INFORMATION ABOUT MENTAL ILLNESS AND ATTITUDE CHANGE

By

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A Thesis submitted to the Faculty of Graduate Studies in Partial Fulfillment of the Requirements for the Degree of

MASTER OF SOCIAL WORK

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ABSTRACT

INFORMATION ABOUT MENTAL ILLNESS AND ATTITUDE CHANGE

Statement of the problem

The intent of this study was to look at changing attitudes of potential mental health service providers towards mental illness after receiving information about what it is like having a severe mental illness from a person identified as a mental health consumer.

Procedure of methods

The design was a post-test only true experiment with random assignment. Both the experimental group (N=31) and the control group (N=29) received an educational intervention. The experimental group received a presentation about what it is like living with a severe mental illness. The control group received a presentation of complementary and alternative and medicines. The presenter was defined as a consumer of mental health and alternative health care for both groups. Dependent variables included the Opinions about Mental Illness (OMI), the Shera-Chandler Attitude Measure (SCAM), and the Receptiveness to Complementary and Alternative Medicine Questionnaire (RCAMQ).

Results

A significant positive attitude difference was found between the experimental group and the control group after the presentation on mental illness using the SCAM as a criterion. An unexpected and correlated difference on the mental hygiene ideology scale of the OMI (experimental group lower) was found, but the scale was unreliable and the only two items discriminating between the two groups was one focusing on optimism of treatment outcome and the social control involved in hospital care. An unexpected and correlated difference on the benevolence scale of the OMI was found (experimental group higher), but the scale was unreliable and the only item discriminating focused on the medical nature of mental disorder. No difference was found between the experimental group and the control group after the presentation on complementary and alternative medicines. The significant correlations of SCAM with the five subscales of the OMI were in opposite directions from those predicted for empirical validation purposes for three of the five subscales.

Conclusions

1. In this sample most OMI scales were unreliable and several were related to SCAM and the intervention in a manner opposite to that hypothesized. Therefore this scale may not be an appropriate measure of student attitudes.
2. A brief presentation from a labelled mental health consumer can improve general attitudes to the mentally ill, but may decrease favourable attitudes to mental health ideology and support for benevolence.
3. There is no evidence that a brief presentation on alternative medicines affect mental health attitudes.

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CHAPTER ONE

RESEARCH PROBLEM AND SIGNIFICANCE

Research Problem And Theoretical Relevance

The intent of this study is to look at changing attitudes of potential mental health service providers towards mental illness after receiving information about what it is like having a severe mental illness. Over the last several years there have been changes in the language used to refer to people with a serious mental illness. The terms have changed since the 1970s from "chronically mentally ill" to "severely disabled mentally ill" to "severely persistently mentally ill", and now "severely mentally ill" (Harding, Zubin & Strauss 1987; Shera & Delva-Tauiliili 1996). The Comprehensive Textbook of Psychiatry uses the DSM IV's definition of severe mental illness that states "many symptoms in excess of those required to make the diagnosis, or several symptoms that are particularly severe, are present, or the symptoms result in marked impairment in social or occupational functioning" (Kaplan & Sadock 1995 p.677). In this study the use of the term "severe mental illness" refers to people with diagnoses such as schizophrenia and major affective disorders, who have extensive or severe symptoms that prevent them from working and experiencing a satisfying social life, which is consistent with the Comprehensive Textbook of Psychiatry (Kaplan & Sadock 1995).

There is much literature on the stigma attributed to persons with mental illness, but the stigma by service providers will be of particular interest to people working in the helping professions. Wahl (1999) studied mental health service users' experience with

stigma in a questionnaire answered by 1,301 people from 49 States in the United States of America, Canada and Ireland. Survey results and follow-up interviews with 100 respondents revealed experience of stigma from a variety of sources, including communities, families, churches, co-workers, and a significant source of stigma from service providers. Mental health service users (Coursey, Curtis, Marsh, Campbell, Harding, Spaniol, Lucksted, McKenna, Kelley, Paulson and Zahniser 2000; Wahl 1999) and the literature on stigma (Kommana, Mansfield & Penn 1997; Penn & Martin 1998; Corrigan 2000) urge for more education on mental illness in general, so information targeted towards mental health service providers could be a first step in that direction.

Attitude Formation And Change

To contemplate changing attitudes requires an understanding of what attitudes are and how they are formed. Attitudes involve making social judgements that form beliefs and feelings that predispose our responses to objects, people and events (Myers 1989; Weiten 1997). Social psychologists traditionally view attitudes as being a complex mixture of cognitive, emotional, and behavioural components (Weiten 1997). The cognitive component is made up of the beliefs that people hold about the object of the attitude; the affective component consists of the emotional feelings stimulated by the attitude object; and the behavioural component consists of predispositions to act in a certain way toward the attitude object (Weiten 1997).

Learning theory explains attitude formation. Classical conditioning creates the negative affective component of attitudes, and observational learning occurs by taking on

another person's attitudes when hearing their opinions (Weiten 1997). The Handbook of Social Psychology (Gilbert, Fiske & Lindsey 1998) describes attitudes as expressing passions and hates, attractions and repulsions, likes and dislikes. People express attitudes when they love or hate things or people, and when they approve or disapprove of them (Gilbert et al. 1998). The formation of an attitude requires direct or indirect experience with the attitude object, such as a person with a mental illness (Gilbert et al. 1998). For the attitude to be negative there had to have been an unfavourable experience.

Similar evaluative responses towards subsequent encounters with people with mental illness, even if it is only from reading the newspaper or watching movies, results in an established psychological tendency, or attitude (Gilbert et al. 1998). The attitude itself is the tendency to evaluate, which forms a mental state in which the individual engages in positive or negative evaluative responding in relation to people with mental illness. The individual may be aware or unaware of this state. This means that the mere presence of a person with a mental illness can automatically produce a tendency to evaluate by preconscious processes that have nothing to do with the person with whom the individual is currently interacting (Gilbert et al.).

Everyday, people are bombarded by efforts to change their attitudes, which is a process of persuasion. The success of the persuasion depends on the credibility of the source, the message that is sent, and the way the message is sent (Myers 1989; Weiten 1997).

Contribution To Empirical Research

Recent research in the area of attitude change, such as the contact hypothesis and attitude-behaviour/behaviour-attitude linkages, has resulted in a more sophisticated understanding of the dynamics involved in forming and changing attitudes (Desforges, Lord, Ramsey, Mason, Van Leeuwen, West & Lepper 1991). Desforges et al. (1991) researched structured co-operative contact, which includes promoting equal status; providing an opportunity to learn about each other; solicitation of information to dispel negative stereotypes; and the pursuit of mutual goals through co-operation. They found that after such contact, the participants in the study described typical mental patients more positively and had more positive attitudes towards the mentally ill in general (Desforges et al. 1991).

In the United Kingdom, between 1991 and 1996, there was a national campaign to defeat depression. Three surveys, each conducted with 2000 subjects in 1991, 1995 and 1997, concluded that newspaper and magazine articles, radio and television programs and other media activities were successful in their goals to educate the public about the depression and its treatment to help reduce stigma associated with the disorder (Paykel, Hart & Priest 1998). Significant positive changes resulted, even though they were relatively small in magnitude.

Coursey et al. (2000) emphasized the importance of professional development for staff because of the rapid advances in treatment and interventions in the mental health system. However, the study also recognized the lack of focus on staff member attitudes and values, and how staff members' attitudes affect outcomes of programs provided by

mental health systems (Coursey et al. 2000). This study will contribute to confirming the theory of attitude change by persuasion.

The hypothesis in this study is that information from a person with personal experience of a severe mental illness, such as schizophrenia, will be perceived as credible because listeners will appreciate that service users know best about what it is like to live with a mental illness. It will be valuable to see whether the information will change individuals' opinions about mental illness, and could impact the way professional development programs are planned and implemented.

Relevance For Practice And Policy

Mental illness is a significant problem, and the Canadian Mental Health Association reports that one in five Canadians will be affected by a mental illness at some time in their lives (CMHA website 2002). It therefore makes sense to try to decrease the stigma associated with mental illness. Education and increased information have been shown to help reduce stigma (Bairan & Farnsworth 1989; Chinnayya, Chandrashekar, Moily, Puttamma, Raghuram, Subramanya, Shanmugham & Udaykumar 1990; Keane 1991; Mayer & Barry 1992; Shera & Tauiliili 1996; Thornton & Wahl 1996; Paykel, Hart & Priest 1998; Penn & Martin 1998; Singh, Baxter, Standen & Duggan 1998; Penn, Kommana, Mansfield & Link 1999; Corrigan 2000).

Stigma and discrimination have been shown to hamper the process of recovery, so it is especially important that mental health service providers learn more about mental illness and stigma (Link 1982; Deegan 1994; Carling 1995; Baxter & Diehl 1998;

Markowitz 1998; Wahl 1999; Corrigan 2000). It is appropriate for potential service providers to learn more about people living successfully with a mental illness, and see that those affected by mental illness can have a hopeful future. It is felt this study will demonstrate whether an information session will positively change attitudes towards the mentally ill. Professional development for staff occurs in many workplaces, and the result of this study will help determine how professional development programs can be designed and implemented.

CHAPTER TWO

LITERATURE REVIEW

Introduction To The Chapter

As an introduction to the subject of mental illness there are some definitions and descriptions of stigma. This is followed by some discussion on how stigma exacerbates the considerable problems encountered by people with mental illness. The debate between the medical model and labelling theory resulted in the development of a modified labelling theory, and this is described. However, regardless of the root of labels there are important consequences, such as social and psychological outcomes, and there is some discussion of these. The development and implementation of programs for people with mental illness is then considered, along with what has been learned from research studies on stigma reduction that explored attitudes and the effect of education. Finally, five studies on changing attitudes towards the mentally ill are discussed.

Definition And Description Of Stigma

Webster's New Twentieth Century Dictionary (1983) defines stigma as "something that detracts from the character or reputation of a person, group, etc.; indicating that something is not considered normal or standard." Goffman (1963) defined stigma as "blemishes of individual character perceived as weak will, domineering or unnatural passions, treacherous and rigid beliefs, and dishonesty" that are due to mental disorder among other things (p.4). More recently, Gilbert et al. (1998) define the socially

stigmatized as individuals who "possess (or are believed to possess) some attribute, or characteristic, that conveys a social identity that is devalued in a particular social context (Vol. 2. p.505).

The common link between these definitions is the "perception" that people have of the mentally ill, or what people believe about mental illness. It is this perception, or attitude that needs to be changed. Stigma describes the undesirable characteristics linked to mental illness and the adverse cognitive and behavioural consequences (Goffman 1963; Link, Cullen, Frank & Wozniak 1987). The reaction of the general public to the mentally ill has become increasingly important as treatment has shifted from hospital care to community-based care. Social integration into satisfying interpersonal networks is important for the mental health of individuals with mental illness, and the level of social integration is related to how well communities respond to them, and how accepted they are (Trute & Loewen 1978; Desforges et al 1991; Carling 1995; Kommana, Mansfield & Penn 1997).

Literature Review

Although one may think that mental illness is becoming more accepted and the many negative assumptions about the nature of mental illness have long since been discarded, the beliefs remain prevalent (Carling 1995). Thompson and Doll (1982) found that problems with stigma were more frequently reported in their replicated study than when it was first conducted in 1961 by Freeman and Simmons (as cited in Phelan, Bromet & Link 1998). Mental health consumers widely report that they encounter stigma

in their lives on a daily basis (Wahl & Harman 1989; Wahl 1999). This trend does not bode well for the future unless something changes.

There is some debate between proponents of the medical model and those that support labelling theory. The medical model considers mental illness an illness like any other, in that it has a cause, course, lesion, symptom pattern, and treatment of choice, with symptoms being the visible signs of an underlying pathology (Scheff 1984). Advocates of labelling theory argue that the medical model is based only on clinical impressions, and has not been demonstrated scientifically (Scheff 1984). The labelling theory of deviance believes symptoms of mental illness are violations of society's norms, and are the result of situations rather than due to personal predisposition. If these behavioural violations are then normalized and accepted they are unlikely to become socially significant (Scheff 1984). The theory argues that it is the labelling that causes the stability of the deviant behaviour, which leads to the stigmatization and isolation of the individual (Scheff 1984). The medical model supports diagnosis and treatment for preventing the stabilization of deviant behaviour, whereas labelling theory supports normalizing it because it will then be transitory (Scheff 1984).

Link, Struening, Cullen, Shrout and Dohrenwend (1989) proposed a modified labelling theoretical perspective which claims that even if labelling does not directly produce mental disorders, it can lead to negative outcomes. Stigma from mental illness affects both psychological and social outcomes. Psychological outcomes include the demoralization, social withdrawal, secrecy, low self-esteem, and hopelessness that develop from the belief that most people devalue and will discriminate against people

with mental illness (Link 1987; Link, Mirotznik & Cullen 1991; Link 1987; Link et al. 1989; Markowitz 1998). Social outcomes include constricted social networks, substantially lower incomes, and unemployment (Link & Cullen 1990; Rosenfield 1997; Markowitz 1998; Wahl 1999). People with mental illness are more likely to be unemployed, have less income, experience a diminished sense of self, and have fewer social supports (Link 1987; Link et al. 1989; Link & Cullen 1990; Link et al. 1991; Markowitz 1998; Rosenfield 1997; Wahl 1999; Corrigan 2000; Wright, Gronfein & Owens 2000).

Link et al. (1991) describe the enormous gaps between labelled and unlabelled groups regarding demoralization, earned income, and the numbers of weeks unemployed, which demonstrates the impact a name can have on a life. Labelling theory suggests that people exhibiting behaviours not easily defined may become labelled as mentally ill by professionals (Scheff 1984; Markowitz 1998). Once labelled, people are rejected and discriminated against when they attempt to resume normative roles and re-integrate into community life, and they are relegated to playing the role of patient (Link et al. 1987; Mueser, Glynn, Corrigan & Baber 1996; Markowitz 1998; Penn & Martin 1998). "Psychiatric hospitalization" and "psychiatric diagnoses" seem to be the most dramatic and potentially stigmatizing labels, often because of perceived dangerousness (Link et al. 1987; Phelan, Bromet & Link 1998). As a result of this labelling, people begin to act in accordance with the stereotype associated with the label (Link 1982; Link et al. 1989; Rosenfield 1997).

Critics of labelling theory vigorously dispute the provocative hypothesis and downplay the importance of factors such as stigma and stereotyping (Link et al. 1989). They argue that the stigma associated with mental illness is minimal and does not affect the lives of those diagnosed as mentally ill. They believe that rejection and negative outcomes are due primarily to the symptoms of mental illness, and that deviant labels are therefore a consequence of deviant behaviour (Markowitz 1998).

Socialization causes people to develop a set of beliefs about how most people treat persons with a mental illness. These beliefs take on new meaning for individuals entering treatment. The more patients believe that they will be devalued and discriminated against, the more they feel threatened by interacting with others. They may try to educate others about their situation, but are more likely to keep their treatment a secret and withdraw from those social contacts they perceive as potentially rejecting. These strategies can result in negative consequences for social support networks, jobs, and self-esteem (Link 1987; Link et al. 1989; Rosenfield 1997; Markowitz 1998; Penn & Martin 1998; Corrigan 2000; Wright et al. 2000).

Link et al. (1991) believe that the three responses to labelling: secrecy, withdrawal and educating others, has resulted in stigma that is powerfully reinforced by a culture that tries to transform a socio-cultural problem into an individual problem. The effects cannot be easily overcome by individuals, and individual coping will not resolve the problem of stigma and discrimination (Link et al. 1991; Rosenfield 1997; Penn et al. 1999; Corrigan 2000). The negative meaning of what "becoming a mental patient" has for most people needs to be changed, but this will not happen overnight. The National

Alliance for the Mentally Ill (NAMI) is an association of mental health service users who collectively work hard to reject what the cultural milieu assigns, even though they may fear being associated with a stigmatized group (Link et al. 1991).

Whatever the root of the label, research has shown that stigma does exist and has important consequences such as blocked access to jobs, job loss and disrupted interpersonal relationships (Link 1987; Link et al. 1987; Link et al. 1989; Link et al. 1991; Markowitz 1998; Penn et al. 1998; Wright et al. 2000). It reduces access to social supports, and causes lack of self-confidence and demoralization that undermines the individual's usual means of coping (Link 1982; Link et al. 1989; Link et al. 1991; Rosenfield 1992; Wright et al. 2000). If mental health service users believe they have assumed a status that is viewed negatively, self-esteem and self-efficacy can be affected to such an extent that work performance is impaired (Link 1987). The fears of stigmatization and rejection expressed by former patients are very real and should not be viewed as mere symptoms of their underlying pathologies (Link 1987; Wahl 1999; Wright et al. 2000). Official labelling can transform a person's beliefs about the devaluation and discrimination of mental patients into an expectation of rejection (Link 1987; Wright et al. 2000). Even if people with a mental illness are productive and functioning, the stigma remains because of the discrimination against people who want or have had inpatient or outpatient psychiatric treatment (Anonymous 1981 as cited in Link et al. 1987).

In studying public attitudes towards people who have mental illness, a consistent finding is that individuals who have had previous contact with the mentally ill are less

likely to try to avoid them (Link & Cullen 1986; Trute, Tefft & Segall 1987; Desforges et al. 1991; Carling 1995; Wolff, Pathare, Craig & Leff 1996; Penn et al. 1998; Penn et al. 1999). A major fear many hold towards mentally ill people is perceived dangerousness, and that fear tends to be reduced when direct contact occurs (Link & Cullen 1986; Corrigan 2000). In the absence of direct contact with the mentally ill, the public is influenced by cultural stereotypes conveyed through jokes, newspaper accounts, and television dramatizations (Link & Cullen 1986; Trute et al. 1987; Thornton & Wahl 1996). Unfortunately, in these circumstances the mentally ill are often portrayed as dangerous and unpredictable. Direct contact results in a significant tendency for individuals to revise their beliefs, not only toward the particular individual contacted, but also toward former mental patients in general (Link & Cullen 1986).

Rosenfield (1992) believes that the chronically mentally ill have few economic resources, low status and little power, and therefore do not have control over their environment. She cites numerous studies that show the destructive consequences that erosion of a sense of mastery has on individuals' psychological well-being in the general population (Rosenfield 1992 & 1997). A low sense of mastery affects subjective quality of life because it results in feelings of hopelessness and passivity. Passive people make fewer attempts to cope with or change situations because they perceive such attempts as futile (Rosenfield 1992). Even in 1963 Goffman recognized that an empowerment approach would attempt to "de-stigmatize" the mentally ill (as cited in Rosenfield 1992).

Wright et al. (2000) found that community-based treatment provides more opportunities to experience social rejection, but supported Rosenfield's (1997) view that

it does lead to greater feelings of mastery and provide more positive treatment results. Aggressive rehabilitation mediates the impact of stigma by enhancing individuals' mastery, but Wright et al. (2000) warn that this can be short-lived and suggest that the self-attitudes of mental patients are more malleable and vulnerable than those of non-stigmatized people. People with low self-esteem are more likely than those with high self-esteem to accept or even elicit negative feedback from others, which can exacerbate their problems (Wright et al. 2000). This highlights the importance for mental health service providers to help service users identify ways to cope with their experiences that will help them avoid or counter negative self-related changes.

Rosenfield (1992) found that programs with an egalitarian and collaborative approach to treating mental illness that focused on minimizing differences in status between patients and staff have better results with all service users, regardless of levels of functioning. Open-ended questions about the programs found that service users liked being treated more equally and taken seriously by staff. In these programs they felt their illness did not rule their lives, and that they were given a sense of self-respect. Service users felt they had a sense of purpose or meaning, which is usually compromised in disadvantaged populations by limitations in options and full social integration (Rosenfield 1992). Low self-esteem can result in self-stigmatization, where service users can reach a stage where they do not believe they even have a right to exist. Service providers must work at helping the service user become cognizant of the absence of self-esteem before they can move on and learn to enjoy life (Gallo 1994).

