the impact of prior contact on community attitudes toward people with mental illness.

Also worth noting is the increased media attention that the community mental health facility received at the time of the 1995 data collection (see Appendix G). The increase in media attention, poses a potential threat to the internal validity of the present study (Coolican, 1999), as it increased the awareness of the facility (i.e., Morrison & Libow, 1977). Prior research indicates that the majority (up to 75%) of community members are unaware of mental health facilities in their area (Dear & Taylor, 1982; Heinemann, Perlmutter, & Yudin, 1974; Huxley, 1993; Morrison & Libow, 1977). In contrast, the present study found that 88% of community members surveyed in 1995, and 81% of community members surveyed in 1996 were aware of the community mental health facility. This finding suggested that a

ceiling effect occurred, where the community's awareness of the mental health facility was inflated by media (Coolican, 1999).

### *Further Research*

Research of community attitudes toward mental illness has produced a number of interesting findings in Europe and North America since deinstitutionalisation was implemented in the 1950s. The findings from the present study suggest that attitudes toward mental illness among community members are becoming more positive. Prior research has thus far, demonstrated that there is an inconsistency in the findings of demographic variables such as age, gender, ethnicity, and occupation, on attitudes among the general public toward people with mental illness. A main limitation of the research to date is that there is no theory driving research on community attitudes toward people with mental illness. A well delivered theory could create challenging research. One place to start is examining previous research on community attitudes and attitude theory, or the relationship between attitudes and behaviour.

Other areas of research that need to be readdressed are the measures used in research designed to examine community attitudes toward mental illness. The comfort in Interaction scale needs to be validated against community samples. Previously, the CI has been used in research on university samples, which are found to have higher mean scores. Comparison of university samples to a community sample is not accurate. In addition, the OMI was developed in 1959, and its items reflect knowledge about mental illness at the time. Forty years on, it is likely that the general public have a greater understanding of mental illness. The OMI items, would

benefit from being revised, changing words such as mental hospital to inpatient unit, and items such as "if parents loved their children more, there would be less mental illness," to be more consistent with current knowledge about mental illness.

Addressing the extent of an individual's knowledge of mental illness would also be helpful in understanding what people know about severity and diagnosis of people with mental illness. A combination of knowledge of mental illness and media depictions could help researchers access how people come to learn about mental illness, and if it is predominately through contact, or knowledge that change the general public's perceptions and attitudes toward mental illness. For example, a study investigated the effect of reading a newspaper article that reported a violent crime committed by a mental patient (Thornton & Wahl, 1996). It was found that those who read the article without first having read a prophylactic article or control article, reported harsher attitudes towards those with mental illness. The study concluded that negative media reports contribute to a general negative attitude towards mental illness.

Furthermore, as suggested earlier another area that would benefit from further research is the impact that ethnicity has on attitudes toward people with mental illness. Examining attitudes among different ethnic groups toward mental illness can provide a greater understanding of how mental illness is viewed among different cultural groups, and subsequently target groups for increasing knowledge about mental illness.

Research on community attitudes toward mental illness in New Zealand, would benefit from further research on a more representative community sample. As it would be impossible to re-examine community attitudes toward people with

mental illness before and after deinstitutionalisation took place, attitudes could be examined before and after the establishment of a community mental health facility to an area.

### *Conclusions*

The present study aimed to investigate the effects of location and time on attitudes toward mental illness among community members in New Zealand. It also aimed to examine whether demographic variables, such as age, gender, ethnicity, and occupation influenced community attitudes, and if prior contact, awareness of and agreement with a community mental health facility influenced attitudes toward people with mental illness. With the exception of ethnicity, all hypotheses were able to be successfully examined. Findings of the present study were in contrast to early New Zealand research that consistently demonstrated age, gender and socio-economic status were not significant influences on attitudes toward mental illness (e.g., Blizard, 1968; Green et al., 1989; Walkey et al., 1981). Moreover, the scores on the present study measures, the OMI and CI, suggest that attitudes toward mental illness are positive among community members in New Zealand. Comparison of the present study findings to other similar studies conducted in North America and Europe suggest that, New Zealanders have similar positive attitudes toward mental illness. However, the findings are limited by a number of methodological issues and design constraints.

Location to a mental health facility did not emerge as a significant influence on attitudes toward mental illness. Moreover, time was only partially supported as an influence on attitudes toward mental illness. Only the demographic variable, age

was found to be significant, contrary to previous research conducted in New Zealand, on community attitudes toward mental illness. Awareness, and agreement with the community mental health facility also yielded significant results in influencing attitudes toward mental illness, along with prior contact.