Rosenfield (1997) concurs with Link and Cullen (1992) that labelling has both positive and negative effects on subjective quality of life. The label itself implies stigma, although there are positive effects through the receipt of services. Both results have consequences that contribute to aspects of self-concept and to life satisfaction. Rosenfield (1997) cites several studies that evaluate programs which combine traditional psychiatric treatment with psycho-social and vocational rehabilitation, supervision, guidance, and also provide for basic needs like housing, financial support, and medical care. Programs using an empowerment approach stress personal rather than professional relationships, and attempt to combat stigmatizing attitudes about mental patients within the programs.

Empowerment fits with the concept of recovery. Internalizing the negative attitudes of the larger society causes mental health service users to feel hopeless about their future. A common message they receive from others, including service providers, is to downsize their expectations (Deegan 1994; Carling 1995; Frese & Davis 1997; Wahl 1999). A key element in recovery is the presence of people who offer hope, understanding, and support; who encourage self-determination; and who promote self-actualization. Recovery is best understood as a process, rather than an outcome (Deegan 1994; Carling 1995; Frese & Davis 1997).

Research results should be used in mental health interventions. Life satisfaction is highest for those who experience little stigma and gain access to high quality services, and lowest among those perceiving high levels of stigma and lacking such services (Rosenfield 1997). Rosenfield (1997) goes as far as saying that this demonstrates the highly positive effects of high quality care, and that empowerment is seen as an antidote

to stigma. Service providers and service users need to know that some people do fully recover, as well as that complete remission is not possible for everyone. The stigma associated with mental illness inhibits those who do recover from disclosing their positive outcomes, which gives the impression that there really is no hope for people to go forward with their lives. The silence of those who fully recover reinforces the prejudices that exist (Frese & Davis 1997).

Wolff, Pathare, Craig & Leff (1996) studied community attitudes towards mental illness by conducting a survey of 305 people from two areas in London, England prior to group homes opening on their streets. The in-person interviews consisted of questions about knowledge of mental illness, reactions towards the mentally ill, knowledge of psychiatric hospital care, knowledge of the shift to care in the community, attitude to community care policy, and opinions about the need for education. The authors used the Community Attitudes toward the Mentally Ill (CAMI) 40-statement inventory, although they report that attitude factors derived from the CAMI are rather imprecise and encompass broad concepts (Wolff et al. 1996). The results showed that people with children and non-Caucasians were more likely to object to the mentally ill living in their neighbourhood, so the authors concluded that any intervention aimed at changing attitudes to the mentally ill people in the community should be targeted to these populations (Wolff et al. 1996).

Wolff et al. (1996) used baseline findings in this study, and found a link between a lack of knowledge and negative attitudes toward the mentally ill. The authors reported a direct correlation between increased education and increased tolerance, which they found

to be consistent with previous studies done on the subject (Wolff et al. 1996). They did not use an intervention and then investigate changes in attitudes, but suggested that any intervention should target people with children and non-Caucasians. However, the authors cautioned readers that their targeted study groups were not representative of the general population. They contained a higher number of higher social class, few elderly and a rich ethnic mix including people of Caribbean, African and Asian origin, although the authors made no comment on cultural or socialization norms.

In the second part of this study, Wolff et al. (1996) used the same baseline data to study community knowledge of mental illness. The authors found that older people, those of lower social class, and those of non-Caucasian ethnic origin had less knowledge about mental illness and negative attitudes. People with children were not less knowledgeable about mental illness, but their negative attitudes seemed to be due to increased wariness in general because of their children's vulnerability (Wolff et al. 1996). This study supports the findings of many other authors, that education is essential for reducing negative attitudes towards people with mental illness (Trute & Loewen 1978; Link & Cullen 1986; Trute et al. 1987; Desforges et al 1991; Penn, Guynan, Daily, Spaulding, Garbin, & Sullivan 1994; Carling 1995; Kommana, Mansfield & Penn 1997; Corrigan 2000).

There is increased acceptance and reduced fear of people with mental illness in communities where the public has had increased exposure to these individuals (Trute & Loewen 1978; Link & Cullen 1986; Trute et al. 1987; Desforges et al. 1991; Penn et al. 1994; Kommana et al. 1997; Corrigan 2000). Mere exposure to someone with a mental

illness may not be enough to reduce stigma, although contact helps to correct much of the misinformation about mental illness (Kommana et al. 1997).

Public education has been shown to be more effective when it directly targets misinformation about dangerousness and mental illness (Kommana et al. 1997; Penn & Martin 1998; Penn, Kommana, Mansfield & Link 1999). Newspaper reports, television and movies are known to be stigmatizing and have been shown to encourage harsher attitudes towards the mentally ill (Wahl & Lefkowits 1989; Thornton & Wahl 1996). Information trailers were not found to be enough to contradict the opposite message given within films (Wahl & Lefkowits 1989), but corrective written information had some effect on reducing negative attitudes (Thornton & Wahl 1996).

It seems that actual reduction of negative portrayals is necessary, and perhaps using mental health professionals as consultants to communications media would help with this (Wahl & Lefkowits 1989). While the media must report news as it happens, there should also be an obligation to provide a balanced view. The balance needs to include positive news: the successful recovery; the new treatment intervention; the importance of community living (Mayer & Barry 1992). There are groups that work systematically to counteract stigma, but it requires vigilance to use all opportunities to educate the public about the difficulties faced by people with mental illness (Mayer & Barry 1992).

Advocacy groups like the National Alliance for the Mentally Ill (NAMI) and the National Mental Health Association (NMHA) have been educating the public about mental illness for over 90 years, and have identified anti-stigma campaigns as a necessary

adjunct to clinical services for enhancing the quality of life of people with mental illness (Corrigan 2000). NAMI has sponsored a campaign to educate the public about mental illness, and the Rotary Club has sponsored a public education program to dispel the many myths about mental illness in an effort to help reduce stigma (Kommana et al. 1997).

Reducing stigma also requires mental health service users to gain interpersonal skills necessary to blend in with the general public (Kommana et al. 1997). Social deficits underscore the public's perception that individuals with mental illness are "strange," which hinders them in forming a social network, and makes them more vulnerable to stress, relapse, and other negative outcomes (Kommana et al. 1997). This is a sensitive area for mental health service providers to work with service users.

Changes in behaviour towards mental health service users can amplify the effects of changing attitudes. There is widespread social prejudice and stereotyping expressed through derogatory terms and labels, even though the majority of people do not use them to be intentionally abusive (Leicester 1999). Labels used by mental health service providers to describe individuals with mental illness can maintain negative stereotypes (Mueser et al. 1996; Kommana et al. 1997; Leicester 1999). Service providers need to be aware of what terms service users prefer because everyone is different, and preferred terms change over time because of the connection between language and attitudes (Mueser et al. 1996; Leicester 1999). Many people in the consumer empowerment movement have emphasized the deleterious and stigmatizing effect of labels (Mueser et al. 1996). Efforts to reduce stigmatization must be an integral part of treatment and rehabilitative programs. It has been shown that revealing information about past

psychiatric treatment leads to decreased success in applying for housing, employment, and school admission, and that identification as a patient leads to condescension and biased interpretation of behaviour on the part of others, including mental health professionals (Wahl 1999).

It is necessary to hear what mental health service users have to say about living with their illness, because neglecting them is also stigmatizing and devalues them (Wahl 1999). Wahl (1999) believes that listening to mental health consumers and providing opportunities for them to tell their unique stories is important for their empowerment and increasing their self-esteem. He therefore structured his study as a large-scale, nationwide survey of 1,301 people with mental illness to expand knowledge of mental illness and to learn more of their experiences with stigma and discrimination. The survey participants were readers of the National Alliance for the Mentally Ill (NAMI) newsletter, people with mental illness in the home towns of NAMI's Consumer Council, and people who responded to the survey on the NAMI Internet site (Wahl 1999). To help people truly understand and appreciate what stigma is and how it affects people with mental illness, those who face that stigma on a daily basis are the best informants when they use their own words about what stigma is, what it does, and how it is conveyed (Wahl 1999).

Respondents included people of all ages and were from 49 states in the United States plus Canada and Ireland. There was representation from people who were single and married, people with graduate degrees and those who had not completed high school, people who were working as well as those who were not, and people in a variety of living situations (Wahl 1999). The participants were of diverse races: Caucasian (80%),

African-American (10%), Hispanic (1%), Asian (0.5%), and Other (5%) which suggests generalizability to a cosmopolitan city like Winnipeg (4.5% were not accounted for in the study so presumably did not declare their ethnicity).

Wahl (1999) found that 46 percent of the respondents cited the general community as the main source of stigma. Relatives were the second most frequent source, at 39 percent, and service providers were cited as the third most frequent source at 28 percent. The main complaints about service providers were that they treated service users as less than competent, discouraged them from setting high goals and made disparaging remarks about them. Sixty-six percent of the respondents indicated that people in general, and mental health service providers in particular, need to be better informed about mental illness for stigma to be reduced (Wahl 1999). The troubling finding of Wahl's study is that service providers were implicated repeatedly as contributors to stigma, not just through their discouraging advice but also through their disparaging remarks and rejecting behaviour. When those whom service users especially look to for understanding and support instead deliver ridicule and disrespect, the consequences must be more devastating than when discouragement comes from strangers (Wahl 1999). This is a strong message for service providers, whose empathic and non-judgemental behaviour should be central to their professional roles.

Liberman and Kopelowicz (1997) report that surveys reveal that public perception of mental illness is gradually changing to a more rational approach. They say this may be due to the fact that some celebrities with mental illness have made public statements, but the new and better medications and psychosocial treatments may also make mental illness

seem treatable and less hopeless. There are recent publications that show mental health professionals are coming forward about their own experiences with mental illness. This would form the ultimate collaborative basis for treatment with service users (Liberman & Kopelowicz 1997).

Stigma reduction means working to accept mental health service users into the community, differences and all, rather than trying to convince people that "they are no different than we are" (Penn & Martin 1998). There is much literature that recommends education and information to reduce stigma (Link & Cullen 1986; Wahl & Lefkowitz 1989; Desforges et al. 1991; Link et al. 1991; Mayer & Barry 1992; Penn et al. 1994; Thornton & Wahl 1996; Wolff et al. 1996; Kommana et al. 1997; Penn & Martin 1998; Leicester 1999; Penn et al. 1999; Wahl 1999; Corrigan 2000). The power of socio-cultural beliefs about mental illness is a main source of stigma (Link et al. 1991; Desforges et al. 1991; Penn & Martin 1998). Information helps to dispel the myths associated with mental illness, and so reduces stigma (Wahl & Lefkowits 1989; Desforges et al. 1991; Mayer & Barry 1992; Thornton & Wahl 1996; Penn et al. 1999; Wahl 1999; Wolff et al. 1996).

Changing Attitudes Toward Mental Illness

Altering public attitudes so that the mentally ill are more accepted is a slow and difficult task. People labelled as mentally ill are feared and unwanted because the general public are both uninformed and misinformed; uninformed because they are lacking information about the mentally ill, and misinformed because they hold stereotypes which

prejudices them in their response to the mentally ill (Trute & Loewen 1978; Wahl 1989; Thornton & Wahl 1996, Wolff et al. 1996; Penn et al. 1999; Corrigan 2000).

There are five relatively recent studies on the subject of attitude change. Shera and Delva-Tauiliili's (1996) study is a quasi-experimental design that measured graduate social work students' attitudes towards people with severe mental illness before and after a four-week training module. The authors state that the students were not randomly assigned, and so they considered the study a "natural experiment" rather than a true experiment. Fifty students participated in the intervention, which included readings and discussion, watching videotapes, and structured interviews with mental health service users. The intervention used the contact hypothesis described by Desforges et al. (1991) which allows the non-mentally ill person to connect with the person behind the disorder, and get a better understanding of the pride, loneliness, resiliency and difficult lives of the severely mentally ill (Shera & Delva-Tauiliili 1996).

Thirteen graduate social work students who did not receive the intervention were the comparison group. Both groups were surveyed using a self-administered questionnaire. Although the authors felt Cohen and Struening's Opinions about Mental Illness (OMI) instrument was the best available, they wanted a more updated instrument and so used the 14-item Shera-Chandler Attitude Measure (SCAM) that was developed in 1993, and consists of fourteen sets of adjectives that describe feelings towards working with people who have serious mental illness. Each set measures an attitude on a five-point scale. The test-retest study suggested high retest reliability, but the authors said the

instrument needs further psychometric development to improve its construct and concurrent validity (Shera & Delva-Tauiliili 1996).

Four respondents in the treatment group were not included because the instrument was not completed appropriately, which totalled 46 respondents in the study. The Wilcoxon signed rank-sum test was used to compare the differences between pre-test and post-test scores. The analysis revealed that for the experimental group of 46 students, the rank-sum scores of the post-test scores was significantly higher than the sum of the ranks of the pre-test scores, whereas the rank-sums of the pre-test and post-test scores of the comparison group of 13 students did not differ significantly. Therefore the study found that the intervention to improve students' attitudes towards the mentally ill was successful. The authors believe that the results are conceptually and practically important as their analysis showed significant changes in attitudes. Mental health service providers' attitudes towards mental illness in general, their expectations regarding their clients, and the extent to which their personal attitudes coincide with the treatment philosophy of their place of work all play integral roles in the success of therapeutic efforts.

Shera is from Toronto and Tauiliili is from Hawaii, and it seems their (1996) study was conducted in Hawaii, with respondents including a mix of graduate social work students of Caucasian and Asian and Pacific Islander backgrounds. The intervention consisted of a mix of class and experiential work, which increased the ways the desired message was delivered.

Keane (1991) studied how an eight-week psychiatric nursing course influenced nursing students' attitudes towards mental illness, using a quasi-experimental design.

There was no random assignment as the experimental group was taken from the 50 percent of the senior nursing students who participated in the study during their orientation class, and the comparison group was the remaining 50 percent yet to take the course. The content of the psychiatric course was not described. The Opinions about Mental Illness (OMI) is a questionnaire developed by Cohen and Struening in 1962, who state that the responses reflect opinions and the factors derived from them represent attitudes. The OMI questionnaire was given to all participants in the study at the beginning of the study and again after six months.

Forty-one students who had completed an eight-week psychiatric nursing course made up the experimental group, and 38 students who had not yet taken the course were the comparison group. The author used the OMI with 100 Likert-type opinion items separated into nine attitude dimensions. The experimental group's mean scores changed positively and significantly in *interpersonal etiology*, and changed positively in *welcome home* from the pre-test to post-test. The *interpersonal etiology* dimension looks at the tendency to perceive that mentally illness arises from lack of nurturing from significant others during childhood, and the *welcome home* dimension looks at the tendency to perceive mentally ill persons as making a better adjustment in the community with the availability of support services and the presence of a caring environment. The authors felt some of the items may need re-evaluating because of the change in philosophy and knowledge about mental health since the OMI was developed in 1962.

The study concluded that the mean scores of the attitudes of the 41 students in the experimental group changed significantly in a favourable direction, compared to the

mean scores of the 38 students in the comparison group. However, the author stated that the eight-week psychiatric nursing course included a comprehensive range of topics that would likely influence even well-entrenched attitudes.

Bairan and Farnsworth (1989) also studied how a psychiatric nursing course changed student nurses' attitudes. The study was a quasi-experimental design and compared nursing students' attitudes towards mental illness before and after experiencing a four-week psychiatric nursing course. The course consisted of five hours of class and 15 hours of clinical attendance per week for four weeks. Nursing care focused on clients' responses to their perceptions and situations in general, and specifically as related to various symptoms of affective disorders such as suicide, schizophrenia, and substance abuse. Clinical attendance included an Alcoholics Anonymous meeting, role-playing and modelling, and visiting a drug treatment program. An abbreviated form of the Opinions about Mental Illness (OMI) was used, with 25 statements, which the authors stated had face validity.

The data from the pre-test and post-test modified OMI scores were analyzed using means, standard deviations, and the correlated *t*-test. The findings showed a significant change in a favourable direction for the mean scores of the 185 students who completed both the pre- and post-test OMI questionnaires. The results were interpreted to mean that the students had a more positive view of mental illness and mentally ill people, were less paternalistic, and did not believe that mentally ill people are a threat to society and must be restricted in their functioning. The authors explain the process of the attitude change in terms of the contact hypothesis of attitude change theory.

The students' attitudes decreased significantly in the *Benevolence* scores, and the authors noted they were aware that in one other study participants also showed a significant decrease in *Benevolence* scores. Bairan and Farnsworth (1989) state that benevolence tends to express a moral point of view in which mental patients are like children but are potentially dangerous. The authors say this view may involve inferiority of clients by participants in studies, whereas they feel that the students in their study were rejecting this moralistic-paternalistic perspective.

The study by Chinnayya, Chandrashekar, Moily, Puttamma, Raghuram, Subramanya, Shanmugham and Udaykumar (1990) looked at the attitudes of 150 primary care paramedical health workers in Bangalore, India before and after a one-week training course in mental health care. The training program consisted of lectures, case demonstrations and role-playing. The study use a quasi-experimental design, with a questionnaire consisting of 35 statements about psychosis, epilepsy and mental retardation being given before and after the training course. The respondents were required to state whether they agreed, disagreed or had no opinion about the 35 statements. The authors developed the instrument based on a 20-item questionnaire that had been used in a study in 1980. Therefore the validity and reliability are unknown. Significance of gain in scores was examined using paired *t* tests. The trainees showed a significant change in attitudes in a favourable direction, and those health workers with lower baseline attitude scores registered a significantly higher gain.

The final study compared the attitudes of two groups of medical students who were taught about psychiatry and mental illness using different teaching methods (Singh,

Baxter, Standen & Duggan 1998). One group of 45 students had the old eight-week curriculum with its didactic, lecture-based teaching, and the second group of 65 students had the shorter (six-week), interactive, problem-oriented, workshop-based learning which included more time in direct patient contact. The study was a quasi-experimental design, and used two questionnaires. The authors state the Attitudes Towards Psychiatry Questionnaire is a 30-item scale that looks at eight related attitudes to psychiatry, and has been validated in earlier studies. The Attitudes to Mental Illness Questionnaire (AMI) is a 20-item questionnaire that was constructed by the researchers and was not subjected to tests of validity and reliability. It has individual items that relate to attitudes towards the causes, treatment and consequences of mental illness and its impact upon individuals and society. The paired *t*-test was used for before and after comparison, and the Wilcoxon matched-pairs signed ranks test was used to identify the statements showing maximum change in scores on both scales. Both groups of students had favourable attitudes before their psychiatry attachment, and these attitudes became more positive after the attachment, with no significant difference between the groups. The new, interactive, student-centred, problem-oriented teaching of the shortened new curriculum was found to be as effective in changing medical students' attitudes as the longer, old-style, didactic lecture-based teaching course.

The Singh et al. (1998) study shows that information does positively affect attitudes, even though the method of delivering the information did not make a difference. Myers (1989) and Weiten (1997) report that the source of information must be

credible to ensure attitude change, which suggests the medical students viewed both methods of teaching positively.

Table 1 shows the five studies that researched attitude change.

Table 1: Five studies that show attitude change

Investigators	Sample	Design	Measures	Findings
Shera & Delva-Tauiliili (1996)	Graduate MSW students: Exp.: 50 Cont.: 13	Quasi-experimental Non-equivalent pre-test, post-test control group design.	Shera-Chandler Attitude Measure (SCAM) – 14 items	Pre-test Wilcoxon rank-sum difference between treatment and comparison score z = .41, p = .68 Post-test Wilcoxon rank-sum z = -2.6, p <.01 (significant)
Bairan & Farnsworth (1989)	Nursing students – 185 in class	Quasi-experimental Pre-test, post-test no control group design.	Abbreviated OMI – 25 items	Authoritarianism *t* 4.43 (p <.000) (significant) Benevolence *t* 1.97 (p < .05) (significant, and opposite direction from that hypothesized) Mental Hygiene *t* -6.36 (p < .000) (significant) Social Restrictiveness *t* 2.16 (p < .016) (significant) Interpersonal Etiology *t* 0.15 (not significant)
Keane (1991)	Senior nursing students Exp.: 41 Cont.: 38	Quasi-experimental Non-equivalent pre-test, post-test control group design.	Revised OMI – 100 items	Authoritarianism Exp. *t* -1.68, p .100; Cont. *t* 1.42, p .164 Benevolence Exp. *t* -1.65, p .107; Cont. *t* -0.50, p .632 Mental Hygiene – excluded Social Restrictiveness Exp. *t* -0.51, p .615; Cont. *t* 1.48, p .147 Interpersonal Etiology Exp. *t* 3.75, p .001 (significant); Cont. *t* 1.37 p .180 Community Residence Exp. *t* 1.21, p .232; Cont. *t* 0.80, p .432 Welcome Home Exp. *t* 1.87, p .068; Cont. 0.13, p .895 Stigma Exp. *t* -0.03, p .977; Cont. *t* -1.60, p .119 Stereotyping Exp. *t* 1.91, p .063; Cont. *t* -0.47, p .644
Singh et al. (1998)	Medical students Old curriculum – 45 New curriculum – 65	Quasi-experimental Non-equivalent pre-test post-test control group design.	ATP – 30 items AMI – 20 items	ATP Old curriculum: *t* 3.61, (P < 0.001) (significant) New curriculum: *t* 6.27, (P < 0.001) (significant) no significant difference between the two methods AMI Old curriculum: *t* 3.02, (P <0.001) (significant) New curriculum: *t* 4.21, (P < 0.001) (significant) no significant difference between the two methods
Chinnayya et al. (1990)	Paramedical health workers – 150 in class	Quasi-experimental Pre-test, post-test no control group design.	Attitude Questionnaire – 35 items	Pre-post score *t* value 19.16 (p < 0.001) (significant change in desirable direction)

The authors of the five studies recognized the need for attitude change in health care providers. It is encouraging to see that all five studies show a significant and positive change in attitudes after the participants received information about mental illness, which supports what the literature says. The one result worth noting was in the Bairan and Farnsworth (1989) study, where the *Benevolence* factor decreased significantly between pre-testing and post-testing.

The studies all used the quasi-experimental design method. In three studies the researchers compared groups that were defined by a naturally occurring variable and so were non-equivalent, rather than formed by using random assignment, and two were even less controlled with no comparison group (Gravetter & Wallnau 2000; Hedrick et al. 1993). The quasi-experimental design works well in the workplace, but when research studies are carried out using naturally occurring non-manipulated variables such as subjects or time there are significant limitations in internal validity. For example, it is difficult to know whether any effects are due to the intervention or to other factors that the researchers are unaware of.

It seems that the findings can be generalized beyond a specific experimental situation to broader populations and settings as the studies had a mix of respondents, which supports their external validity (Hedrick et al. 1993). Participants included graduate social work students, nursing students, medical students, and health workers, who were from a variety of places: United States (Georgia and Hawaii), the United Kingdom (Nottingham), India (Bangalore), and one unknown. Each study directed

specific and relevant information to its targeted population, and reached a successful outcome. The studies span nearly a decade in that they date from 1989 to 1998.

There were differences in the kind of intervention regarding patient contact. Shera and Delva-Tauiliili (1996) used class readings and discussion, a videotape, and structured interviews with mental health service users in their four-week training course for graduate social work students. The authors emphasized how they employed the contact hypothesis with the use of co-operative contact. Bairan and Farnsworth (1989) used class work and clinical attendance, which seemed to be observational rather than participatory, for their four-week nursing course. Keane (1991) did not describe the intervention used in her eight-week nursing course. Chinnayya et al. (1990) used only a one-week class for paramedical workers. Singh et al. (1998) compared an eight-week lecture-style curriculum with a new-style six-week course for medical students that had seminars and workshops.

Even with their similarities and differences, the studies were consistent in their positive results of successfully changing attitudes. The five studies describe interventions that are training programs ranging from one week to eight weeks. Because of the limited time and resources for professional development programs in workplaces, it is felt that this study will be useful for practical purposes as it will demonstrate if there is a significant and positive change in attitudes after a one-time information session.

CHAPTER THREE

METHODOLOGY

Hypotheses

The hypothesis that there will be no significant difference between the two groups in this study is known as the null hypothesis. The primary hypothesis was that students receiving an educational intervention on mental illness would exhibit more positive attitudes towards mental illness than those receiving an educational intervention on complementary and alternative medicines. The experimental group received a presentation about what it is like living with a severe mental illness, from someone with personal experience. The attitudes on mental illness were measured both by the Opinions about Mental Illness (OMI), developed by Cohen and Struening in 1962 and the Shera-Chandler Attitude Measure (SCAM) developed in 1993. This measurement was the dependent variable.

The control group received a presentation from the same presenter but on a different topic, so a questionnaire that would relate to the information they received was included. The secondary hypothesis was that the control group receiving the presentation on complementary and alternative medicines would give a higher percentage of "Yes" responses in the "wish to know more" column of the Receptiveness to Complementary and Alternative Medicine Questionnaire (RCAMQ) than the experimental group receiving the presentation on mental illness. It was expected that the result would reflect an increased interest in alternative approaches in the prevention and management of

illness after hearing the presentation on complementary and alternative medicines (Ashton 2000).

The presentations provided the information that was the independent variable to be manipulated. The experimental group received the information about mental illness and the control group received the information about complementary and alternative medicines. The measurement of attitudes toward mental illness was the dependent variable of specific interest and controlled for with the presentation to the control group.

Measures

The test consisted of three instruments (appendix 4). Two instruments were used to measure mental health attitudes: the Opinions about Mental Illness (OMI) questionnaire developed by Cohen and Struening (1962) and the Shera-Chandler Attitude Measure (SCAM, 1993). Both instruments were used because of the age of the OMI and the need to validate it in a modern context, and the need to validate SCAM given limited validation research on it.

The third instrument was the Receptiveness to Complementary and Alternative Medicine (RCAMQ) developed by Ashton for her Doctor of Psychology degree in 2000. The control group received a presentation on alternative medicines, and the experimental group received the presentation on mental illness.

Cohen and Struening (1962) state that the responses obtained from the OMI reflect opinions, and the factors derived from them represent attitudes, and this questionnaire seems to be the most comprehensive questionnaire in use in this area. The

14-item SCAM, developed in 1993, was chosen after a review of recent literature on professional attitudes towards the severely mentally ill.

A 20-item Attitude to Mental Illness questionnaire (AMI) was reviewed. It was developed by Singh, Baxter, Standen and Duggan for their 1998 study, but it has not been used in other studies to substantiate its validity and reliability. A 35-item attitude questionnaire used by Chinnayya, Chandrashekar, Moily, Puttamma, Raghuram, Subramanya, Shanmugham and Udaykumar was developed for their 1990 study, but it has not been used again and so its validity and reliability can not be substantiated.

Cohen and Struening developed the OMI in 1962, to measure the attitudes of staff that worked with mental patients. It was a period when concepts, care, and treatment of people with mental illness began changing. The OMI was developed in order to study the relationships between attitudes toward the mentally ill and variables associated with successful rehabilitation of former inpatients (Schell 1999). Cohen and Struening developed approximately 200 opinion statements regarding the cause, description, treatment, and prognosis of severe mental illness that reflected the current attitudes toward mental illness. These were reviewed and amended by mental health professionals and representatives of the different levels and function of personnel that would come into contact with mental patients, and reduced to 70 items. A factor analysis was conducted on the responses from this first instrument, scales developed, and the current 51-item OMI resulted (Schell 1999).

The OMI was chosen for use in this study because it is well established, standardized, and has been used with many populations. It assesses a broad range of

attitudes, is considered to be the best instrument available and has been reported to be reliable and valid (Cohen & Struening 1965; Bairan & Farnsworth 1989; Keane 1991; Schell 1999; Shera & Delva-Tauiliili 1996). However, the OMI was developed during a period of transition in concepts, care, and treatment of people with mental illness. Long-term hospitalizations tend to have been replaced with more "open" hospitals that are called "psychiatric units" and "day treatment centres" (Schell 1999). Therefore the wording of the statements was changed from "mental hospital" to "psychiatric unit" in the OMI to reflect the updated terminology.

Cohen and Struening (1962) believed that opinions about the mentally ill are potentially multi-dimensional with numbers and natures that are empirical, and so developed the multi-factorial instrument using a Likert format. Reliability refers to the accuracy with which opinions can be measured, and research studies using the instrument over the four decades the OMI has been used report outcomes are similar (Bairan & Farnsworth 1989; Cohen & Struening 1962; Cohen & Struening 1965; Keane 1991). The OMI has indirect evidence of reliability that is shown by its sensitivity to change in studies by Cohen and Struening (1962; 1965) and is borne out by Bairan and Farnsworth (1989) and Keane (1991). Keane (1991) stated that reliability coefficients ranging from .83 to .86 indicate the OMI's good internal consistency reliability.

Validity refers to whether the instrument measures what it claims to measure. The OMI has face validity, in that it appears to be "getting at" what it should. The instrument is believed to have construct validity and measure opinions successfully (Bairan & Farnsworth 1989; Cohen & Struening 1962; Cohen & Struening 1965; Keane 1991;

Shera & Delva-Tauiliili 1996). The multi-dimensional aspect of the OMI strengthens its content validity (Bairan & Farnsworth 1989; Cohen & Struening 1962; Keane 1991). Research studies using the OMI are considered to have statistical validity, and have used appropriate design and statistical methods to enable them to detect effects that are present (Bairan & Farnsworth 1989; Cohen & Struening 1962; Cohen & Struening 1965; Hedrick, Bickman & Rog 1993; Keane 1991). Bairan and Farnsworth (1989) stated that seven studies using the OMI scale found that education and/or training resulted in positive changes in nursing students' attitudes towards the mentally ill, which supports their own study of attitudes toward mental illness.

Struening and Cohen (1963) estimated the internal consistency for each factor using a method developed by Tryon in 1957, which is equivalent to Chronbach's alpha. The following reliability was reported: Authoritarianism 77 to 80%, Benevolence 70 to 73%, Mental Hygiene Ideology 29 to 40%, Social restrictiveness 71 to 77%, and Interpersonal Etiology 65 to 66% (Schell 1999).

The OMI consists of 51 opinions about mental illness and people with mental illness, and is presented in Likert format with provision following each item for a checked response on a six-point agreement continuum. The six possible response choices for each of the items on the scale were assigned numeric values: one for "strongly agree"; two for "agree"; three for "not sure but probably agree"; four for "not sure but probably disagree"; five for "disagree"; and six for "strongly disagree." A constant was used for the scoring formulae for each of the subscales (Struening & Cohen 1963).

The OMI is made up of five factors. Factor A is *Authoritarianism,* which conceptualizes that people with mental illness are distinctly different and inferior to normal people and require coercive handling (Cohen & Struening 1962; Schell 1999). Statements 1, 6, 9, 11, 16, 19, 21, 39, 43, 46, and 48 are included in this dimension. Low scores on the *Authoritarianism* scale is considered positive, so it was expected that the experimental group would score lower than the control group. Factor B is *Benevolence*, a kind paternalistic view towards the mentally ill as childlike and in need of nurturance (Cohen & Struening 1962; Schell 1999). Statements 2, 12, 17, 18, 22, 26, 27, 32, 34, 36, 37, 40, 47 and 49 are included in this dimension. The *Benevolence* and *Interpersonal Etiology* scales are open to interpretation as far as what is considered positive and negative. When the instrument was first developed, lower *Benevolence* scores were considered more positive (Cohen & Struening 1962; Schell 1999). Mental health professionals tended to have low *Benevolence* scores and blue collar mental health workers had high *Benevolence* scores, so it was expected that the experimental group would score lower than the control group. Factor C is *Mental Hygiene Ideology*, a positive and optimistic view of mental illness and treatment (Cohen & Struening 1962; Schell 1999). Statements 3, 13, 23, 28, 31, 33, 38, 44 and 50 are included in this dimension, and it was expected that the experimental group would score higher than the control group. Factor D is *Social Restrictiveness*, a belief that people with mental illness are a threat to society and must be restricted during and after hospitalization (Cohen & Struening 1962; Schell 1999). Statements 4, 7, 8, 14, 24, 29, 41, 42, 45 and 51 are included in this dimension. It was expected that the experimental group would score

lower than the control group. Factor E is *Interpersonal Etiology*, and reflects a belief that mental illness arises from interpersonal experience, particularly deprivation of parental love and support during childhood (Cohen & Struening 1962; Schell 1999). Statements 5, 10, 15, 20, 25, 30 and 35 are included in this dimension. It was expected that the experimental group would score lower than the control group.

The SCAM is a five-point scale consisting of fourteen sets of adjectives, with each set measuring an attitude towards people with mental illness. Each set of adjectives is scored with from one to five with 1 = unpredictable to 5 = predictable for the positively loaded items, and in reverse order for the negatively loaded items (Shera & Delva-Tauiliili 1996). Originally, a list of 18 items describing attitudes towards the severely mentally ill was developed, and after two social work professors reviewed them the number of items was reduced to 14 (Shera & Delva-Tauiliili 1996). The test-retest study suggested high retest reliability, but the authors said they wanted to compare its reliability with the OMI because the OMI is currently the best available measure of attitudes towards the mentally ill (Shera & Delva-Tauiliili 1996). A Spearman rank correlation, r = .81 suggested high test-retest reliability. Internal consistency of items between times of administration was also high. Cronbach's Alpha ranged between .85 at pre-test and .90 at post-test. Both the OMI and the SCAM were used in this study, and the responses correlated. It was expected that the experimental group would score higher than the control group for the SCAM.

The RCAMQ asks about use of complementary and alternative medicines. It consists of a list of eighteen complementary and alternative medicines and asks three

questions about each therapy as follows: 1) has the respondent ever used the therapy, 2) has anyone in the immediate family ever used the therapy, and 3) is the therapy something the respondent wishes to know more about. The third response was the only response of interest. It was expected that the control group that received the presentation on complementary and alternative medicines would give a higher percentage of "Yes" responses in the "wish to know more" column of the RCAMQ than the experimental group that received the presentation on mental illness, because this was the only characteristic that was malleable through the intervention. This predicted result would reflect an increased interest in knowing more about alternative approaches in the prevention and management of illness after hearing the presentation on alternative medicines (Ashton 2000).

The order of the three instruments was randomly varied within each group to eliminate order effects. There were six different possibilities of ordering the questionnaires: 123; 132; 213; 231; 312 and 321.

There were some demographic questions for participant description only. The anonymity of participation was stressed and the fact that the issues are matters of opinion about which even professionals differ, so that there is no right or wrong answer. There was no way of identifying the respondents so signed consent was unnecessary, although a recruitment letter explaining voluntariness was distributed.

In summary, the test consisted of two groups. Each group received one verbal presentation from an individual who is a consumer of mental health services and alternative medicines, after which they were given the OMI, SCAM and RCAMQ

questionnaires to complete. The experimental group had a presentation on mental illness, and the control group received a presentation on alternative medicines.

Sample Recruitment

The sample for the study was drawn from social work students in the Faculty of Social Work at the University of Manitoba, as potential mental health service providers. One class of sixty-four students was used, which was randomly divided into two groups of thirty-one and thirty-three students. A table of random numbers was used to divide the group of students, and colour-coded recruitment letters were distributed to divide the students into the two groups.

Design

An experimental research design was used to test the existence of a causal relationship among two variables. The independent variable (information) was manipulated so that its effect on the dependent variable (attitudes) could be measured. The distinguishing characteristic of an experimental study is the random assignment of individuals to the study to control any biases at the time of assignment. A post-test only design was used.

The class used for the study comprised sixty-four social work students. They were randomly assigned into two groups, one with thirty-one students and one with thirty-three students. For the first half of the class, the experimental group heard a presentation on what it is like living with a severe mental illness, and how it is possible to do all the same

things as someone who does not have a mental illness. That group then filled out their questionnaires. The control group then heard a presentation, from the same presenter, on complementary and alternative medicines, and how beneficial they have been shown to be in many instances.

Both presentations were given by the same person to eliminate as many variables as possible. The intervention was administered and the post-test questionnaires distributed on the same day to eliminate as much extraneous interference as possible and to ensure as much internal validity as possible.

Analysis

Preliminary analyses were run to assess patterns of missing data, as well as the equivalence of the groups on demographic variables. Then the effects of instrument order was assessed, and the reliability of the instruments. The normality of the dependent variables was also assessed, as well as their variability.

A *t* test was used to compare the scores of the experimental group and control group for each subscale of the OMI and for the SCAM. If the value of *t* exceeds the critical value, the groups are said to be significantly different at the $p < .05$ level (Hassard 1991). If the *t* is less than the critical value, the groups are said to be not significantly different. The null hypothesis would be rejected if the primary hypothesis showed that its mean was in one tail of the normal distribution. Only one specific alternative was of interest, so the 5% did not have to split between two tails of the *t* distribution and could be concentrated in just one tail (Hassard 1991).

Multivariate analyses included two-way analyses of variance to enhance efficiency and then analysis of covariance to assess independence of effects. The Statistics Package for the Social Sciences (SPSS) was used to compute the independent samples *t* test of the control group and experimental group to obtain the measure of variance.

The significance level, or alpha level, determines the maximum probability of committing a Type I error, which means concluding that information does have an effect when in fact it has no effect. An alpha level of .05 (5%) means that there is less than a 5% probability that the result occurred by chance, and therefore 95% confidence that the obtained difference is greater than one would expect by chance alone. This level is scientifically used and accepted, and so was used (Bloom, Fischer, & Orme 1999).

Both the OMI and SCAM instruments were used because of the age of the OMI and the need to validate it in a modern context, and the need to validate SCAM, given limited validation research on it (Shera & Delva-Tauiliili 1996). The Pearson correlation was used to compare the results of each OMI subscale with the SCAM results. A minimal .5 positive correlation was expected across both groups between SCAM and the OMI for the *Mental Hygiene Ideology* subscale, and a minimal .5 negative correlation between SCAM and the OMI for the *Authoritarianism, Benevolence, Social Restrictiveness and Interpersonal Etiology* OMI subscales.

The hypothesis for the control group receiving the presentation on alternative medicines was that they would give a significantly higher number of "Yes" responses than the experimental group receiving the presentation on mental illness. A *t* test was

used to compare the responses on the RCAMQ by the control group and the experimental group. A higher number of "Yes" responses was expected, which would reflect an increased interest in alternative approaches in the prevention and management of illness after hearing the presentation on alternative medicines (Ashton 2000).

The power of a statistical test is the probability of detecting a difference between the groups if there is one. Using a sample with approximately 60, an alpha level of .05, and the generally acceptable statistical power level of .80, an effect size of .50 was detectable (Hedrick et al. 1993 p.78). This is generally regarded as a moderate effect size.

For the demographic variables the chi-square test was used to measure the difference between the two groups on gender and ethnicity. The Mann-Whitney *U* test was used to compare the two groups on age and income (Hassard 1991).

Note: The Presenter was a 48 year old male, who works as an educator and advocate in a program of the Manitoba Mental Health Education and Empowerment Initiative. He has a German background as both his parents were from Germany, and he was brought up as a Mennonite.