Further areas of research include, (a) investigating a theory for attitudes toward mental illness, (b) use of more representative New Zealand community samples, allowing for research among a number of ethnic groups in New Zealand, (c) investigating the CI measure, (d) investigating the relationship between attitudes and behaviour, and (e) research into the knowledge and awareness of mental illness in New Zealand.

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APPENDIX A

New Zealand Government Legislation for Mental Health



## Acts

One of the broader goals of providing community care for people who have a mental illness is dependent on their experience of integration into the community. People with mental illness are entitled to the rights of full citizenship as is afforded to other community individuals (Perkins & Repper, 1996). They are also entitled to expect from their communities tolerance and non-discrimination (Bhugra, 1989).

The legal rights of people with mental illness have improved and are now more readily recognised, which possibly will lead to a change in attitude (Ojanen, 1992). However, the majority of people with mental illness are largely unaware of their rights, and therefore do not exercise them even when it involves direct discrimination. For example, the right to have the best treatment available and be apart of a community.

### New Zealand Bill of Rights, 1990

The New Zealand Bill of Rights (1990) guides decision-making. It outlines what needs to be taken into account when interpreting legislation such as that specific to the mental health consumers.

### *Human Rights Act, 1993*

The Human Rights Act (1993), outlines legislation on discrimination and points out on certain grounds in which discrimination is prohibited, such as that of disability. Under the Act, disability includes psychiatric illness, intellectual or psychological disability or impairment, and any other loss or abnormality of

psychological or anatomical structure or function. The Act also provides specific exclusions that the person seeking to discriminate must demonstrate.

It also inherently says that, that while all mental illness should be treated the same as other grounds for discrimination, that there are a lot of grey areas, and therefore room for interpretation and misunderstanding. Consequently, many people with mental illness would not think of the human rights act 1993 to pursue complaints (Mental Health Commission, 1997).

#### *Mental Health (Compulsory Assessment and Treatment) Act 1992.*

The objective of the Mental Health (compulsory assessment and treatment) Act 1992 is to provide rights for psychiatric patients who in the past under certain circumstances and conditions could be subjected to compulsory treatment and assessment. It aims to protect the rights of those people suffering from mental disorders in respect to their assessment and treatment and outlines these rights and the processes for appeal. The mental health act (compulsory assessment and treatment) 1992, replaced the Mental health act 1969, after review starting in the early 1980s. The review process was influenced by the decline and closure of large psychiatric hospitals, the inquiries into Oakley psychiatric hospital, concern for the rights of the psychiatric patients and affirmation of the Treaty of Waitangi as a constitutional document (Gamby, 1995).

#### *Health and Disability Commissioners Act, 1994*

The purpose of the Health and Disability Commissioners Act (1994) is to promote and protect the rights of mental health consumers by appointing a

commissioner to investigate complaints, to establish consumer advocacy services and to make the code well known to consumers.

#### *Privacy Act, 1994*

The privacy Act (1994) has implications for mental health consumers as it does for everyone else. It is there to ensure that consumer's rights to privacy are protected but balanced by a holistic health approach such as support from family and friends.

#### *Treaty of Waitangi 1840*

The Treaty of Waitangi (1840) fundamentally outlines the need to address cultural values and issues of the Maori people in all areas of health and research. The main articles of relevance to mental health in the Treaty of Waitangi are articles two and three. Under Article two the term *taonga* or things that are highly prized extends to the health of a person. The article is also important as it stipulates that the crown's right to govern must be balanced in that they also protect and provide for the Maori people equal rights and authority over lands, villages, and all other things precious. In particular, all forms of health. Institutions took away from those patients of Maori heritage respect for their cultural background, values and belief systems. It was hoped that community based settings for Maori with mental illness would allow them to express their cultural identity.



## APPENDIX B

Community Placements in New Zealand



## Community placements

Community placements vary depending on individual patient needs. The Ministry of Health, has established guidelines for the level of care assigned to an individual presenting with mental illness to a district health board mental health services. Levels of care range from Level four, to Level one, indicating the level of functioning that a patient presents with. Lower levels are indicative of a higher functioning patient. New Zealand has 21 district health boards, all of which provide a mental health service, and include a number of hospital beds for acute care, forensic, and outpatient services.