CHAPTER FOUR

FINDINGS

This chapter describes the research findings. The main purpose of the experimental study was to study the changes in attitudes of social work students toward mental illness, and their interest in alternative medicines, after presentations differentially including information about living with a mental illness and alternative medicines, consistently provided by a person who acknowledges living with a mental health problem. An additional purpose was to validate a new measure of attitudes toward those experiencing mental health problems (Shera-Chandler Attitude Measure, or SCAM) with an established, but perhaps anachronistic measure (Opinions about Mental Illness, or OMI).

Both the OMI and SCAM were used because of the age of the OMI and the need to validate it in a modern context, as well as wanting to validate SCAM. A minimal .5 positive correlation was expected across both groups between SCAM and the OMI for the Mental Hygiene Ideology subscale, and a minimal .5 negative correlation between SCAM and the OMI for the Authoritarianism, Benevolence, Social Restrictiveness and Interpersonal Etiology OMI subscales.

First, missing data and how they were dealt with are discussed, and then the sample is described. Possible selection differences between the control group and the experimental group are then investigated. Three instruments were used in the research, which were given to the students in a folder. The order of the instruments was randomly

assigned, and whether there was any difference in how the instruments were completed based on order is then investigated. The reliability of the instruments and the correlations among them were then analyzed.

The primary hypothesis was that students in the experimental group receiving an educational intervention on mental illness would exhibit more positive attitudes toward mental illness than the students in the control group receiving the educational intervention on alternative medicines. The presenter was introduced to both study groups as a consumer of mental health services and alternative medicines, and working in the mental health system. The experimental group received a presentation about what it is like living with a severe mental illness. The hypothesis was that information from a person who has personal experience of a severe mental illness, such as schizophrenia, would be perceived as credible because listeners would appreciate that service users know best about what it is like to live with a mental illness. The attitudes on mental illness were measured both by the Opinions about Mental Illness (OMI), developed by Cohen and Struening in 1962 and the Shera-Chandler Attitude Measure (SCAM) developed in 1993.

The control group received a presentation from the same presenter, but on a different topic: alternative medicines. Therefore, the Receptiveness to Complementary and Alternative Medicine Questionnaire (RCAMQ) was included because it related to the information they received. The secondary hypothesis was that the control group receiving the presentation on complementary and alternative medicine therapies would give a higher number of "Yes" responses in the "wish to know more" column of the RCAMQ

than the experimental group receiving the presentation on mental illness. It was thought that the result would reflect an increased interest in alternative approaches to the prevention and management of illness after hearing the presentation on alternative medicines (Ashton 2000).

Sixty-four undergraduate social work students participated in the study, with thirty-one participants in the control group and thirty-three participants in the experimental group. Four cases, two from the control group and two from the experimental group, were eliminated because of having more than five percent of their data missing (5.8%; 16.1%; 20.7% and 21.8%).

Missing Data

Forty-five cases (75.0%) had no missing data. Fifteen cases (25.0%) had between one and three elements of data missing; nine cases with missing data were in the control group and six cases with missing data were in the experimental group. There were no data missing in 69.0 percent of the control group and 80.6 percent of the experimental group. Tables 2 and 3 describe the missing data. In the data analysis any missing data were replaced with the mean to make the cases available for analysis. Decreasing the variance is a side effect of this, but the low number of missing cases in this study would have had a very limited effect on Type 2 error. There was no significant pattern in the missing data, in that it did not occur in one group more than another. The alpha level for all tests was 0.05.

Table 2 describes the missing data by group.

Table 2: Missing Data by Group

Study Group	Cases With Missing Data	Mean Number Missing	SD	Statistic (2-tailed)
Control Experimental	9 (31.0%) 6 (19.4%)	.4828 .2258	.8290 .4973	df = 58 *t* = 1.467* p = .148 Fisher's exact test = .376

* *t* test for equality of means
Equal variances assumed

Table 3 describes the missing data by variable.

Table 3: Missing Data by Variable

Variable	Number Missing	Statistic (2-tailed)
Gender	Control – 1 (3.4%) Experimental – 0	Fisher's exact test = .483 df = 1 *p* = .297
Income	Control – 1 (3.4%) Experimental – 0	Fisher's exact test = .483 df = 1 *p* = .297
OMI 1A	Control – 1 (3.4%) Experimental - 0	Fisher's exact test = .483 df = 1 *p* = .297
OMI 2B	Control – 1 (3.4%) Experimental - 0	Fisher's exact test = .483 df = 1 *p* = .297
OMI 28C	Control – 0 Experimental – 1 (3.2%)	Fisher's exact test = 1.000 df = 1 *p* = .329
OMI 33C	Control – 0 Experimental – 1 (3.2%)	Fisher's exact test = 1.000 df = 1 *p* = .329
OMI 39A	Control – 1 (3.4%) Experimental – 0	Fisher's exact test = .483 df = 1 *p* = .297
SCAM 04	Control – 1 (3.4%) Experimental – 0	Fisher's exact test = .483 df = 1 *p* = .297
S CAM 13	Control – 1 (3.4%) Experimental – 0	Fisher's exact test = .483 df = 1 *p* = .297
RCAMQ 2C	Control – 1 (3.4%) Experimental – 1 (3.2%)	Fisher's exact test = 1.000 df = 1 *p* = .962
RCAMQ 3C	Control – 1 (3.4%) Experimental – 0	Fisher's exact test = .483 df = 1 *p* = .297
RCAMQ 4C	Control – 1 (3.4%) Experimental – 0	Fisher's exact test = .483 df = 1 *p* = .297
RCAMQ 6C	Control – 0 Experimental – 1 (3.2%)	Fisher's exact test = 1.000 df = 1 *p* = .329
RCAMQ 14C	Control – 2 (6.9%) Experimental – 0	Fisher's exact test = .229 df = 1 *p* = .137
RCAMQ 17C	Control – 1 (3.4%) Experimental – 0	Fisher's exact test = .483 df = 1 *p* = .297
RCAMQ 18C	Control – 0 Experimental – 3 (9.7%)	Fisher's exact test = .238 df = 1 *p* = .086

Legend:
OMI A: Opinions about Mental Illness, Authoritarian subscale
OMI B: Opinions about Mental Illness, Benevolence subscale
OMI C: Opinions about Mental Illness, Mental Hygiene Ideology subscale
OMI D: Opinions about Mental Illness, Social Restrictiveness subscale
OMI E: Opinions about Mental Illness, Interpersonal Etiology subscale
SCAM: Shera-Chandler Attitude Measure
RCAMQ: Receptiveness to Complementary and Alternative Medicines Questionnaire

Demographic Data

Table 4 describes the demographic data. The four possible ethnic groups were Aboriginal, Asian/African, Canadian and European, with the modal ethnic category being Canadian at 55.0% (N=33). The modal gender was female at 85.0% (N=51). There were seven income categories, ranging from 1) less than $10,000 to 7) more than $60,000. The median category for the whole sample was 5) $40,001-$50,000. The median category for the control group was 4.5 which is between 4) $30,001-$40,000 and 5) $40,001-$50,000 and the median for the experimental group was 5) $40,001-$50,000. There were seven age categories, ranging from 1) 20 years or younger to 7) 46-50 years old. The median category for the whole sample was 2) 21-25 years, and also for both the control group and the experimental group.

Table 4: Description of Sample

Characteristic	Descriptive Statistic
Ethnicity	15% (N=9) Aboriginal (C: 5; E: 4) 10% (N=6) Asian/African (C: 1; E: 5) 55% (N=33) Canadian (C: 17; E: 16) 20% (N=12) European (C: 6; E: 6)
Gender	85% Female (N=51) (C: 24; E: 27) 13.3% Male (N=8) (C: 4; E: 4) 1.7% Not reported (N=1) (C:1)
Income category	Median income = 5) $40,001-$50,000 (C: 4.5; E: 5) 4) = $30,001-$40,000; 5) = $40,001-$50,000 Range: 1) less than $10,000 – 7) more than $60,000 1.7% Not reported (N=1) (C:1)
Age category	Median age category 2) = 21-25 yrs (C: 2; E: 2) Range: 1) 20 yrs or younger – 7) 46-50 yrs

Legend: C = control group; E = experimental group

The randomization process was shown to be effective with no significant difference in the demographic variables (age, gender, ethnicity, income) between the control group and the experimental group. This is seen in Tables 5 and 6.

Table 5: Mann-Whitney Test Comparing Study Groups (C = 29; E = 31)

Variable	Mann-Whitney U	z	p (2-tailed)
Income	439.000	-.158	.874
Age	351.500	-1.555	.120

Table 6: Study Group Comparison

Variable	df	Fisher's Exact Test (2-sided)
Gender	1	1.000
Ethnicity: Aboriginal	1	.727
: Asian/African	1	.196
: Canadian	1	.614
: European	1	1.000

Order Effect

Each student was given three instruments to fill out. To assess and randomize out potential order effects, the instruments were randomly ordered into six groups. The Opinions about Mental Illness (OMI) was instrument number one (1). The Shera-Chandler Attitude Measure (SCAM) was instrument number two (2). The Receptiveness to Complementary and Alternative Medicines Questionnaire (RCAMQ) was instrument number three (3). The six possible orders of the instruments were 1) 123; 2) 132; 3) 231; 4) 213; 5) 312; and 6) 321.

The instrument scores were analysed using one-way analyses of variance (ANOVA) to determine if there were differences in the means for the six groups completing the instruments in different orders. As can be seen in Table 7, no significant difference was found on the basis of order.

Table 7: Order Effect Using One-Way Analysis of Variance (ANOVA)

Instrument	df1	df2	F	Significance
OMI A	5	54	.362	.872
OMI B	5	54	1.488	.209
OMI C	5	54	.161	.976
OMI D	5	54	.390	.854
OMI E	5	54	.268	.929
SCAM	5	54	.990	.432
RCAMQ	5	54	1.652	.162

Legend:
OMI A: Opinions about Mental Illness, Authoritarian subscale
OMI B: Opinions about Mental Illness, Benevolence subscale
OMI C: Opinions about Mental Illness, Mental Hygiene Ideology subscale
OMI D: Opinions about Mental Illness, Social Restrictiveness subscale
OMI E: Opinions about Mental Illness, Interpersonal Etiology subscale
SCAM: Shera-Chandler Attitude Measure
RCAMQ: Receptiveness to Complementary and Alternative Medicines Questionnaire

Variances Of Instruments

Variance shows the dispersion of data around the mean and is the square of the standard deviation (Bryman & Cramer 1997). Levene's test was done to test whether the variances were the same for the six order groups.

As seen in Table 8, Levene's test showed that all but the OMI C were equal in variance. The Kruskal-Wallis test does not require the assumption of equal variance, and so was used for the OMI C subscale.

Table 8: Levene's Test For Equality of Variance

Instrument	Levene Statistic	df1	df2	Sig.
OMI A	.428	5	54	.827
OMI B	1.077	5	54	.076
OMI C	3.692	5	54	.000*
OMI D	.389	5	54	.393
OMI E	.847	5	54	.522
SCAM	.301	5	54	.910
RCAMQ	1.315	5	54	.272

* Equal variance assumption violated

Legend:
OMI A: Opinions about Mental Illness, Authoritarian subscale
OMI B: Opinions about Mental Illness, Benevolence subscale
OMI C: Opinions about Mental Illness, Mental Hygiene Ideology subscale
OMI D: Opinions about Mental Illness, Social Restrictiveness subscale
OMI E: Opinions about Mental Illness, Interpersonal Etiology subscale
SCAM: Shera-Chandler Attitude Measure
RCAMQ: Receptiveness to Complementary and Alternative Medicines Questionnaire

As seen in Table 9, the probability level was greater than 0.05 which confirms there is no difference in means based on the order in which the instruments were administered.

Table 9: Kruskal-Wallis Test

Instrument	Chi Square	df	P
OMI C	.850	5	.974

Reliability Of Instruments

Measurement devices should be both reliable and valid. The reliability of a measure refers to its consistency. Cronbach's alpha is widely used to calculate the average of all possible split-half reliability coefficients. The rule of thumb is that the result should be 0.8 or above, with a lower result suggesting a low level of internal reliability (Bryman & Cramer 1997).

Table 10 shows the OMI Authoritarianism subscale (A) had a Cronbach alpha of .7008. This is below acceptable reliability, and could not be improved significantly. The OMI Benevolence subscale (B) had a low alpha of .4738, which could not be improved significantly. The OMI Mental Hygiene Ideology subscale (C) had a very low alpha at .2467, which cannot be improved significantly. The OMI Social Restrictiveness subscale (D) had an alpha of .7104. The OMI Interpersonal Etiology subscale (E) had an alpha of .7968, which is an acceptable level of reliability. Keane (1991) found reliability coefficients ranging from .52 to .88 with the OMI Mental Hygiene Ideology subscale having the lowest, and so she omitted that subscale in her study.

The SCAM's reliability was good with an Alpha of .8379, and the reliability of the RCAMQC questions was shown to be very good with a Cronbach alpha of .9502.

Table 10: Reliability of Instruments

Instrument	Number of Items in Scale	Cronbach's alpha
OMI A	11	.7008
OMI B	14	.4738
OMI C	9	.2467
OMI D	10	.7104
OMI E	7	.7968
SCAM	14	.8379
RCAMQ	18	.9502

Legend:
OMI A: Opinions about Mental Illness, Authoritarian subscale
OMI B: Opinions about Mental Illness, Benevolence subscale
OMI C: Opinions about Mental Illness, Mental Hygiene Ideology subscale
OMI D: Opinions about Mental Illness, Social Restrictiveness subscale
OMI E: Opinions about Mental Illness, Interpersonal Etiology subscale
SCAM: Shera-Chandler Attitude Measure
RCAMQ: Receptiveness to Complementary and Alternative Medicines Questionnaire

The limited reliability of the Benevolence and Mental Hygiene Ideology subscales means analyses in which they were involved were predisposed to Type 2 error. A Type 2 error occurs when the null hypothesis is accepted though it is false. Low reliability makes it more difficult to find differences between the control and experimental groups and correlations among variables because of random error.

The Opinions about Mental Illness (OMI) was developed in 1962 (Cohen & Struening 1962) and the Benevolence subscale tends to reflect old concepts (Schell 1999; Shera & Delva-Tauiliili 1996) which may account for the low reliability. Benevolence indicates how people with mental illness were looked upon in 1962, when the OMI was developed, and has its roots in moralism, humanism and religion rather than science (Cohen & Struening 1962; Bairan & Farnsworth 1989; Keane 1991; Schell 1999). It was a charitable and kind, but paternalistic view toward people with mental illness, which

tended to result in them being treated as childlike and in need of nurturance (Schell 1999). For example item 49 states "There is little that can be done for persons with severe mental illness except to see that they are comfortable and well fed." Mental Hygiene Ideology involves a belief that mental illness is treatable like any other illness (Bairan & Farnsworh 1989; Keane 1991). It indicates a positive view of mental illness and prognosis and views the person as having the ability to be a productive citizen (Schell 1999), which should fit with today's concepts. It should be noted that the participants of this study were social work students who have knowledge of newer concepts.

Distribution Of Responses

Table 11 shows there was sufficient variance in all of the dependent variables to allow for assessment of any group differences.

Table 11: Descriptive Statistics of the Dependent Variables

Dependent Variable	Mean	SD
OMI A	43.5077	5.56906
OMI B	33.9042	5.18305
OMI C	21.6605	3.59791
OMI D	39.6333	4.94706
OMI E	29.7333	4.23811
SCAM	51.9000	7.59505
RCAMQ	9.9167	6.50760

Legend:
OMI A: Opinions about Mental Illness, Authoritarian subscale
OMI B: Opinions about Mental Illness, Benevolence subscale
OMI C: Opinions about Mental Illness, Mental Hygiene Ideology subscale
OMI D: Opinions about Mental Illness, Social Restrictiveness subscale
OMI E: Opinions about Mental Illness, Interpersonal Etiology subscale
SCAM: Shera-Chandler Attitude Measure
RCAMQ: Receptiveness to Complementary and Alternative Medicines Questionnaire

Normality Of Dependent Variables

Abnormal distribution of data is prone to Type 2 error. To confirm that the dependent variables had a normal distribution, the very sensitive one-sample Kolmogorov-Smirnov test was run to compare the distribution of the range of values with a normal distribution. As seen in Table 12, the results were not significant which means the distributions were normal.

Table 12: One-Sample Kolmogorov-Smirnov Test

Instrument	Z	N	Sig. (2-tailed)
OMI A	.785	60	.568
OMI B	.924	60	.361
OMI C	.843	60	.475
OMI D	.706	60	.701
OMI E	.840	60	.481
SCAM	.655	60	.784
RCAMQ	1.173	60	.127

Legend:
OMI A: Opinions about Mental Illness, Authoritarian subscale
OMI B: Opinions about Mental Illness, Benevolence subscale
OMI C: Opinions about Mental Illness, Mental Hygiene Ideology subscale
OMI D: Opinions about Mental Illness, Social Restrictiveness subscale
OMI E: Opinions about Mental Illness, Interpersonal Etiology subscale
SCAM: Shera-Chandler Attitude Measure
RCAMQ: Receptiveness to Complementary and Alternative Medicines Questionnaire

Correlation Of Dependent Variables

OMI is the Opinions about Mental Illness instrument. Table 13 shows that OMI A (Authoritarian subscale) correlated significantly positively to OMI B (Benevolence subscale), OMI D (Social Restrictiveness subscale) and OMI E (Interpersonal Etiology subscale). The Authoritarianism subscale (A) is authoritarian and views the mentally ill as an inferior class that requires coercive handling, which is a similar view to Social

Restrictiveness (OMI D) that believes the mentally ill are a threat to society and must be restricted in their functioning during and after hospitalization (Bairan & Farnsworth 1989). The positive correlation with OMI B may reflect an outdated view that people with mental illness need to be protected and kept safe. The highest correlation was seen between OMI A and Interpersonal Etiology (OMI E). OMI E is the belief that mental illness arises from interpersonal experience, especially deprivation of parental love during childhood (Bairan & Farnsworth 1989), so perhaps it was felt that control, possibly viewed as the controversial tough love, is the best way of dealing with the resulting mental illness.

The Benevolence subscale (OMI B) has a paternalistic and kindly view towards people with mental illness, with origins in religion and humanism, according to Cohen and Struening (1962) and Bairan and Farnsworth (1989), yet the positive correlation with OMI A and OMI D suggests a paternalistic view that "childlike" people with mental illness need to be controlled and restricted. The positive correlation with OMI E may reflect a belief that people with mental illness need to be particularly looked after because of having been neglected and deprived of love as children.

OMI C correlated significantly negatively to SCAM, which was in the opposite direction from that hypothesised. The Mental Hygiene Ideology subscale (OMI C) has a positive orientation, a belief that mental illness is treatable like any other illness (Bairan & Farnsworth 1989), which was expected to be reflected in the contemporary scale. The opposite correlation from that predicted suggests the two instruments were measuring different things.

OMI D correlated significantly positively to OMI A, OMI B, OMI E and SCAM. The positive correlation between OMI D (Social Restrictiveness subscale) and OMI A (Authoritarian subscale) may be due to both believing in coercive and restrictive handling of people with mental illness. OMI D's positive correlation with OMI E (Interpersonal Etiology subscale) may reflect a belief that lack of nurturing in childhood can be corrected with authoritarian care as adults. OMI D's positive correlation with OMI B (Benevolence subscale) may reflect an outdated view that people with mental illness need to be taken care of because they are incapable of looking after themselves. The positive correlation between OMI D and SCAM was opposite from that expected. This finding suggests the two instruments were measuring different things.

OMI E correlated significantly positively with OMI A, OMI B, OMI D and SCAM. As suggested previously, the positive correlation with OMI A (Authoritarian subscale) and OMI D (Social Restrictiveness subscale) may be because authoritarian care of people with mental illness is thought to correct the deprivation of parental love and lack of nurturing belief that is seen as the reason for mental illness in OMI E (Interpersonal Etiology subscale). Again, the significantly positive correlation with OMI B (Benevolence subscale) may reflect the belief that people with mental illness especially need to be protected and looked after because of having been neglected as children. The significantly positive correlation between SCAM and the OMI E was opposite from that predicted. It was surprising because of the tolerant view of mental illness held by SCAM as opposed to the dogmatic view of the causes for mental illness held by the OMI E.

Table 13: Correlations of Instruments

	OMI A	OMI B	OMI C	OMI D	OMI E	SCAM	RCAMQ
OMI A Correlation Significance (2-tailed unless otherwise stated)	1 .	.368* .004	-.165 .209	.631* .000	.752* .000	.209 .108 (2-tailed) .054 (1-tailed)	.116 .379
OMI B Correlation Significance (2-tailed unless otherwise stated)	.368* .004	1 .	.087 .508	.305* .018	.262* .043	.082 .535 (2-tailed) .268 (1-tailed)	-.004 .976
OMI C Correlation Significance (2-tailed unless otherwise stated)	-.165 .209	.087 .508	1 .	-.232 .074	-.186 .154	-.327* .011 (2-tailed) .006 (1-tailed)	-.215 .099
OMI D Correlation Significance (2-tailed unless otherwise stated)	.631* .000	.305* .018	-.232 .074	1 .	.497* .000	.335* .009 (2-tailed) .005 (1-tailed)	.164 .211
OMI E Correlation Significance (2-tailed unless otherwise stated)	.752* .000	.262* .043	-.186 .154	.497* .000	1 .	.368* .004 (2-tailed) .002 (1-tailed)	-.007 .958
SCAM Correlation Significance (2-tailed unless otherwise stated)	.209 .108 (2-tailed) .054 (1-tailed)	.082 .535 (2-tailed) .268 (1-tailed)	-.327* .011 (2-tailed) .006 (1-tailed)	.335* .009 (2-tailed) .005 (1-tailed)	.368* .004 (2-tailed) .002 (1-tailed)	1 .	-.003 .984
RCAMQ Correlation Significance (2-tailed unless otherwise stated)	.116 .379	-.004 .976	-.215 .099	.164 .211	-.007 .958	-.003 .984	1 .

* Correlation is significant at the 0.05 level (2-tailed)

Legend:
OMI A: Opinions about Mental Illness, Authoritarian subscale
OMI B: Opinions about Mental Illness, Benevolence subscale
OMI C: Opinions about Mental Illness, Mental Hygiene Ideology subscale
OMI D: Opinions about Mental Illness, Social Restrictiveness subscale
OMI E: Opinions about Mental Illness, Interpersonal Etiology subscale

SCAM: Shera-Chandler Attitude Measure
RCAMQ: Receptiveness to Complementary and Alternative Medicines Questionnaire

There was no expectation of a correlation between RCAMQ (Receptiveness to Complementary and Alternative Medicines Questionnaire) and either SCAM or OMI because the instruments are constructed very differently and measure very different things. There were no significant correlations found.

Hypotheses Regarding Correlation Of Mental Health Attitude Scales

The primary hypothesis was that students in the experimental group receiving an educational intervention on mental illness would exhibit more positive attitudes towards mental illness than the students in the control group receiving the educational intervention on alternative medicines. Two instruments were used to measure mental health attitudes: the Opinions about Mental Illness (OMI) questionnaire developed by Cohen and Struening (1962) and the Shera-Chandler Attitude Measure (SCAM, 1993). Both instruments were used because of the age of the OMI and the need to validate it in a modern context, and the need to validate SCAM given limited validation research on it.

The Pearson correlation was used to compare the results of each OMI subscale with the SCAM results. A minimal .5 positive correlation was expected across both groups between SCAM and the OMI for the *Mental Hygiene Ideology* subscale (OMI C), and a minimal .5 negative correlation between SCAM and the OMI for the *Authoritarianism* subscale (OMI A), *Benevolence* subscale (OMI B), *Social Restrictiveness* subscale (OMI D) *and Interpersonal Etiology* subscale (OMI E).

It was hypothesized that SCAM would correlate positively with OMI C, which views mental illness as treatable like any other illness, and seems more understanding and less blaming. However, SCAM correlated significantly negatively to OMI C, and instead of a significantly positive correlation there was a significantly negative correlation (-.327).

Significantly negative correlations were expected between SCAM and OMI A, OMI B, OMI D and OMI E because of the controlling views of OMI A (Authoritarian subscale) and OMI D (Social Restrictiveness subscale), the paternalistic view of the OMI B, and the prejudiced view of OMI E (Interpersonal Etiology). Factors A and D in the OMI see the need for people with mental illness to be controlled and restricted. OMI A conceptualizes that people with mental illness are distinctly different and inferior to normal people and require coercive handling (Cohen & Struening 1962; Schell 1999). OMI D holds the belief that people with mental illness are a threat to society and must be restricted during and after hospitalization (Cohen & Struening 1962; Schell 1999). OMI E reflects a belief that mental illness arises from interpersonal experience, particularly deprivation of parental love and support during childhood (Cohen & Struening 1962; Schell 1999).

SCAM was expected to reflect the contemporary assumption of tolerance and understanding of mental illness. Instead SCAM correlated significantly positively to OMI D (.335) and OMI E (.368) which was surprising because of the controlling views of OMI D and the dogmatic views of OMI E.

There was a positive correlation between SCAM and OMI A, but it was not significant (.209). There was also a positive correlation between SCAM and OMI B, but it was not significant (.082).

In summary of the hypotheses regarding the correlations, the null hypotheses could not be rejected. This would suggest that SCAM and OMI should not be used to validate each other as they seem to be measuring different things.

Comparison Of Attitudes Of Experimental Group And Control Group

The *t* test was used to compare the scores of the experimental group and control group for each subscale of the OMI, for the SCAM, and for the RCAMQ. As seen in Table 14, there was a significant difference between the control group and the experimental group for OMI C, but in the opposite direction from that hypothesised with the control group's mean score higher than the experimental group's mean score.

Table 14: *t* test Comparing Control Group and Experimental Group

Instrument	Mean Cont.	Mean Exp.	SD Cont.	SD Exp.	df	t	Sig. (1-tailed)
OMI A	44.4641	42.6129	4.2642	6.5048	52.112	1.312	0.098 (Equal variances not assumed)
OMI B	33.0432	34.7097	5.38841	4.93419	58	-1.250	0.108
OMI C	22.5517	20.8269	3.50088	3.54026	58	1.896	0.032*
OMI D	4.7586	4.9677	.98761	.94812	58	-.837	0.203
OMI E	30.4483	29.0645	3.5915	4.7254	58	1.270	0.105
SCAM	50.2069	53.4839	7.1782	7.7454	58	-1.696	0.048
RCAMQ	9.3448	10.4516	6.9759	6.1038	58	-.655	0.258

*Difference is significant at the 0.05 level (1-tailed)
Equal variances assumed, except where otherwise stated

Legend:
OMI A: Opinions about Mental Illness, Authoritarian subscale
OMI B: Opinions about Mental Illness, Benevolence subscale
OMI C: Opinions about Mental Illness, Mental Hygiene Ideology subscale
OMI D: Opinions about Mental Illness, Social Restrictiveness subscale
OMI E: Opinions about Mental Illness, Interpersonal Etiology subscale
SCAM: Shera-Chandler Attitude Measure
RCAMQ: Receptiveness to Complementary and Alternative Medicines Questionnaire

As seen in Table 15, Levene's test showed that groups for all but the OMI A were equal in variance.

Table 15: Levene's Test for Equal Variances

Instrument	Levene's Statistic	Sig.
OMI A	5.003	.029*
OMI B	3.916	.744
OMI C	.055	.907
OMI D	.518	.573
OMI E	1.306	.258
SCAM	.484	.489
RCAMQ	2.353	.130

* Equal variance assumption violated

The Mann-Whitney U test does not require assumption of equal variance, and so was used for the OMI A subscale. The significance level was greater than 0.05, as seen in Table 16, and confirms there is no difference in means of the control group and experimental group.

Table 16: Mann-Whitney U Test

Instrument	Mann-Whitney U	Sig. (1-tailed)
OMI A	399.500	.230

In the comparison of the study groups, the OMI C showed a significant difference between the control group and the experimental group. The SCAM approached

significance, with the expected result of the experimental group scoring higher than the control group. OMI C has a positive orientation and believes that mental illness is treatable like any other illness (Cohen & Struening 1962; Bairan & Farnsworth 1989; Keane 1991).

SCAM is a more recent instrument, having been developed in 1993, and also views mental illness as treatable, just like any other illness (Shera & Delva-Tauiliili 1996). However, it seems that there is a fundamental difference between OMI C and SCAM and that they are measuring things very differently.

The secondary hypothesis was that the control group receiving the presentation on alternative medicines would give a higher number of "Yes" responses in the "wish to know more" column of the RCAMQ than the experimental group receiving the presentation on mental illness. It was thought the result would reflect an increased interest in alternative approaches in the prevention and management of illness after hearing the presentation on alternative medicines. However, there was no difference in the responses for the experimental group and the control group.

In summary, the significant difference was found between the experimental group and the control group in OMI C. The null hypothesis was not rejected for the secondary hypothesis as there was no difference found between the experimental group and the control group.

Tests Of Hypotheses Controlling For Variation Related To Demographic Variables

To more sensitively test the equality of means between the experimental and control groups, a two-way analysis of variance was run for each instrument while controlling for each of the demographic variables and their interactions separately. Where interactions between the groups (experimental and control) and the demographic variable were insignificant the interaction term was removed. However, the interaction term was replaced if removing it rendered the group differences insignificant.

Table 17 shows that the mean score for SCAM was significantly higher for the experimental study group when controlling for gender and its interaction with the assigned group. This finding was in the hypothesised direction. There is no evidence that the mean SCAM score differs between groups when controlling for income, age or ethnicity and their interactions.

Table 17: Effect of Group Assignment Controlling for Demographic Variables - SCAM

Dependent Variable	Control Variables	Type lll Sum of Squares for Group	df1	df2	F for Group	Sig.
SCAM	Gender and interaction of gender and group	306.347	1	55	5.535	.022*
	Income and interaction of income and group	83.547	1	46	1.901	.175 .080 when controlling for interaction
	Age and interaction of age and group	88.878	1	48	1.691	.200 .067 when controlling for interaction
	Ethnicity and interaction of ethnicity and group	40.850	1	52	.699	.407 .150 when controlling for interaction

* Significant at the 0.05% level
Legend: SCAM: Shera-Chandler Attitude Measure
Levene's test was not significant for the SCAM study groups. See appendix 1 for Levene's test for the SCAM study groups and demographic variables.

Table 18 shows the means and standard deviations for males and females in the control group and the experimental group for SCAM.

Table 18: Gender Means and Standard Deviations - SCAM

Dependent Variable	Control Variable	Study Group	n	Mean	SD
SCAM	Gender	Control – Female	24	50.8333	6.90725
		– Male	4	44.7500	7.54431
		Not reported	1	57.0000	
		Exp. – Female	27	53.1481	8.23082
		– Male	4	55.7500	2.21736

Table 19 shows that for the OMI A there was no significant difference between the control group and the experimental group. There is no evidence that the mean Authoritarianism score differs between groups.

Table 19: Effect of Group Assignment Controlling for Demographic Variables – OMI A

Dependent Variable	Control Variables	Type lll Sum of Squares for Group	df1	df2	F for Group	Sig.
OMI A	Gender and interaction of gender and group	1.439	1	55	.048	.828 .238 when controlling for interaction
	Income and interaction of income and group	87.690	1	46	3.130	.084 .133 when controlling for interaction
	Age and interaction of age and group	16.949	1	48	.527	.471 .286 when controlling for interaction
	Ethnicity and interaction of ethnicity and group	21.741	1	52	.715	.402 .361 when controlling for interaction

Legend: OMI A: Opinions about Mental Illness, Authoritarian subscale

Levene's test was significant at the 0.05% level for the following demographics:
Gender: df1=3; df2=55; p=.037* (.054 when controlling for interaction)
Income: df1=12; df2=46; p=.055 (.039* when controlling for interaction)
Age: df1=11; df2=48; p=.029* (.139 when controlling for interaction)
Ethnicity: df1=7; df2=52; p=.004* (.024* when controlling for interaction)
See appendix 1 for Levene's test for the OMI A study groups and demographic variables.

Table 20 shows that for the OMI B the mean score was significantly higher for the experimental study group when controlling for age and its interaction with the group assignment variable. This finding was in the opposite direction from that hypothesised.

Table 20: Effect of Group Assignment Controlling for Demographic Variables – OMI B

Dependent Variable	Control Variables	Type lll Sum of Squares for Group	df1	df2	F for Group	Sig.
OMI B	Gender and interaction of gender and group	69.689	1	55	2.696	.106 .130 when controlling for interaction
	Income and interaction of income and group	7.189	1	46	.248	.621 .371 when controlling for interaction
	Age and interaction of age and group	69.077	1	48	3.423	.070 .016* when controlling for interaction
	Ethnicity and interaction of ethnicity and group	21.847	1	52	.796	.376 .151 when controlling for interaction

* Significant at the 0.05% level

Legend: OMI B: Opinions about Mental Illness, Benevolence subscale

Levene's test was significant for income only:
Income: df1=13; df2=46; p=.004* (.011* when controlling for interaction)
See appendix 1 for Levene's test for the OMI B study groups and demographic variables.

Table 21 shows the means and standard deviations for the control group and experimental group for each age group.

Table 21: Means and Standard Deviations for OMI B Age Categories

Study Group	Age Cat.	N	Mean	SD
Control	1 (20 yrs. or younger)	2	8.0000	1.4142
	2 (21-25 yrs.)	15	12.2169	5.0454
	3 (26-30 yrs.)	4	11.2500	6.0759
	4 (31-35 yrs.)	2	14.0000	5.6569
	5 (36-40 yrs.)	3	19.0000	5.5678
	6 (41-45 yrs.)	2	11.0000	1.4142
	7 (46-50 yrs.)	1	16.0000	
Experimental	1 (20 yrs. or younger)	7	16.4286	3.1547
	2 (21-25 yrs.)	15	13.0667	3.8260
	3 (26-30 yrs.)	2	13.0000	.0000
	4 (31-35 yrs.)	5	15.0000	4.6368
	5 (36-40 yrs.)			
	6 (41-45 yrs.)	2	16.5000	2.1213
	7 (46-50 yrs.)			

There is no evidence that the mean Benevolence score differs between groups when controlling for gender, income, or ethnicity while controlling for their interactions.

Table 22 shows that for the OMI C there was no significant difference between the control group and the experimental group for all four demographic variables. The *t* test, however, (Table 14) showed a significant difference between the control group and the experimental group in OMI C. Here, the demographic variables were not significantly related to the dependent variable, so did not increase the accuracy of the estimate. However, they decreased the power of the test on the group variable.

Table 22: Effect of Group Assignment Controlling for Demographic Variables – OMI C

Dependent Variable	Control Variables	Type lll Sum of Squares for Group	df1	df2	F for Group	Sig.
OMI C	Gender and interaction of gender and group	21.445	1	55	1.655	.204 .062 when controlling for interaction
	Income and interaction of income and group	24.168	1	46	1.932	.171 .064 when controlling for interaction
	Age and interaction of age and group	36.362	1	48	2.911	.094 .066 when controlling for interaction
	Ethnicity and interaction of ethnicity and group	3.643	1	52	.280	.599 .087 when controlling for interaction

Legend: OMI C: Opinions about Mental Illness, Mental Hygiene Ideology subscale

Levene's test was not significant for the OMI C study groups. See appendix 1 for Levene's test for the OMI C study groups and demographic variables.

Table 23 shows that for OMI D there was no significant difference between the control group and the experimental group when all four demographic variables were controlled. Therefore there is no evidence that the mean score for Social Restrictiveness differs between the study groups.

Table 23: Effect of Group Assignment Controlling for Demographic Variables – OMI D

Dependent Variable	Control Variables	Type lll Sum of Squares for Group	df1	df2	F for Group	Sig.
OMI D	Gender and interaction of gender and group	7.871	1	55	.317	.576 .765 when controlling for interaction
	Income and interaction of income and group	.618	1	46	.024	.878 .912 when controlling for interaction
	Age and interaction of age and group	19.368	1	48	.811	.372 .832 when controlling for interaction
	Ethnicity and interaction of ethnicity and group	2.522	1	52	.098	.755 .778 when controlling for interaction

Legend: OMI D: Opinions about Mental Illness, Social Restrictiveness subscale

Levene's test was significant for ethnicity only: df1=7; df2=52; p=.021* (.027* when controlling for interaction).
See appendix 1 for Levene's test for the OMI D study groups and demographic variables.

Table 24 shows that for OMI E there was no significant difference between the control group and the experimental group when all four demographic variables were controlled. Therefore there is no evidence that the mean score for Interpersonal Etiology differs between the study groups.

Table 24: Effect of Group Assignment Controlling for Demographic Variables – OMI E

Dependent Variable	Control Variables	Type lll Sum of Squares for Group	df1	df2	F for Group	Sig.
OMI E	Gender and interaction of gender and group	.062	1	55	.004	.952 .240 when controlling for interaction
	Income and interaction of income and group	45.876	1	46	2.610	.113 .133 when controlling for interaction
	Age and interaction of age and group	1.643	1	48	.091	.764 .398 when controlling for interaction
	Ethnicity and interaction of ethnicity and group	.071	1	52	.004	.950 .293 when controlling for interaction

Legend: OMI E: Opinions about Mental Illness, Interpersonal Etiology subscale

Levene's test was not significant for the OMI E study groups. See appendix 1 for Levene's test for the OMI E study groups and demographic variables.

Table 25 shows that for RCAMQ there was no significant difference between the control group and the experimental group when all four demographic variables were controlled. Therefore there is no evidence that the mean score for RCAMQ differs between the study groups.

Table 25: Effect of Group Assignment Controlling for Demographic Variables – RCAMQ

Dependent Variable	Control Variables	Type lll Sum of Squares for Group	df1	df2	F for Group	Sig.
RCAMQ	Gender and interaction of gender and group	71.353	1	55	1.637	.206 .564 when controlling for interaction
	Income and interaction of income and group	95.891	1	46	2.044	.160 .429 when controlling for interaction
	Age and interaction of age and group	48.524	1	48	1.238	.271 .738 when controlling for interaction
	Ethnicity and interaction of ethnicity and group	18.998	1	52	.443	.509 .586 when controlling for interaction

Legend:
RCAMQ: Receptiveness to Complementary and Alternative Medicines Questionnaire
Levene's test was significant for income and age:
Income: df1=12; df2=46; p=.006* (.036* when controlling for interaction)
Age: df1=11; df2=48; p=.000* (.000* when controlling for interaction)
See appendix 1 for Levene's test for the RCAMQ study groups and demographic variables.

Two-Way Analysis Of Variance Models With Unequal Variances

Variances were found to be significantly different for models controlling for some demographic variables when assessing the following dependent variables: OMI A, OMI B, OMI D and RCAMQ. To try to deal with this assumption being violated, the data for these instruments were transformed using a logarithmic transformation and a square root transformation. Successful transformations would lower the probability of Type 2 error.

As table 26 indicates, transforming the data for the OMI A using log transformation did not change the result. The variances remained unequal.

Table 26: Levene's Test for Equal Variances for OMI A Using Log Transformation

Dependent Variable	Control Variable	df1	df2	Sig.
OMI A	Gender	4	55	.036*
	Age	11	48	.010*
	Income	13	46	.028*
	Ethnicity	7	52	.001*

* Significant at the 0.05% level

As table 27 indicates, transforming the data for the OMI A using square root transformation did not change the result. The variances remained unequal.