Discharge from an inpatient service to outpatient, and outpatient to independent circumstances involves four main components, (a) patient details. (b) needs assessment, (c) service arrangements, which include an evaluation and follow-up treatment plan, and (d) other necessary patient related administration requirements. The New Zealand Ministry of Health (1993) provides guidelines for the discharge planning for people with mental illness from psychiatric hospitals. The aim of discharge planning is to provide “an ongoing, individualised programme of care and support which meets the objectively assessed needs of a patient/consumer on leaving hospital” (p. 1). The discharge plan also addresses “social, cultural, therapeutic and educational interventions necessary to safeguard and enhance that person’s health and wellbeing in the community” (p. 1).

Goodhealth Wanganui is the district health board for the Wanganui area. Wanganui has three inpatient units located on hospital grounds: Te Awhina, Delta Wing, and Stanford House. Te Awhina, is an acute admitting unit for persons with mental illness undergoing crisis, many are able to return home after a short stay.

Other patients are transferred to the Delta Wing, which provides extended care and intensive rehabilitation (C. McDonald<sup>1</sup>, personal communication, August 29, 2003). Stanford House is a locked site providing a longer-term forensic service to patients with mental illness who are a risk to themselves or others. The highest level of care and security for the Wanganui community units is level three; those assigned a level four usually reside in the level three units. The Key worker, usually a registered psychiatric nurse, works with the patient on a one on one basis most days and is able to assess their level of needs, and assigns to the patient a level of care (C. McDonald, personal communication, August 29, 2003). A person assigned a level three, typically is able to independently shower, dress and may be able to cook for themselves. However, will need help with for example, medication and motivation to care for themselves. Level three care has stay over nursing and clinical assistance staff. A patient assigned as Level two care has similar needs to that of a patient in level three care however, typically has nursing and clinical assistance provided during the day. Level one care is characteristic of a person that is able to function by themselves and live independently, receiving support services rather than residential housing requirements.

Wanganui has two service providers for community outpatient services, Wanganui Community Living Trust and Halfways Rehabilitation Services (C. McDonald, personal communication, August 29, 2003). Wanganui Community Living Trust has three residential properties providing beds for 12 to 15 people, as well as running a support service that provides support to patients in their own

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<sup>1</sup> C. McDonald is the Service Coordinator for acute and community mental health at Wanganui Good Health District Health Board, Wanganui.

homes (Level one care): Halfways Rehabilitation Service provider has two residential housing complexes. One complex on Sun Parade consists of five-double units which house two people each. The second complex on Nixon Street consists of single units which can house up to 12 people (C. McDonald, personal communication, August 29, 2003).

Over time the level of care assigned to patients of the mental health system, has changed. The level of care assigned to patients in Wanganui in 1995 is different from the level of care assigned to patients in Wanganui in 2003. In 1995 the 12 chronically ill patients, that were transferred to the mental health facility in Area 1 of the present study design (see Chapter Six for more detail), and were assigned to number seven level of care. Number seven level of care would be the equivalent to level four care assigned today.



## APPENDIX C

Questionnaire used in the Present Study



**MASSEY  
UNIVERSITY**

Private Bag 11222  
Palmerston North  
New Zealand  
Telephone +64-6-356 9099  
Facsimile +64-6-350 5673

**FACULTY OF  
SOCIAL SCIENCES**

**DEPARTMENT OF  
PSYCHOLOGY**

## Information Sheet

### Community Attitudes Toward Mental Illness

In this study we are interested in your attitudes toward mental illness, and your feelings about the treatment of people with mental illness in the community. If you decide to participate in the study you will be asked to fill in a questionnaire which takes about 20 minutes to complete. You do not have to put your name on the questionnaire to participate. For this study we would like the person at the residence who is over 18 years of age and with the next birthday to complete the questionnaire.

The study is being done by Nik Kazantzis who is a graduate student at the Department of Psychology, Massey University. Nik is being supervised by Dr. Frank Deane who is a Senior Lecturer at the Department of Psychology.

Everything you write on the questionnaire is confidential and will only be used for the purposes of the study. A report will be written at the end of the study summarising the findings, but only group data will be reported and no individual will be identifiable in any reports. A summary of the findings will be available from the Department of Psychology at Massey University at the conclusion of the study around February 1996.

Participation is entirely voluntary. If you decide to participate, we would appreciate it if you could try to answer all of the questions but you have the right to refuse to answer any particular question.

By completing the enclosed questionnaire and returning it in the postage paid envelope you are consenting to participate in the study. Please return the questionnaire in the envelope it arrived in, you do not have to put a stamp on it. If you do not wish to participate, do not complete the questionnaire.

If you have any questions about this study please feel free to contact Frank Deane or Nik Kazantzis at the Psychology Department, Massey University, telephone (06) 3569099.

Thank you for your assistance.



**MASSEY  
UNIVERSITY**

Private Bag 11222  
Palmerston North  
New Zealand  
Telephone +64-6-356 9099  
Facsimile +64-6-350 5673

**FACULTY OF  
SOCIAL SCIENCES**

**DEPARTMENT OF  
PSYCHOLOGY**

## Information Sheet

### Community Attitudes Toward Mental Illness

In this study we are interested in your attitudes toward mental illness, and your feelings about the treatment of people with mental illness in the community. You may recall receiving a similar questionnaire approximately one year ago. One of the preliminary results of that part of the study suggested that those who lived in close proximity to a residential unit for people with mental illness on average had similar attitudes toward people with mental illness as respondents who did not live close to a residential unit.

In this, the second part of the study we want to see whether there have been changes in peoples attitudes over this time. Even if you did not complete the questionnaire last year, you can still participate in this part of the study if you wish. If you decide to participate in the study you will be asked to fill in a questionnaire which takes about 20 minutes to complete. You do not have to put your name on the questionnaire to participate. For this study we would like the person at the residence who is over 18 years of age and with the next birthday to complete the questionnaire.

This part of the study is being done by Dr. Frank Deane who is a Senior Lecturer at the Department of Psychology, Massey University.

Everything you write on the questionnaire is confidential and will only be used for the purposes of the study. A report will be written at the end of the study summarising the findings, but only group data will be reported and no individual will be identifiable in any reports. A summary of the findings will be available from the Department of Psychology at Massey University at the conclusion of the study around March 1997.

Participation is entirely voluntary. If you decide to participate, we would appreciate it if you could try to answer all of the questions but you have the right to refuse to answer any particular question.

By completing the enclosed questionnaire and returning it in the postage paid envelope you are consenting to participate in the study. Please return the questionnaire in the postage paid return envelope supplied, you do not have to put a stamp on it. If you do not wish to participate, do not complete the questionnaire.

If you have any questions about this study please feel free to contact Frank Deane at the Psychology Department, Massey University, telephone (06) 3569099.

Thank you for your assistance.

**Directions:**

The statements that follow are opinions or ideas about mental illness and mental patients. By mental illness, we mean the kinds of illness which bring patients to mental hospitals, and by mental patients we mean mental hospital patients. There are many differences of opinion about this subject. In other words, many people agree with each of the following statements while many people disagree with each of the statements. We would like to know what you think about these statements. Each of them is followed by six choices.

1	2	3	4	5	6
strongly	agree	not sure	not sure	disagree	strongly
agree		but probably	but probably		disagree
		agree	disagree		

Please circle the number of the choice which comes closest to saying how you feel about each statement. You can be sure that many people, including doctors, will agree with your choice. There are no right or wrong answers: we are interested only in *your opinion*.

- |                                                                                                                                     |   |   |   |   |   |   |
|-------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|---|
| 1. Nervous breakdowns usually result when people work too hard.....                                                                 | 1 | 2 | 3 | 4 | 5 | 6 |
| 2. Mental illness is an illness like any other.....                                                                                 | 1 | 2 | 3 | 4 | 5 | 6 |
| 3. Most patients in mental hospitals are not dangerous.....                                                                         | 1 | 2 | 3 | 4 | 5 | 6 |
| 4. Although patients discharged from mental hospitals may seem all right, they should not be allowed to marry.....                  | 1 | 2 | 3 | 4 | 5 | 6 |
| 5. If parents loved their children more, there would be less mental illness.....                                                    | 1 | 2 | 3 | 4 | 5 | 6 |
| 6. It is easy to recognise someone who once had a serious mental illness.....                                                       | 1 | 2 | 3 | 4 | 5 | 6 |
| 7. People who are mentally ill let their emotions control them: normal people think things out.....                                 | 1 | 2 | 3 | 4 | 5 | 6 |
| 8. People who were once patients mental hospitals are no more dangerous than the average citizen.....                               | 1 | 2 | 3 | 4 | 5 | 6 |
| 9. When a person has a problem or a worry, it is best to think about it, but keep busy with more pleasant things.....               | 1 | 2 | 3 | 4 | 5 | 6 |
| 10. Although they usually aren't aware of it, many people become mentally ill to avoid the difficult problems of everyday life..... | 1 | 2 | 3 | 4 | 5 | 6 |
| 11. There is something about mental patients that makes it easy to tell them from normal people.....                                | 1 | 2 | 3 | 4 | 5 | 6 |
| 12. Even though people in mental hospitals behave in funny ways, it is wrong to laugh about them.....                               | 1 | 2 | 3 | 4 | 5 | 6 |
| 13. Most mental patients are willing to work.....                                                                                   | 1 | 2 | 3 | 4 | 5 | 6 |
| 14. The small children of people in mental hospitals should not be allowed to visit them.....                                       | 1 | 2 | 3 | 4 | 5 | 6 |
| 15. People who are successful in their work seldom become mentally ill.....                                                         | 1 | 2 | 3 | 4 | 5 | 6 |