Table 27: Levene's Test for Equal Variances for OMI A Using Square Root Transformation

Dependent Variable	Control Variable	df1	df2	Sig.
OMI A	Gender	4	55	.035*
	Age	11	48	.017*
	Income	13	46	.042*
	Ethnicity	7	52	.002*

* Significant at the 0.05% level

Furthermore, the group term did not become significant in any of the models using transformations of OMIA as the dependent variable.

As table 28 indicates, transforming the data for the OMI B using a log transformation and controlling for income did not change the result. The variance remained unequal.

Table 28: Levene's Test for Equal Variances for OMI B Using Log Transformation

Dependent Variable	Control Variable	df1	df2	Sig.
OMI B	Income	13	46	.005*

* Significant at the 0.05% level

As table 29 indicates, transforming the data for the OMI B using a square root transformation did not change the result. The variance remained unequal.

Table 29: Levene's Test for Equal Variances for OMI B Using Square Root Transformation

Dependent Variable	Control Variable	df1	df2	Sig.
OMI B	Income	13	46	.004*

* Significant at the 0.05% level

Furthermore, the group term did not become significant in the models using transformations of OMI B as the dependent variable.

As table 30 indicates, transforming the data for the OMI D using a log transformation and controlling for ethnicity did not change the result. The variance remained unequal.

Table 30: Levene's Test for Equal Variances for OMI D Using Log Transformation

Dependent Variable	Control Variable	df1	df2	Sig.
OMI D	Ethnicity	7	52	.025*

* Significant at the 0.05% level

As table 31 indicates, transforming the data for the OMI D using a square root transformation did not change the result. The variance remained unequal.

Table 31: Levene's Test for Equal Variances for OMI D Using Square Root Transformation

Dependent Variable	Control Variable	df1	df2	Sig.
OMI D	Ethnicity	7	52	.023*

* Significant at the 0.05% level

Furthermore, the group term did not become significant in the models using transformations of OMI D as the dependent variable.

As indicated in table 32, transforming the data for the RCAMQ using a log transformation did not change the result. The variances remained unequal.

Table 32: Levene's Test for Equal Variances for RCAMQ Using Log Transformation

Dependent Variable	Control Variable	df1	df2	Sig.
RCAMQ	Age	11	48	.000*
	Income	13	46	.006*

* Significant at the 0.05% level

As indicated in table 33, transforming the data for the RCAMQ using square root transformation did not change the result. The variances remained unequal.

Table 33: Levene's Test for Equal Variances for RCAMQ Using Square Root Transformation

Dependent Variable	Control Variable	df1	df2	Sig.
RCAMQ	Age	11	48	.001*
	Income	13	46	.027*

* Significant at the 0.05% level

The group parameter did not become significant in any model using transformed RCAMQ scores.

Summary Of Hypotheses On Group Differences

In summary, the primary hypothesis was that students in the experimental group receiving an educational intervention on mental illness would exhibit more positive attitudes towards mental illness than the students in the control group receiving the educational intervention on alternative medicines. The null hypothesis was rejected using one dependent variable. A difference was found in OMI C in the *t* test comparison of the study groups. A difference was found in OMI B when controlling for age, and a difference was found in SCAM when controlling for gender. The experimental group mean indicated more benevolence than the control group, which was in the opposite direction from that hypothesized. Also, for mental hygiene ideology, the control group mean was higher, again opposite to the direction hypothesized. Therefore the null hypothesis was rejected only for SCAM.

The secondary hypothesis was that the control group receiving the presentation on alternative medicines would give a higher number of "Yes" responses in the "wish to know more" column of the RCAMQ than the experimental group receiving the presentation on mental illness. However, there was no difference in the responses for the experimental group and the control group and so the null hypothesis was not rejected.

Analysis Of Covariance To Determine Independence Of Findings – Mental Health

Analysis of covariance was used to determine if the significant findings were independent of the other dependent variables on which the significant findings were located. Analyses of group differences controlling for gender were run for SCAM while

controlling for a relationship with OMI B and OMI C separately. As seen in Table 34, the group difference for SCAM was independent of OMI B, but not OMI C.

Table 34: Effect of Group Assignment on SCAM Controlling for Gender and Other Dependent Variables

Dependent Variable	Control Variables	Type III Sum of Squares for Group	df1	df2	F for Group	Sig.
SCAM	Gender; interaction of gender and group OMI B	292.702	1	54	5.192	.027*
	Gender; interaction of gender and group OMI C	211.303	1	54	4.085	.048

* Significant at the 0.05% level

Levene's test was not significant for the study groups. See appendix 2 for Levene's test for the SCAM study groups and the relationship of demographic variables.

Analyses of group differences controlling for age were run for OMI B while controlling for a relationship with SCAM and OMI C separately. As seen in Table 35, the significant group difference for OMI B was not independent of either SCAM or OMI C.

Table 35: Effect of Group Assignment on OMI B Controlling for Age and Other Dependent Variables

Dependent Variable	Control Variables	Type III Sum of Squares for Group	df1	df2	F for Group	Sig.
OMI B	Age; interaction of age and group SCAM	61.427	1	47	2.990	.090
	Age; interaction of age and group OMI C	76.522	1	47	3.744	.059

Levene's test was not significant for OMI B study groups. See appendix 2 for Levene's test for the OMI B study groups and the relationship of demographic variables.

As seen in Table 36, the significant group difference for OMI C was not independent of either OMI B or SCAM.

Table 36: Effect of Group Assignment on OMI C Controlling for Other Dependent Variables

Dependent Variable	Control Variables	Type lll Sum of Squares for Group	df1	df2	F for Group	Sig.
OMI C	SCAM	23.296	1	57	2.016	.161
	OMI B	51.285	1	57	4.137	.047

Levene's test was not significant for study groups. See appendix 2 for Levene's test for the OMI C study groups and the relationship of demographic variables.

The conclusion was that two independent effects were found. The effect for SCAM and OMI C were related, but SCAM was independent of OMI B. The effect for OMI B was related to both SCAM and OMI C, and the effect of OMI C was related to both SCAM and OMI B. The overall pattern therefore, was that there was one pervasive effect and most of the significant findings were related to each other.

Analysis Of Covariance To Test Homogeneity Of Regression Requirement – Mental Health

SPSS MANOVA was used to test the homogeneity of regression for each of the six models used in the analysis of covariance. As indicated in Table 37, the finding for the covariate by group interaction was not significant for SCAM when either OMI B or OMI C was covaried out separately and while controlling for gender. Therefore the regression was homogeneous and the assumption was met.

Table 37: Analysis of Covariance to Assess Covariate by Group Interaction: Dependent Variable: SCAM

Dependent Variable	Covariate	Control Variable	Type lll sum of Squares for Group	df1	df2	F for interaction of covariate by group	Sig.
SCAM	OMI B	Gender, and interaction of gender and group	43.74	1	55	.76	.387
SCAM	OMI C	Gender, and interaction of gender and group	6.13	1	55	.11	.737

As indicated in Table 38, the finding was not significant for the covariate by group interaction term when either SCAM or OMI C was covaried out separately and while controlling for age. Therefore regression was homogeneous and assumption was met.

Table 38: Analysis of Covariance to Assess Covariate by Group Interaction: Dependent Variable: OMI B

Dependent Variable	Covariate	Control Variable	Type lll sum of Squares for Group	df1	df2	F for interaction of covariate by group	Sig.
OMI B	SCAM	Age, and interaction of age and group	7.32	1	50	.38	.542
OMI B	OMI C	Age, and interaction of age and group	.20	1	50	.01	.921

As indicated in Table 39, the finding was not significant for the covariate by group interaction term when either SCAM or OMI B was covaried out separately. Therefore regression was homogeneous and assumption was met.

Table 39: Analysis of Covariance to Assess Covariate by Group Interaction: Dependent Variable: OMI C

Dependent Variable	Covariate	Type lll sum of Squares for Group	df1	df2	F for interaction of covariate by group	Sig.
OMI C	SCAM	.43	1	56	.04	.848
OMI C	OMI B	11.28	1	56	.91	.345

Covariance assumes homogeneity of regression for the groups tested. SPSS MANOVA found no statistical significance between any of the six models used in the analysis of covariance which confirms that there was no relationship between them. Therefore the homogeneity of regression requirement was met.

Attitudes About Alternative Medicines

There was no difference between the experimental group and the control group in their interest to learn more about alternative medicines. To determine whether this finding was related to the participants' and/or their families' use of alternative medicines, further comparison tests of the RCAMQ questions asking participants if they (A) or anyone in their family (B) had used alternative medicines were analysed. The reliability for questions A plus B combined was .8543, which is above the acceptable level of 0.8.

The normality of questions A and B combined were checked by running the Kolmogorov-Smirnov test to compare the distribution of the range of values with a

normal distribution. As seen in Table 40, the result was not significant, which means the distribution was normal.

Table 40: One-Sample Kolmogorov-Smirnov Test

Instrument	Z	N	Sig. (2-tailed)
RCAMQ A&B	.810	60	.529

Analysis Of Covariance To Determine Interest in Alternative Medicines

It was thought that those who had used, or whose families had used, alternative medicines would not want to know more because they already knew. This idea was tested by an analysis of covariance to control for this possibility. However, as seen in Table 41, the group term did not become significant, which shows this was not the case.

Table 41: Analysis of Covariance Controlling For Use: Dependent Variable: RCAMQ

Dependent Variable	Covariate	Control Variable	Type lll Sum of Squares for Group	df1	df2	F for Group	Sig.
RCAMQ	RCAMQ A+B	Use; and interaction of use and group	24.992	1	57	.701	.406

Levene's test was not significant for the RCAMQ. See appendix 2 for Levene's test for covariance of RCAMQ.

Analysis Of Covariance To Test Homogeneity Of Regression Requirement – Alternative Medicines

SPSS MANOVA was used to test the homogeneity of regression for the model in the analysis of covariance. As indicated in Table 42, the finding was not significant for RCAMQ when RCAMQ A+B was covaried out separately. Therefore regression was homogeneous and assumption was met.

Table 42: Analysis of Covariance to Assess Covariate by Group Interaction: Dependent Variables: RCAMQ

Dependent Variable	Covariate	Type lll sum of Squares for Group	df1	df2	F for interaction of covariate by group	Sig.
RCAMQ	RCAMQ A+B	7.86	1	56	.22	.643

Covariance assumes homogeneity of regression for the groups tested. SPSS MANOVA indicated that the group by covariate interaction term was not significant. Therefore the homogeneity of regression requirement was met.

CHAPTER FIVE

DISCUSSION

Introduction To The Chapter

This chapter discusses issues relating to the measurement instruments used, and then moves on to discuss the primary hypothesis related to the impact of the intervention on attitudes toward consumers of mental health services. The findings of this study are then compared with those in the literature. Next, the secondary hypothesis is discussed related to attitudes about alternative and complementary health care.

The implications of the findings for the contact hypothesis and for attitude change theory are then considered, and then the implications for social work professional and continuing education. Recommendations for further research are made. The limitations of this research and the impact they have for interpretation of the findings are considered.

Measurement Issues

No good survey instrument that measures opinions about mental illness is available. The Opinions about Mental Illness (OMI) was developed in 1962 and so may be anachronistic, and the Shera-Chandler Attitude Measure (SCAM) was developed in 1993 and has not been validated. Both instruments were used in this study because of the age of the OMI and the need to validate it in a modern context, and the need to validate SCAM given limited validation research on it. The third instrument used was the

Receptiveness to Complementary and Alternative Medicine Questionnaire (RCAMQ), which was developed in 2000 and has not been validated.

Correlations Of OMI And SCAM

Significantly negative correlations were expected between SCAM and OMI A, OMI B, OMI D and OMI E because of the controlling views of OMI A, the restrictive views of OMI D, and the prejudiced view of OMI E. SCAM was expected to reflect the contemporary assumption of tolerance and understanding of mental illness. Instead SCAM correlated significantly positively to OMI D (.335) and OMI E (.368).

It was hypothesized that SCAM would correlate positively with OMI C because both measures seemed to view mental illness as an illness like any other, and be more understanding and less blaming. Surprisingly, instead of a significantly positive correlation there was a significantly negative correlation (-.327).

However, the two measures are constructed very differently and so may be measuring very different things, which could account for the significantly negative correlation. For example, the OMI C specifically mentions work with "Most people with severe mental illness are willing to work" whereas the SCAM implies it with "Likely to Succeed/Unlikely to Succeed." That mental illness is responsive to treatment is addressed in the OMI C by "If our hospitals had enough well trained doctors, nurses, and aides, many of the patients would get well enough to live outside the hospital" and SCAM uses "Responsive to Treatment/Not responsive to Treatment" and " Good Prognosis/Poor Prognosis" and "Hopeful/Hopeless."

Another major difference is that many of the statements of the OMI refer to psychiatric units. For example, "Our psychiatric units seem more like prisons than like places where severely mentally ill people can be cared for"; "Many persons with severe mental illness would remain in the hospital until they were well, even if the doors were unlocked"; "Many people who have never been patients in a psychiatric unit are more mentally ill than many patients admitted to psychiatric units" and "Every psychiatric unit should be surrounded by a high fence and guards." These statements illustrate how the instrument reflects a classical medical model approach, which takes the responsibility off the person with the mental illness. The adjectives in SCAM do not mention institutions at all, and the instrument fits well with the recovery model that tends to be promoted by community based services. This demonstrates that the OMI C and SCAM are measuring different things, and that the OMI is not measuring a modern notion of mental illness.

There were some surprising correlations among the OMI subscales that should not be there. For example, OMI B correlated significantly positively with OMI A, OMI D and OMI E, even though its kindly perspective should be opposite from the controlling view of the OMI A, the restrictive view of the OMI D and the dogmatic view of the OMI E. These anomalies suggest the OMI is not working well because these correlations violate the relationships expected among the constructs. When combined with the low reliability of many OMI scales, this raises the question of whether the scales are measuring what they are supposed to be measuring, at least in the current sample.

The Primary Hypothesis And The Intervention

The primary hypothesis was that students in the experimental group receiving an educational intervention on mental illness from a person with personal experience would exhibit more positive attitudes towards mental illness than the students in the control group receiving the educational intervention on alternative medicines. It was predicted that information from a person with personal experience of a severe mental illness would be perceived as credible because service users know best about what it is like to live with a mental illness. The control group received a presentation from the same presenter, who was similarly identified as someone with personal experience with a severe mental illness, but also on a different topic: alternative medicines. Both presentations were given from an objective stance, although in the introduction for the presenter both study groups were told he is a user of services in both fields. They were also told he is the Program Co-ordinator and an educator in Partnership for Consumer Empowerment.

Both presentations were similar in format in that they were given using PowerPoint and were 45 minutes in duration. Both presentations were given in an easy-going but informative way that normalised the services being described (appendix 3). The intervention combined the effects of a label and information. The presenter was a person who has been a consumer of mental health services and alternative medicines, and currently works in the mental health field. However, he may have been perceived as more of an expert in the presentation on mental illness than the presentation on alternative medicines because of his job.

The Findings

The primary purpose of this study was to determine the effects of an educational intervention, provided by a presenter identified as a consumer of mental health services and alternative health care, on social work students' attitudes toward mental illness. A significant difference was found between the experimental group and the control group in the OMI C, the OMI B, and the SCAM. The finding for SCAM was in the hypothesised direction and the findings for OMI C and OMI B were in the opposite directions from those predicted. The findings of SCAM and OMI C were related, the findings of OMI B were related to SCAM and OMI C, and the findings of OMI C were related to OMI B and SCAM.

In the presentation on mental illness the presenter did not specifically address "benevolence" but inferred that even though a person has a mental illness she or he can still make decisions about her or his life and does not want to be treated like a child. Therefore the experimental group was expected to score lower than the control group. The findings were opposite, however, with the experimental group scoring significantly higher than the control group when controlling for age ($p = .016$).

The presenter's perspective endorsed the view of the OMI C. He introduced the rehabilitation view of recovery and the belief that people can regain some social functioning, despite having symptoms, limitations, medication, and remaining mentally ill. The experimental group was expected to score higher than the control group, so it was particularly surprising that they scored significantly lower ($p = .032$ one-tailed).

The presenter contradicted many views of the OMI generally, even though he did not specifically address them. For example, he said that people with mental illness participate equitably in our culture, society, and community, which suggests they do work, are not dangerous, and are spouses and parents. He also discussed how people living with severe mental illness generally do not need to be controlled or restricted in their lives if they are given appropriate treatment and supports. Also, treatment should be decided with the individual's input, or it can be detrimental rather than beneficial.

The null hypothesis was rejected for the primary hypothesis because a significant difference (of 3.3, or 5.9% of the scale range) was found between the experimental group and the control group in the SCAM, and significant differences were found in the OMI C subscale and the OMI B subscale.

The results for SCAM were as predicted, and show that the attitudes for the experimental group improved significantly. However, for OMI B and OMI C the directions were opposite from those predicted for the experimental group, which show less positive attitudes. These findings raise the question about the validity of the instruments because the OMI B and OMI C measured particularly low reliability levels (.4738 and .2467 respectively), and reliability is a prerequisite for validity.

For the OMI B, the experimental group scored significantly higher than the control group when controlling for age and its interaction with the assigned group. It was expected to score lower after a presentation that included information about how many people with severe mental illness respond well to treatment and live successful lives. The *Benevolence* factor indicates a kind, paternalistic, and nurturing attitude that has its roots

in humanism or religion (Cohen & Struening 1962; Bairan & Farnsworth 1989; Keane 1991; Schell 1999). Examples of items in the OMI B subscale are "Even though people with severe mental illness behave in funny ways, it is wrong to laugh about them" and "Persons with severe mental illness are in may ways like children" and "There is little that can be done for persons with severe mental illness except to see that they are comfortable and well fed." Cohen and Struening (1962) stated that in their study of psychiatric institution staff that the mental health professionals tended to have low *Benevolence* scores whereas the blue collar mental health workers (aides, cooks) had high benevolence scores.

Item 2 ("Severe mental illness is an illness like any other") is in the Benevolence subscale according to Struening & Cohen (1963) , yet in Cohen & Struening (1962) the authors state that this statement partially summarises the view of Mental Hygiene Ideology (OMI C). In an item analysis of the OMI B subscale, the means were not significantly different on all but item 2 (Cont. M=4.2; SD=1.7; Exp. M=3.4; SD=1.5; p=.03 one-tailed). This single discriminating item may be measuring recovery or the general medical nature of mental health rather than benevolence, which may have resulted in the opposite finding from that hypothesised by measuring only that item rather than the entire construct. The experimental group was significantly more likely to agree on this item, which would account for the higher score for the experimental group, especially since OMI B is not reliable and thus the items are not sufficiently related to each other.

For the OMI C subscale the experimental group scored significantly lower than the control group. It was expected to score higher after the presentation discussed how mental illness, like physical illness, responds well to treatment and often has a good prognosis. The *Mental Hygiene Ideology* factor indicates a positive view of mental illness and its prognosis, and views the patient as having the ability to be a productive citizen (Cohen & Struening 1962; Bairan & Farnsworth 1989; Keane 1991; Schell 1999). Examples of items in the OMI C subscale are "Most persons with severe mental illness are not dangerous" and "Most people with severe mental illness are willing to work" and "People who are unable to work because of severe mental illness should receive money for living expenses." The items are more factually descriptive of people with mental illness, and implicit in this conception is the idea that people with mental illness are much like normal people. They may differ in degree, but not in kind (Cohen & Struening 1962). The efficacy of treatment is strongly endorsed, as is the assumption by society of its obligations to people with mental illness.