1	2	3	4	5	6	
strongly agree	----- agree	----- not sure but probably agree	----- not sure but probably disagree	----- disagree	----- strongly disagree	
16. People would not become mentally ill if they avoided bad thoughts.....	1	2	3	4	5	6
17. Patients in mental hospitals are in many ways like children.....	1	2	3	4	5	6
18. More tax money should be spent in the care and treatment of people with severe mental illness.....	1	2	3	4	5	6
19. A heart patient has just one thing wrong with him, while a mentally ill person is completely different from other patients.....	1	2	3	4	5	6
20. Mental patients come from homes where the parents took little interest in their children.....	1	2	3	4	5	6
21. People with mental illness should never be treated in the same hospital with people with physical illness.....	1	2	3	4	5	6
22. Anyone who tries to better himself deserves the respect of others.....	1	2	3	4	5	6
23. If our hospitals had enough well-trained doctors, nurses, and aides, many of the patients would get well enough to live outside the hospital.....	1	2	3	4	5	6
24. A woman would be foolish to marry a man who had a severe mental illness, even though he seems fully recovered.....	1	2	3	4	5	6
25. If the children of mentally ill patients were raised by normal parents, they would not become mentally ill.....	1	2	3	4	5	6
26. People who have been patients in a mental hospital will never be their old selves again.....	1	2	3	4	5	6
27. Many mental patients are capable of skilled labour, even though in some ways they are very disturbed mentally.....	1	2	3	4	5	6
28. Our mental hospital seem more like prisons than like places where mentally ill people can be cared for.....	1	2	3	4	5	6
29. Anyone who is in a hospital for a mental illness should not be allowed to vote.	1	2	3	4	5	6
30. The mental illness of many people is caused by the separation or divorce of their parents during childhood.....	1	2	3	4	5	6
31. The best way to handle patients in mental hospitals is to keep them behind locked doors.....	1	2	3	4	5	6
32. To become a patient in a mental hospital is to become a failure in life.....	1	2	3	4	5	6
33. The patients in mental hospitals should be allowed more privacy.....	1	2	3	4	5	6

1	2	3	4	5	6	
strongly agree	agree	not sure but probably agree	not sure but probably disagree	disagree	strongly disagree	
34. If a patient in a mental hospital attacks someone, he should be punished so he doesn't do it again.....	1	2	3	4	5	6
35. If the children of normal parents were raised by mentally ill parents, they would probably become mentally ill.....	1	2	3	4	5	6
36. Every mental hospital should be surrounded with a high fence and guards.	1	2	3	4	5	6
37. The law should allow a woman to divorce her husband as soon as he has been confined in a mental hospital with a severe mental illness.....	1	2	3	4	5	6
38. People (both veterans and non-veterans) who are unable to work because of mental illness should receive money for living expenses.....	1	2	3	4	5	6
39. Mental illness is usually caused by some disease of the nervous system....	1	2	3	4	5	6
40. Regardless of how you look at it, patients with severe mental illness are no longer really human.....	1	2	3	4	5	6
41. Most women who were patients in a mental hospital could be trusted as baby sitters.....	1	2	3	4	5	6
42. Most patients in mental hospitals don't care how they look.....	1	2	3	4	5	6
43. College professors are more likely to become mentally ill than are business men.....	1	2	3	4	5	6
44. Many people who have never been patients in a mental hospital are more mentally ill than many hospitalized mental patients.....	1	2	3	4	5	6
45. Although some mental patients seem all right, it is dangerous to forget for a moment that they are mentally ill.....	1	2	3	4	5	6
46. Sometimes mental illness is punishment for bad deeds.....	1	2	3	4	5	6
47. Our mental hospitals should be organized in a way that makes the patient feel as much as possible like he is living at home.....	1	2	3	4	5	6
48. One of the main causes of mental illness is lack of moral strength or will power.....	1	2	3	4	5	6
49. There is little that can be done for patients in a mental hospital except to see that they are comfortable and well-fed.....	1	2	3	4	5	6
50. Many mental patients would remain in the hospital until they were well, even if the doors were unlocked.....	1	2	3	4	5	6
51. All patients in mental hospitals should be prevented from having children by a painless operation.....	1	2	3	4	5	6

***New Directions:***

The statements that follow are opinions or ideas about people with mental illness. There are many differences of opinion about this subject. In other words, many people agree with each of the following statements while many people disagree with each of the statements. We would like to know what you think about these statements. Each of them is followed by six choices.