An item analysis was run for the OMI C subscale, which showed that two items were discriminating (item 23, p=.023 one-tailed; item 28, p=.002 one-tailed). Item 23 is "If our hospitals had enough well trained doctors, nurses, and aides, many of the patients would get well enough to live outside the hospital" and item 28 is "Our psychiatric units seem more like prisons than like places where severely mentally ill people can be cared for." The control group indicated greater agreement with both items (item 23: Cont. M=3.4; SD=1.3; Exp. M=4.1; SD=1.3) (item 28: Cont. M=3.8; SD=1.3; Exp. M=4.6; SD=.8). Less agreement with both these items may reflect a belief by the experimental

group that the sooner a person can be treated and discharged the better, because mental illness can be treated better by community-based services rather than hospital-based confinement.

SCAM is a more recent instrument, having been developed in 1993, and views mental illness as treatable, just like any other illness (Shera & Delva-Tauiliili 1996). However, it seems that there is a fundamental difference between OMI C and SCAM and that they are measuring things very differently. SCAM is constructed very differently from the OMI. The OMI consists of 51 opinions about mental illness and people with mental illness, and is presented in Likert format with provision following each item for a checked response on a six-point agreement continuum. SCAM is a five-point scale consisting of fourteen sets of adjectives, with each set measuring an attitude towards people with mental illness. Examples of the sets of adjectives are "Difficult/Not Difficult" and "Responsive to Treatment/Not Responsive to Treatment" and "Likely to Succeed/Unlikely to Succeed."

The items of SCAM are less specific and more comprehensive than the items in the OMI C as they include statements about the service provider as well as statements about the person with a mental illness. The instrument was developed by social workers wanting to measure the attitudes of professionals towards the severely mentally ill, and asks about competence, responsiveness to treatment, prognosis, dangerousness, and hopefulness. The SCAM's reliability was good with an alpha of .8379. The findings in this study would suggest that SCAM and OMI should not be used to validate each other as they seem to be measuring different things.

The findings raise the question of whether the OMI continues to measure what it was developed to measure in 1962, at least in a sample of social work students, as the philosophy and knowledge base of mental health have undergone a revolution since the 1960s.

Relationship With Empirical Literature

This study used the Opinions about Mental Illness (OMI) Scale and the Shera-Chandler Attitude Measure (SCAM) to measure attitudes toward mental illness in a randomised post-test only experimental research design. None of the five studies on attitude change in the literature was a randomised true experiment (see Table 1, page 28). Two studies used the OMI, one used SCAM, one used an "Attitude Questionnaire" that was based on one used for a study in 1980, and one used an "Attitudes to Mental Illness Questionnaire" (AMI) that was constructed by the researchers for their study.

Shera and Delva-Tauiliili (1996) used an intervention most similar to that used in this study because they included structured co-operative contact (in the form of interviews with consumers of mental health services with severe mental illness) and information (class and videotape), and used the SCAM to measure graduate social work students' attitudes towards people with severe mental illness before and after a four-week training module. The authors found their experimental group's attitudes changed significantly after a four-week training module ($p<.001$ two-tailed), and this study found a significant difference when controlling for gender ($p=.022$ 1-tailed). The structure was similar in that both studies used social work students, although Shera and Delva-Tauiliili

(1996) used MSW students in a service role as well as in an educational setting, and this study used BSW students only in an educational setting. The findings were similar, too, although this study's intervention was briefer.

Two studies focused on nursing students. The study by Bairan and Farnsworth (1989) used an abbreviated form of the OMI that consisted of five items from each of the five factors to measure attitude change in nursing students after a four-week course, and Keane (1991) used nine dimensions of the OMI to measure attitude change in nursing students after an eight-week course. Table 43 compares the significant findings of the current study and the two nursing studies on each OMI subscale.

Table 43: Significant Findings For OMI Subscales

Subscale	Bairan & Farnsworth	Keane	This study
Authoritarian	Sig. decrease (p <.000)		
Benevolence	Sig. decrease (p <.05)		Sig. increase (p=.016)
Mental Hygiene Ideology	Sig. increase (p <.001)		Sig. decrease (p=0.032)
Social Restrictiveness	Sig. decrease (p <.016)		
Interpersonal Etiology		Sig. increase (p< .001)	

The *Authoritarian* factor is characterised by the belief that people with mental illness are inferior, distinctly different from normal people, and require coercive handling (Cohen & Struening 1962; Bairan & Farnsworth 1989; Keane 1991; Schell 1999). Lower *Authoritarian* scores are considered positive, but only in Bairan and Farnsworth's study (1989) was the difference significant.

Bairan and Farnsworth (1989) was the only study in addition to the current one with a significant change in benevolence scores. Bairan and Farnsworth (1989) predicted the scores would increase, but they decreased significantly after a four-week course (significance not reported). This study found a significant increase.

Keane (1991) omitted the *Mental Hygiene Ideology* dimension because of low reliability. Bairan and Farnsworth (1989) hypothesised that the *Mental Hygiene Ideology* scores would increase significantly, and they did ($p < .000$) [not reported whether one- or two-tailed]. So, one nursing study eliminated the subscale altogether, one nursing study found a hypothesised significant increased score, and this study found a significantly decreased score.

The *Social Restrictiveness* factor indicates a belief that people with mental illness should have restrictions placed on their lives (Cohen & Struening 1962; Bairan & Farnsworth 1989; Keane 1991; Schell 1999). Examples of items in OMI D are "Although persons with severe mental illness seem all right, they should not be allowed to marry" and "The small children of persons with severe mental illness should not be allowed to visit them." Bairan and Farnsworth (1989) found a significantly decreased score after the four-week course ($p < .016$) [not reported whether one- or two-tailed].

The *Interpersonal Etiology* factor measures the extent to which a person believes that mental illness is caused by poor interpersonal relationships (Cohen & Struening 1962; Bairan & Farnsworth 1989; Keane 1991; Schell 1999). Examples of items in the OMI E subscale are "If parents loved their children more, there would be less severe mental illness" and "If the children of mentally ill parents were raised by normal parents,

they would probably not become mentally ill." The only significant finding reported in Keane's study was a significant increase in the *Interpersonal Etiology* score in the experimental group ($p < .001$) [not reported whether one- or two-tailed].

Differences between the two nursing studies and the current one can be explained on a number of bases, including sample, intervention, design and measurement differences. Regarding the latter, the instruments used to measure attitudes are critically important. Keane (1991) used the OMI with 100 Likert-type opinion items separated into nine attitude dimensions to measure the attitudes of students after completing an eight-week psychiatric nursing course. The study concluded that the mean scores of the attitudes of the experimental group changed significantly in a favourable direction. However, this form of the OMI has not been validated.

Bairan and Farnsworth (1989) used an abbreviated (25 item) form of the OMI. They stated the reliability of the OMI is reported as satisfactory, and that their abbreviated form has face validity. However, the reliability and validity of untested adjusted instruments should be questioned. Of the five factors, four changed significantly. The results were interpreted to mean that the students had a more positive view of mental illness and mentally ill people, were less paternalistic, and did not believe that mentally ill people are a threat to society and must be restricted in their functioning. The authors explain the process of the attitude change in terms of the contact hypothesis of attitude change theory. The contact in their study consisted of attending a clinic where psychiatric patients were being treated rather than with consumers in normal or competent roles.

Different findings from the nursing studies may also be explained by differences in the interventions and the intensity of the intervention. For example, Keane (1991) stated that the eight-week psychiatric nursing course they studied included a "comprehensive range of topics that would likely influence even well-entrenched attitudes." Bairan and Fansworth (1989) looked at a four-week nursing course that consisted of some contact with people with mental illness in a clinical setting. This study had a consumer of mental health services giving a presentation, which is a competent role in a normal situation.

Different designs may also play a role. Both the Bairan and Farnsworth (1989) and Keane (1991) studies used a pre- and post-test design, and Keane also used a control group.

Chinnayya et al. (1990) used their Attitude Questionnaire to study the attitudes of primary care paramedical health workers after a one-week training course in mental health care. The authors reported a significant change overall in attitudes in a favourable direction for the health workers. The study used an attitude questionnaire that had been used for a previous study in 1980, but no mention was made of validity or reliability. The authors stated that 10 of 35 items failed to detect significant changes in attitude, and some items had a low proportion of desirable responses even after training. This study is very different in design from any of the others cited here, and has a different measure. However, the authors stated the study was important because it indicated that the national training program for paramedical workers was effective in changing attitudes towards mental illness.

Singh et al. (1998) used their AMI to compare the attitudes of two groups of medical students after a six-week course about psychiatry and mental illness using different teaching methods. The instrument used was developed for the study, with unknown validity and reliability. Both groups of students had favourable attitudes before their psychiatry attachment, and these attitudes became more positive after the attachment, with no significant difference between the groups. The Singh et al. (1998) study shows that information does positively affect attitudes, even though the method of delivering the information did not make a difference.

The literature reports that education and information results in changed attitudes (Wahl & Lefkowits 1989; Desforges et al. 1991; Mayer & Barry 1992; Thornton & Wahl 1996; Penn et al. 1999; Wahl 1999; Wolff et al. 1996). This position is supported by this study. The terms "information" and "education" are sometimes used interchangeably, particularly when the authors use the word "information" to describe reading material that can be used for public education (Penn et al. 1999; Wahl 1999). However, more frequently "information" seems to refer to what is given out to the general public by the media (Wahl & Lefkowits 1989; Mayer & Barry 1992; Thornton & Wahl 1996) and "education" seems to refer to more structured processes such as the co-operative interaction used in interviews (Desforges et al. 1991) and academic education and training (Bairan & Farnsworth 1989; Keane 1991; Shera & Delva-Tauiliili 1996).

The contact hypothesis theorists believe that after structured co-operative contact with persons with mental illness, people will have more positive attitudes towards the mentally ill in general (Desforges et al. 1991). This study was a combination. It consisted

of information from a competent person who has personal experience of a severe mental illness, who was expected to be viewed as credible because service users know best about what it is like to live with a mental illness. It has been suggested that a critical aspect of direct contact involves the mentally ill performing normal roles and acting in a normal manner, in normal community settings (Trute et al. 1989).

Attitudes About Alternative Medicines

The secondary hypothesis was that the control group receiving the presentation on alternative medicines would give a higher percentage of "Yes" responses in the "wish to know more" column of the RCAMQ than the experimental group receiving the presentation on mental illness, indicating more positive attitudes. In his presentation the presenter briefly mentioned a wide variety of alternative medicines and listed their potential benefits. "Biofeedback" was the only therapy listed in the RCAMQ that was not touched on. It was predicted that the presentation on alternative medicines would reflect an increased interest in alternative approaches to the prevention and management of illness. However, the null hypothesis was not rejected for the secondary hypothesis as there was no difference found between the experimental group and the control group.

This finding raises the issue of why the intervention affected attitudes about mental health but not about alternative medicines. The consistency of the questionnaire was acceptable with the reliability of the RCAMQ question shown to be very good with a Cronbach alpha of .9502. Therefore, the null finding was not due to high levels of random error in this instrument.

It was expected that the control group, who received the presentation on alternative medicines, would show an increased interest in learning more about at least some of the therapies if not all of them. However, the questionnaire showed no increased interest in learning more about alternative medicines for both study groups (C: 9.34; E: 10.45 out of a possible score of 36). Perhaps the presenter was not perceived to be authoritative on this topic because he was only a user and not a worker in the field, or perceived to be a good example of a user of alternative medicines because he may not have been appraised as meeting expectations of physical fitness.

A difference between the presentations was the supporting evidence used for the presenter's arguments. For the mental illness presentation the presenter cited international studies with figures that substantiated the reported success rates. In the presentation on alternative medicine the presenter used anecdotal reports of success. Perhaps this was not considered as convincing as the presentation on mental illness.

Another consideration is the hypothesis in this study that information from a person with experience of a severe mental illness would be perceived as competent and credible because service users know best about what it is like to live with a mental illness. Perhaps the group that heard the presentation on mental illness saw the presenter as more credible because he worked in the field of mental health, as well as having been a consumer of services. Perhaps they perceived him as presenting more authoritatively. Perhaps the participants saw more of a relationship between the material he presented and his background. This supports the view that the success of the persuasion depends on the

credibility of the source, the message that is sent, and the way the message is sent (Myers 1989; Weiten 1997).

However, the labelling theorists would say that once labelled, people are rejected and discriminated against when they attempt to resume normal roles in society (Link et al. 1987; Mueser et al. 1996; Markowitz 1998; Penn & Martin 1998). This argument would suggest that the group who received the information on alternative medicine were influenced by the mental illness label and therefore did not perceive the presenter as credible or competent, and so discounted what he said. Perhaps the label operated differently in the two groups. The label may have been taken as a sign of more credibility in the first group, but detracted from his credibility by the second group.

Implications For The Contact Hypothesis And For Attitude Change Theory.

There are numerous studies that show increased acceptance and reduced fear of people with mental illness in communities where the public has had increased exposure to these individuals (Trute & Loewen 1978; Link & Cullen 1986; Trute et al. 1987; Desforges et al. 1991; Penn et al. 1994; Kommana et al. 1997; Corrigan 2000). Direct contact results in a significant tendency for individuals to revise their beliefs, not only toward the particular individual contacted, but also toward former mental patients in general (Link & Cullen 1986). However, mere exposure to someone with a mental illness may not be enough to reduce stigma, although contact helps to correct much of the misinformation about mental illness (Kommana et al. 1997). Direct contact in normal community settings has been shown to have the greatest impact on decreasing rejection

of people with mental illness, especially when those with mental illness are seen to be competent (Trute et al. 1989; Corrigan 2000)

Everyday, people are bombarded by efforts to change their attitudes, which is a process of persuasion. The success of the persuasion depends on the credibility of the source, the message that is sent, and the way the message is sent (Myers 1989; Weiten 1997). This study has shown that a short, informal educational intervention on mental illness presented by a person who has been a consumer of mental health services and who may be seen as currently successful because he is in an occupational role in the mental health system, succeeded in changing attitudes.

The effects found in this study indicate that the result was shown to be above and beyond a mental health consumer making the presentation as both study groups were given the same information regarding the presenter. The conclusion, then, is that it was the information that made the difference.

Implications For The Intervention

This study was different from the other studies in the literature in terms of the nature of contact, and has demonstrated the effectiveness of a much shorter intervention. The five studies cited from the literature looked at courses that ran for one week to eight weeks. This time frame is not practical in a workplace situation where professional development, when offered, often allows for only the occasional presentation at the end of the work day or perhaps over a lunch hour. It has been shown that a presentation of less than an hour can make a significant difference.

The significant difference, though, raises two questions. The first is whether it was the presentation or the presenter that made the difference. The second question is one of effectiveness. There were three significant findings: 1) more benevolence; 2) less mental hygiene ideology; 3) more positive attitudes as measured using SCAM. It was not the intention of the study to increase attitudes of benevolence or decrease mental hygiene ideology, but these findings may be due to the outdated instrument used. The more positive attitudes, as measured by SCAM, would be considered an effective intervention.

Implication For Social Work Professional And Continuing Education.

Coursey et al. (2000) emphasized the importance of professional development for staff because of the rapid advances in treatment and interventions in the mental health system. However, that study also recognized the lack of focus on staff member attitudes and values, and how staff members' attitudes affect outcomes of programs provided by mental health systems (Coursey et al. 2000). This study demonstrated the benefit of the generally accepted short, professional development in-service presentations. When a presentation is being arranged in these times of financial restraints, it is important to make it count.

An argument against this, though, would be the lack of effectiveness of the intervention on alternative and complementary medicines. Perhaps the intervention will not work for all topics.

Implications For Further Research

There is a need for a contemporary standardised instrument to measure attitudes about mental illness. The discrepancy in OMI scores and the unreliability of the instrument suggests the recommendation for using SCAM and measuring its reliability and validity.

Further study could focus on attitude change in a non-educational setting.

Further study could also focus on long-term attitude change, and the relationship of attitude change to behaviour.

This study was not able to separate the effects of the two elements and the interaction between them. A study with a large number of participants could have four groups to do that. Group 1 would have no intervention; group 2 would receive information from a person with mental illness who talks on something unrelated; group 3 would receive the mental health information from a person not identified as having a mental health problem; and group 4 would have the same mental health information from someone with a mental health problem. With enough subjects it would be possible to analytically separate all the effects.

Limitations

The post-test only experimental design relies heavily on the randomization process to provide equivalent groups with respect to prior knowledge. It is recognized that pre-test measures are desirable whenever possible, but there was a concern with the test-retest reliability and too much consistency between measures occurring if they were

administered twice in such a short time period. It was also felt this would encourage hypothesis guessing.

Another limitation relates to the external validity of the study. The population used as participants in the study was students in a university setting, who were there to learn and used to listening to lectures and presentations. This would lead to the question of whether there would be a similar effect in a non-educational setting. It would be hoped that professional people listening to an educational presentation that is relevant to their work would find it interesting and that it would have some impact.

In this study, the only difference between the treatments was the nature of information (mental health versus alternative health care) and not the presenter, and both groups were informed that he was a consumer of both mental health services and alternative medicines. Therefore, logically, any effect was due to the information and not the presenter.

Hypothesis guessing may have been a limitation to this study. The participants were social work students who have likely learned something about mental illness. They may have guessed what was expected from the instruments, especially those in the mental health presentation.

However, this study was very strong in internal validity because of the randomisation and control of the intervention. The experimental and control groups were equivalent on all demographic factors. A pre-test might have been useful, but nevertheless this was a true experimental design.

The fact that SCAM has not been validated reduces its construct validity, even though it had a high reliability (.8379) and a significantly positive attitude difference was found after using it.

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APPENDICES

Appendix 1: Levene's Test Of Variance For Dependent Variables

Table 16: Levene's test of variance for SCAM study groups when controlling for demographic variables

Gender:	df1=3; df2=55; p=.248 (.590 when controlling for interaction)
Income:	df1=12; df2=46; p=.276 (.907 when controlling for interaction)
Age:	df1=11; df2=48; p=.222 (.439 when controlling for interaction)
Ethnicity:	df1=7; df2=52; p=.404 (.477 when controlling for interaction)

Table 18: Levene's test of variance for OMI A study groups when controlling for demographic variables (* significant at the 0.05% level)

Gender:	df1=3; df2=55; p=.037* (.054 when controlling for interaction)
Income:	df1=12; df2=46; p=.055 (.039* when controlling for interaction)
Age:	df1=11; df2=48; p=.029* (.139 when controlling for interaction)
Ethnicity:	df1=7; df2=52; p=.004* (.024* when controlling for interaction)

Table 19: Levene's test of variance for OMI B study groups when controlling for demographic variables (* significant at the 0.05% level)

Gender:	df1=4; df2=55; p=.290 (.406 when controlling for interaction)
Income:	df1=13; df2=46; p=.004* (.011 when controlling for interaction)
Age:	df1=11; df2=48; p=.317 (.569 when controlling for interaction)
Ethnicity:	df1=7; df2=52; p=.558 (.625 when controlling for interaction)

Table 21: Levene's test of variance for OMI C study groups when controlling for demographic variables

Gender:	df1=4; df2=55; p=.608 (.608 when controlling for interaction)
Income:	df1=13; df2=46; p=.247 (.614 when controlling for interaction)
Age:	df1=11; df2=48; p=.343 (.354 when controlling for interaction)
Ethnicity:	df1=7; df2=52; p=.491 (.879 when controlling for interaction)

Table 22: Levene's test of variance for OMI D study groups when controlling for demographic variables

Gender:	df1=4; df2=55; p=.275 (.343 when controlling for interaction)
Income:	df1=13; df2=46; p=.303 (.496 when controlling for interaction)
Age:	df1=11; df2=48; p=.314 (.392 when controlling for interaction)
Ethnicity:	df1=7; df2=52; p=.021* (.027 when controlling for interaction)

Table 23: Levene's test of variance for OMI E study groups when controlling for demographic variables

Gender:	df1=3; df2=55; p=.202 (.359 when controlling for interaction)
Income:	df1=12; df2=46; p=.214 (.350 when controlling for interaction)
Age:	df1=11; df2=48; p=.232 (.481 when controlling for interaction)
Ethnicity:	df1=7; df2=52; p=.260 (.467 when controlling for interaction)

Table 24: Levene's test of variance for RCAMQ study groups when controlling for demographic variables

Gender:	df1=3; df2=55; p=.092 (.313 when controlling for interaction)
Income:	df1=12; df2=46; p=.006* (.036* when controlling for interaction)
Age:	df1=11; df2=48; p=.000* (.000* when controlling for interaction)
Ethnicity:	df1=7; df2=52; p=.370 (.483 when controlling for interaction)

Appendix 2: Levene's Test Of Variance For Covariate Analyses

Table 33: Levene's test of variance for model assessing independence of SCAM and covariates

Covariance OMI B: df1=4; df2=55; p=.246
Covariance OMI C: df1=4; df2=55; p=.492

Table 34: Levene's test of variance for model assessing independence of OMIB and covariates

Covariance SCAM: df1=11; df2=48; p=.378
Covariance OMI C: df1=11; df2=48; p=.444

Table 35: Levene's test of variance for model assessing independence of OMIC and covariates

Covariance SCAM: df1=1; df2=58; p=.926
Covariance OMI B: df1=1; df2=58; p=.977

Table 41: Analysis of Covariance Controlling For Use: Dependent Variable: RCAMQ

Covariance RCAMQ: df1=1; df2=57; p=.279

Appendix 3: Presentations

The presenter gave two presentations, one to the control group and one to the experimental group. The first was on mental illness and the second was on complementary and alternative medicines. Both presentations were given from an objective stance, although in the introduction for the presenter both study groups were told he is a user of services in both fields. They were also told he is the Program Co-ordinator and an educator in Partnership for Consumer Empowerment.