1	2	3	4	5	6
strongly agree	agree	not sure but probably agree	not sure but probably disagree	disagree	strongly disagree

Please circle the number of the choice which comes closest to saying how you feel about each statement. You can be sure that many people, including doctors, will agree with your choice. There are no right or wrong answers: we are interested only in *your opinion*.

- |                                                                                                                         |   |   |   |   |   |   |
|-------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|---|
| 52. I would feel comfortable going out in public with people with mental illness.....                                   | 1 | 2 | 3 | 4 | 5 | 6 |
| 53. I feel knowledgeable about people with mental illness.....                                                          | 1 | 2 | 3 | 4 | 5 | 6 |
| 54. I am grateful that I do not have the burden of a mental illness.....                                                | 1 | 2 | 3 | 4 | 5 | 6 |
| 55. I would feel comfortable looking a person with a mental illness straight in the face.....                           | 1 | 2 | 3 | 4 | 5 | 6 |
| 56. If I was with people with mental illness I would not be able to help staring at them.....                           | 1 | 2 | 3 | 4 | 5 | 6 |
| 57. I am aware of the problems that people with mental illness face.....                                                | 1 | 2 | 3 | 4 | 5 | 6 |
| 58. If I was with people with mental illness I would feel okay about my lack of illness.....                            | 1 | 2 | 3 | 4 | 5 | 6 |
| 59. I would feel frustrated being with people with mental illness because I wouldn't know how to help.....              | 1 | 2 | 3 | 4 | 5 | 6 |
| 60. After frequent contact with a person with mentally illness, I would just notice the person and not the illness..... | 1 | 2 | 3 | 4 | 5 | 6 |
| 61. Contact with people with mental illness would remind me of my own vulnerability.....                                | 1 | 2 | 3 | 4 | 5 | 6 |
| 62. I feel sorry for people with mental illness.....                                                                    | 1 | 2 | 3 | 4 | 5 | 6 |
| 63. Being near people with mental illness would make me nervous.....                                                    | 1 | 2 | 3 | 4 | 5 | 6 |
| 64. If I was with people with mental illness I would feel comfortable and relaxed.....                                  | 1 | 2 | 3 | 4 | 5 | 6 |
| 65. I dread the thought that I could eventually end up like people with mental illness.....                             | 1 | 2 | 3 | 4 | 5 | 6 |
| 66. If I was with people with mental illness I would feel unsure because I wouldn't know how to behave.....             | 1 | 2 | 3 | 4 | 5 | 6 |

67. I feel ignorant about people with mental illness..... 1 2 3 4 5 6
68. I would feel uncomfortable and find it hard to relax with people with mental illness..... 1 2 3 4 5 6
69. I don't pity people with mental illness..... 1 2 3 4 5 6
70. I feel overwhelmed with discomfort about my lack of mental illness..... 1 2 3 4 5 6
71. I would tend to make contacts only brief and finish them as quickly as possible with people with mental illness..... 1 2 3 4 5 6

72. How old are you? \_\_\_\_\_ years

73. What gender are you? (please circle the number) 1. male 2. female

74. Are you aware that a residential unit for people with mental illness is being proposed at Castlecliff? 1. yes 2.no

75. To what extent do you agree with the placement of the proposed unit at Castlecliff? (please circle the number)

1	2	3	4	5	6
strongly agree	agree	not sure but probably agree	not sure but probably disagree	disagree	strongly disagree

76. In general, how much direct contact have you had with people with mental illness? (please circle the number)

1	2	3	4	5
not at all	rarely	moderately	often	extensively

77. With which ethnic group do you most closely identify? (please circle the number)

1. European / Pakeha 2. Maori 3. Asian 4. Pacific Islander 5. Other (please specify) \_\_\_\_\_

78. What is your occupation? \_\_\_\_\_

79. What is your annual income? (please circle the number)

1. Nil income or loss      2. \$1 - \$5,000      3. \$5,001 - \$10,000      4. \$10,001 - \$15,000      5. \$15,001 - \$20,000

6. \$20,001 - \$30,000      7. \$30,001 - \$40,000      8. \$40,001 - \$50,000      9. \$50,001 and over

80. If you are willing for us to send you a similar questionnaire at a later date, please write your name and address below.

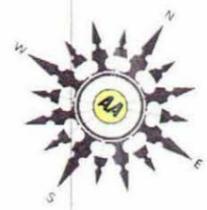
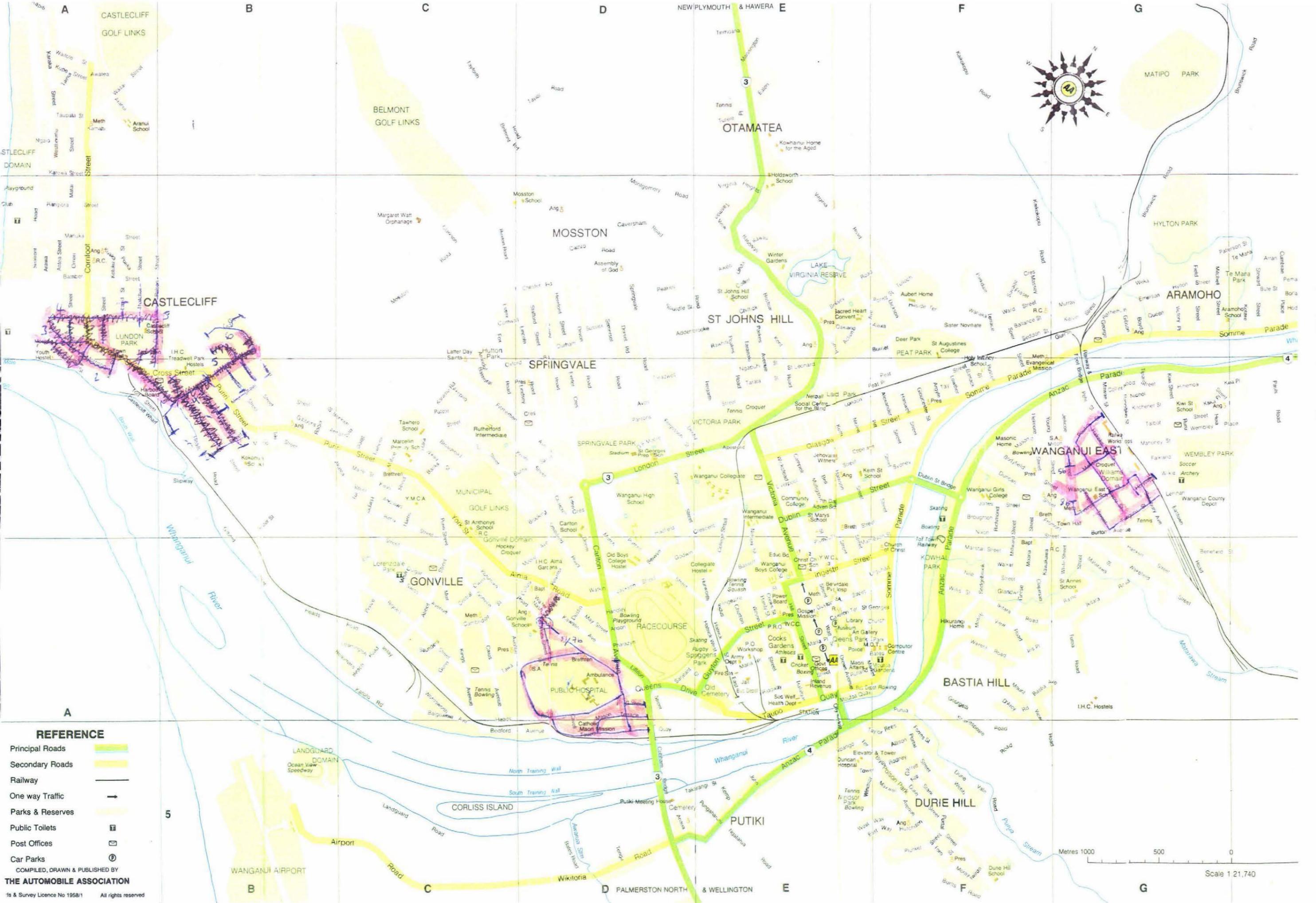
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APPENDIX D

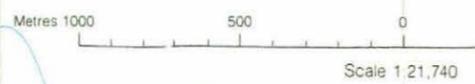
Map of Targeted Areas 1, 2, 3



**REFERENCE**

- Principal Roads
- Secondary Roads
- Railway
- One way Traffic
- Parks & Reserves
- Public Toilets
- Post Offices
- Car Parks

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## APPENDIX E

Comparison Table of 1991, 1996, and 2001 Income and Demographic Data

(Statistics New Zealand)

**Table 11.** Socio-economic Characteristics of Income Per Area (1991, 1995, 1996)

Income Annual income (\$)	1991 Census Data		
	<u>Area 1</u>	<u>Area 2</u>	<u>Area 3</u>
Nil or Loss	5.4%	3.4%	3.7%
1,000 – 10,000	36.6%	36.8%	37.8%
10,001 - 20,000	33.0%	28.8%	33.6%
20,001 - 40,000	18.4%	23.1%	18.7%
40,001 and over	1.7%	3.6%	1.6%
Not specified	4.9%	4.3%	4.6%
	1995 Survey Data		
Nil or Loss	0%	0%	1.9%
1,000 – 10,000	23%	11.8%	13.2%
10,001 - 20,000	21%	25.5%	28%
20,001 - 40,000	31%	25.5%	28%
40,001 and over	4%	7.8%	11%
Not specified	21.2%	19.6%	13.2%
	1996 Survey Data		
Nil or Loss	0%	7.3%	3.8%
1,000 – 10,000	28%	12.2%	17.3%
10,001 - 20,000	20.5%	29.3%	38.5%
20,001 - 40,000	33.3%	36.6%	21.2%
40,001 and over	5.1%	7.3%	11.5%
Not specified	12.8%	7.3%	7.7%

Note Adapted from Statistics New Zealand (1991) census information for Taranaki/Manawatu-Wanganui region.

**Table 12.** Population Count (1991, 1996, 2001)

Area	Population Count		
	<u>1991</u>	<u>1996</u>	<u>2001</u>
Area 1	1, 542	1, 473	1, 332
Area 2	3, 303	3, 393	3, 174
Area 3	2, 052	2, 025	2, 097

*Note* Adapted from Statistics New Zealand (1991) census of population and dwellings for Taranaki/Manawatu-Wanganui region.

## APPENDIX F

### Statistical Assumptions of MANCOVA

## Assumptions of MANCOVA

Before proceeding with MANCOVA, a number of assumptions need to be met. Assumptions of MANCOVA require assessment of, unequal samples sizes and missing data, multivariate normality, and linearity, outliers, homogeneity of variance-covariance matrices, homogeneity of regression, reliability of the covariates, and lastly multicollinearity and singularity.

Reliability of the covariates was assessed by using the multiple-regression analysis of the covariate variables, as covariates that are not reliable can increase either type I or type II error, as well as lead to loss of statistical power (Tabachnick & Fidell, 2001). Power is the probability that type I or type II error will not occur, and is dependent on sample size (Coolican, 1999).

A number of unequal sample sizes were found on observation of the cell frequency counts (e.g., area, contact, and awareness, among gender, age and ethnicity, see Table 1). When there are more dependent variables than cell cases the power of the analysis is lowered, increasing the likelihood of a non-significant multivariate  $F$  (Tabachnick & Fidell, 1996). A low cases-to-DVs ratio requires that MANCOVA, as an analytic strategy, must be discarded as the assumption has been violated. The more dependent variables and greater discrepancy in the cell sample sizes, increases the likelihood of a distortion in alpha levels (Tabachnick et al., 2001). If cells with larger sample sizes produce larger variances and covariance's, then the alpha level is conservative allowing for null hypotheses to be rejected with confidence. However, if cells with smaller samples produce larger variances and covariance's then the significance test becomes to liberal (Tabachnick et al., 2001).

Homogeneity is affected when MANCOVA is applied to a number of dimensions. Multiple dimensions cause a decrease in sample cell size often producing unequal cases (Tabachnick et al., 1996), as is the case in the present study, where attitudes were measured across three locations and over two time periods producing a minimum of a 2 x 6 design, that is further divided by the covariate variables.

A test of multivariate normality was carried out to test the significance of the unequal sample sizes. Another test often used is Box's M, however due to the sensitivity of this test, multivariate normality was used to test for the robustness of the MANCOVA procedure in the case of unequal sample sizes in the present data (Tabachnick et al., 1996). Results from multivariate normality indicate that the assumptions of MANCOVA are not met using the present study data. Cases in some cells were below a recommended number of 20 (Tabachnick et al., 1996), as well as lower than the number of DVs used in the present study. The use of MANCOVA was therefore discarded in preference of ANCOVA.