Presentation One

In the presentation on mental illness and the mentally ill the presenter talked about how severe mental illnesses such as schizophrenia have been viewed as irreversible illnesses with increasing disability over time. Mental health program planning, policies, and practices have been implemented to support this uncompromisingly negative view of the predicted outcome for people with psychiatric disability.

The presenter introduced the rehabilitation view of recovery and the belief that people can regain some social functioning, despite having symptoms, limitations, medication, and remaining mentally ill. He cautioned against saying that a person's mental illness is a permanent condition because that will likely forever ostracize the person from society and prevent them from ever regaining a major social role. He highlighted the results of some international long-term studies on schizophrenia where 46-68% of patients had made a full recovery or were significantly improved.

Recovery as an evolutionary process was discussed, along with the growth and change that integrates the illness experience. People experiencing mental disorders can and do overcome them and participate equitably in our culture, society, and community; they can have a Ph.D, an M.D., an M.S.W., a bachelor degree. People with mental illness are students, teachers, parents, children, grandchildren, poets, painters, actors, dancers… It was suggested that it is the responsibility of every person to ensure that all disadvantaged and vulnerable persons amongst us have the opportunity, support, and resources to participate and contribute to our community, culture, and society at the level of their choosing, and that the value of their involvement is recognized, valued, and encouraged.

Presentation Two

In the presentation on complementary and alternative medicines the presenter talked about how the many aspects of scientific medicine can deter patients, and so they instead opt for other types of therapies. Complementary and alternative medicine is very individualized and recognizes that not everything is for everyone. It takes a holistic approach, which addresses the physical, mental, emotional and spiritual aspects of life. The individual's beliefs, values, and self-awareness are key components in the practitioner-client relationship and appropriateness of therapy.

The presenter briefly described a variety of types of complementary and alternative medicine, such as the use of natural healing supplements and diets in homeopathy and Chinese medicine. There are alternative test methods such as live cell

analysis, blood analysis, iridology, and muscle testing for allergies or the body's nutritional needs. Exercise such as tai chi promotes increased breath, muscle tone, flexibility, stress management, removing energy blocks. Relaxation techniques and prayer are used for healing and forgiveness. Mindfulness such as Buddhism and theosophy helps increase self-awareness and living consciously. Yoga helps with breathing, increases flexibility, releases tension from the body, and increases the ability to focus. Acupuncture and acupressure adjust disruptions in the body's energy flow and can relieve pain, tension and stress.

Reflexology, massage therapy, therapeutic touch, chiropractic, aromatherapy, colour therapy, sound and music therapy can all help physically, mentally, emotionally and spiritually. Art therapy can include dance therapy, drama and music, and the direct participation of the client can lead to a very cathartic experience. Cognitive behaviour therapy can help with fears, phobias, psychotic disorders and depression. Other therapies include hypnotherapy, anger management, stress management, and self-help and mutual aid support groups. There are Aboriginal practices such as the sweat lodge, smudging, healing circles, and fasting.

The presenter acknowledged the reports of successful treatments through complementary and alternative medicines for physical illness and disabilities such as cancer, vision loss, arthritis, back injuries, and in the treatment of schizophrenia, bipolar disorder and panic disorders. He encouraged the students to ask themselves if they would support future clients' desires to try complementary and alternative medicines, and consider what they would need to know and do to help people make informed choices.

The presenter ended by talking about helping clients cope with slow healing processes – "miraculous" cures are rare, and healing takes time.

Appendix 4a. **Opinions About Mental Illness**

Jacob Cohen
Elmer L. Struening

The statements that follow are opinions or ideas about severe mental illness and people with severe mental illness. By this term we are referring to people with diagnoses such as schizophrenia and major affective disorders, who have extensive or severe symptoms that prevent them from working and experiencing a satisfying social life. 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 these statements. We would like to know what you think about these statements. Each of them is followed by six choices:

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

Please check (√) in the space provided that choice which comes closest to saying how you feel about each statement. You can be sure that many people will agree with your choice. There are no right or wrong answers: we are interested only in your opinion. It is very important that you answer every item. Please do NOT sign your name.

* * * * *

1. NERVOUS BREAKDOWNS USUALLY RESULT WHEN PEOPLE WORK TOO HARD.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

2. SEVERE MENTAL ILLNESS IS AN ILLNESS LIKE ANY OTHER.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

3. MOST PERSONS WITH SEVERE MENTAL ILLNESS ARE NOT DANGEROUS.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

4. ALTHOUGH PERSONS WITH SEVERE MENTAL ILLNESS SEEM ALL RIGHT, THEY SHOULD NOT BE ALLOWED TO MARRY.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

5. IF PARENTS LOVED THEIR CHILDREN MORE, THERE WOULD BE LESS SEVERE MENTAL ILLNESS.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

6. IT IS EASY TO RECOGNIZE SOMEONE WHO ONCE HAD A SEVERE MENTAL ILLNESS.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

7. PEOPLE WHO ARE SEVERELY MENTALLY ILL LET THEIR EMOTIONS CONTROL THEM, NORMAL PEOPLE THINK THINGS OUT.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

8. PEOPLE WHO WERE ONCE SEVERELY MENTALLY ILL ARE NO MORE DANGEROUS THAN THE AVERAGE CITIZEN.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

9. WHEN A PERSON HAS A PROBLEM OR A WORRY, IT IS BEST NOT TO THINK ABOUT IT, BUT KEEP BUSY WITH MORE PLEASANT THINGS.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

10. ALTHOUGH THEY USUALLY AREN'T AWARE OF IT, MANY PEOPLE BECOME SEVERELY MENTALLY ILL TO AVOID THE DIFFICULT PROBLEMS OF EVERYDAY LIFE.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

11. THERE IS SOMETHING ABOUT PEOPLE WITH SEVERE MENTAL ILLNESS THAT MAKES IT EASY TO TELL THEM FROM NORMAL PEOPLE.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

12. EVEN THOUGH PEOPLE WITH SEVERE MENTAL ILLNESS BEHAVE IN FUNNY WAYS, IT IS WRONG TO LAUGH ABOUT THEM.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

13. MOST PEOPLE WITH SEVERE MENTAL ILLNESS ARE WILLING TO WORK.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

14. THE SMALL CHILDREN OF PERSONS WITH SEVERE MENTAL ILLNESS SHOULD NOT BE ALLOWED TO VISIT THEM.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

15. PEOPLE WHO ARE SUCCESSFUL IN THEIR WORK SELDOM BECOME SEVERELY MENTALLY ILL.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

16. PEOPLE WOULD NOT BECOME SEVERELY MENTALLY ILL IF THEY AVOIDED BAD THOUGHTS.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

17. PERSONS WITH SEVERE MENTAL ILLNESS ARE IN MANY WAYS LIKE CHILDREN.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

18. MORE TAX MONEY SHOULD BE SPENT IN THE CARE AND TREATMENT OF PEOPLE WITH SEVERE MENTAL ILLNESS.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

19. A HEART PATIENT HAS JUST ONE THING WRONG WITH HIM, WHILE A SEVERELY MENTALLY ILL PERSON IS COMPLETELY DIFFERENT FROM OTHER PATIENTS.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

20. SEVERELY MENTALLY ILL PEOPLE COME FROM HOMES WHERE THE PARENTS TOOK LITTLE INTEREST IN THEIR CHILDREN.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

21. PEOPLE WITH SEVERE MENTAL ILLNESS SHOULD NEVER BE TREATED IN THE SAME HOSPITAL AS PEOPLE WITH PHYSICAL ILLNESS.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

22. ANYONE WHO TRIES HARD TO BETTER HIMSELF DESERVES THE RESPECT OF OTHERS.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

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.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

24. A WOMAN WOULD BE FOOLISH TO MARRY A MAN WHO HAS HAD A SEVERE MENTAL ILLNESS, EVEN THOUGH HE SEEMS FULLY RECOVERED.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

25. IF THE CHILDREN OF MENTALLY ILL PARENTS WERE RAISED BY NORMAL PARENTS, THEY WOULD PROBABLY NOT BECOME MENTALLY ILL.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

26. PEOPLE WHO HAVE BEEN SEVERELY MENTALLY ILL WILL NEVER BE THEIR OLD SELVES AGAIN.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

27. MANY SEVERELY MENTALLY ILL PERSONS ARE CAPABLE OF SKILLED LABOUR, EVEN THOUGH IN SOME WAYS THEY ARE VERY DISTURBED MENTALLY.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

28. OUR PSYCHIATRIC UNITS SEEM MORE LIKE PRISONS THAN LIKE PLACES WHERE SEVERELY MENTALLY ILL PEOPLE CAN BE CARED FOR.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

29. ANYONE WHO IS SEVERELY MENTALLY ILL SHOULD NOT BE ALLOWED TO VOTE.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

30. THE SEVERE MENTAL ILLNESS OF MANY PEOPLE IS CAUSED BY THE SEPARATION OR DIVORCE OF THEIR PARENTS DURING CHILDHOOD.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

31. THE BEST WAY TO HANDLE PERSONS WITH SEVERE MENTAL ILLNESS IS TO KEEP THEM BEHIND LOCKED DOORS.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

32. TO BECOME A SEVERELY MENTALLY ILL PERSON IS TO BECOME A FAILURE IN LIFE.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

33. SEVERELY MENTALLY ILL PERSONS SHOULD BE ALLOWED MORE PRIVACY.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

34. IF A SEVERELY MENTALLY ILL PERSON ATTACKS SOMEONE, HE SHOULD BE PUNISHED SO HE DOESN'T DO IT AGAIN.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

35. IF THE CHILDREN OF NORMAL PARENTS WERE RAISED BY SEVERELY MENTALLY ILL PARENTS THEY WOULD PROBABLY BECOME SEVERELY MENTALLY ILL.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

36. EVERY PSYCHIATRIC UNIT SHOULD BE SURROUNDED BY A HIGH FENCE AND GUARDS.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

37. THE LAW SHOULD ALLOW A WOMAN TO DIVORCE HER HUSBAND AS SOON AS HE HAS BEEN DIAGNOSED WITH A SEVERE MENTAL ILLNESS.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

38. PEOPLE WHO ARE UNABLE TO WORK BECAUSE OF SEVERE MENTAL ILLNESS SHOULD RECEIVE MONEY FOR LIVING EXPENSES.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

39. SEVERE MENTAL ILLNESS IS USUALLY CAUSED BY SOME DISEASE OF THE NERVOUS SYSTEM.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

40. REGARDLESS OF HOW YOU LOOK AT IT, PATIENTS WITH SEVERE MENTAL ILLNESS ARE NO LONGER REALLY HUMAN.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

41. MOST WOMEN WHO WERE ONCE SEVERELY MENTALLY ILL COULD BE TRUSTED AS BABYSITTERS.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

42. MOST PERSONS WITH SEVERE MENTAL ILLNESS DON'T CARE HOW THEY LOOK.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

43. COLLEGE PROFESSORS ARE MORE LIKELY TO BECOME SEVERELY MENTALLY ILL THAN ARE BUSINESS MEN.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

44. MANY PEOPLE WHO HAVE NEVER BEEN PATIENTS IN A PSYCHIATRIC UNIT ARE MORE MENTALLY ILL THAN MANY PATIENTS ADMITTED TO PSYCHIATRIC UNITS.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

45. ALTHOUGH SOME SEVERELY MENTALLY ILL PATIENTS SEEM ALL RIGHT, IT IS DANGEROUS TO FORGET FOR A MOMENT THAT THEY ARE SEVERELY MENTALLY ILL.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

46. SOMETIMES SEVERE MENTAL ILLNESS IS PUNISHMENT FOR BAD DEEDS.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

47. OUR PSYCHIATRIC UNITS SHOULD BE ORGANIZED IN A WAY THAT MAKES THE PATIENT FEEL AS MUCH AS POSSIBLE LIKE HE IS LIVING AT HOME.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

48. ONE OF THE MAIN CAUSES OF SEVERE MENTAL ILLNESS IS A LACK OF MORAL STRENGTH OR WILLPOWER.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

49. THERE IS LITTLE THAT CAN BE DONE FOR PERSONS WITH SEVERE MENTAL ILLNESS EXCEPT TO SEE THAT THEY ARE COMFORTABLE AND WELL FED.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

50. MANY PERSONS WITH SEVERE MENTAL ILLNESS WOULD REMAIN IN THE HOSPITAL UNTIL THEY WERE WELL, EVEN IF THE DOORS WERE UNLOCKED.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

51. ALL PERSONS WITH SEVERE MENTAL ILLNESS SHOULD BE PREVENTED FROM HAVING CHILDREN BY A PAINLESS OPERATION.

strongly agree ____ agree ____ not sure but probably agree ____ not sure but probably disagree ____ disagree ____ strongly disagree ____

Please check back and make sure that you have not left out any statements.

Thank you for completing this questionnaire.

Appendix 4b. **Shera – Chandler Attitude Measure (SCAM)**

For each pair of adjectives, place a check on the space (√) that most closely describes your feelings towards working with people who have a severe mental illness. By this we mean people with diagnoses such as schizophrenia and major affective disorders, who have extensive or severe symptoms that prevent them from working and experiencing a satisfying social life.

Difficult	____	____	____	____	____	Not Difficult
Hopeful	____	____	____	____	____	Hopeless
Burdensome	____	____	____	____	____	Not Burdensome
Likely to Succeed	____	____	____	____	____	Unlikely to Succeed
Dull	____	____	____	____	____	Interesting
Worth Time Spent	____	____	____	____	____	Not Worth Time Spent
Low Prestige	____	____	____	____	____	High Prestige
Professionally Satisfying	____	____	____	____	____	Professionally Unsatisfying
Rewarding	____	____	____	____	____	Not Rewarding
Responsive to Treatment	____	____	____	____	____	Not Responsive to Treatment
Predictable	____	____	____	____	____	Unpredictable
Dangerous	____	____	____	____	____	Not Dangerous
Good Prognosis	____	____	____	____	____	Poor Prognosis
Helpless	____	____	____	____	____	Competent

Appendix 4c.

Receptiveness to Complementary and Alternative Medicines Questionnaire (RCAMQ)

Erikalin N Ashton

Please check (√) "yes" [Y] or "No" [N] in the space provided for each of the three questions. The three questions are:

1. Have you yourself ever used this therapy?
2. Has anyone in your immediate family (as far as you know) ever used this therapy? "*Immediate family" includes your parents, siblings, spouse or partner, and your children.*
3. Is the therapy something you wish to know more about?

Method	Have you ever used?	Has anyone in your immediate family used?	Do you wish to know more about CAM?
Acupuncture	Y ___ ; N ___	Y ___ ; N ___	Y ___ ; N ___
Chiropractic care	Y ___ ; N ___	Y ___ ; N ___	Y ___ ; N ___
Homeopathy	Y ___ ; N ___	Y ___ ; N ___	Y ___ ; N ___
Herbal therapies of any kind	Y ___ ; N ___	Y ___ ; N ___	Y ___ ; N ___
High-dose or mega-vitamin Therapies	Y ___ ; N ___	Y ___ ; N ___	Y ___ ; N ___
Special commercial diet programs for losing weight	Y ___ ; N ___	Y ___ ; N ___	Y ___ ; N ___
A lifestyle diet, such as Vegetarianism or macrobiotics	Y ___ ; N ___	Y ___ ; N ___	Y ___ ; N ___
Relaxation techniques, such as meditation	Y ___ ; N ___	Y ___ ; N ___	Y ___ ; N ___
Imagery techniques, such as guided imagery	Y ___ ; N ___	Y ___ ; N ___	Y ___ ; N ___
Massage therapies	Y ___ ; N ___	Y ___ ; N ___	Y ___ ; N ___
Energy healing of any kind	Y ___ ; N ___	Y ___ ; N ___	Y ___ ; N ___
A folk remedy of any kind	Y ___ ; N ___	Y ___ ; N ___	Y ___ ; N ___
A health-related self-help group of any kind (excluding AA, CA, NA, or Al-Anon)	Y ___ ; N ___	Y ___ ; N ___	Y ___ ; N ___
Biofeedback	Y ___ ; N ___	Y ___ ; N ___	Y ___ ; N ___

Hypnosis	Y ____ ; N ____	Y ____ ; N ____	Y ____ ; N ____
Yoga	Y ____ ; N ____	Y ____ ; N ____	Y ____ ; N ____
Prayer or spiritual practice by a person for his/her own health concern	Y ____ ; N ____	Y ____ ; N ____	Y ____ ; N ____
Spiritual or religious healing of a person by others	Y ____ ; N ____	Y ____ ; N ____	Y ____ ; N ____

Please check your age bracket:

20 yrs. or younger ____ ; 21-25 yrs. ____ ; 26-30 ____ ; 31-35 ____ ; 36-40 ____ ; 41-45 ____ ;
46-50 ____ ; 51-55 ____ ; 56-60 ____ ; 61-65 ____ ; 66-70 ____

Gender: M ____ F ____

Please check the ethnic identity that you feel best describes you.

Aboriginal ____ ; African ____ ; American ____ ; British ____ ; Canadian ____ ; Chinese ____ ;
Filipino ____ ; German ____ ; Indo/Pakistanian ____ ; Italian ____ ; Japanese ____ ; Jewish ____ ;
Metis ____ ; Russian ____ ; Scandinavian ____ ; Ukrainian ____ ; Other (please specify) _____

Which number comes closest to the total income of all the members of your household for this past year before tax and deductions?

Less than $10,000 ____ ; $10,000 - $20,000 ____ ; $20,001 - $30,000 ____ ; $30,001 - $40,000 ____ ;
$40,001 - $50,000 ____ ; $50,001 - $60,000 ____; more than $60,000 ____

Appendix 5: Recruitment Letter

Hello, my name is Erica White. I am a graduate student in the Faculty of Social Work, and am doing some research for my Master's thesis. My telephone number is ., My advisor is Dr. Sid Frankel, and his telephone number is 474-9706.

The purpose of this research is to learn about what you think of various health issues. You will be asked to listen to a presentation for about 30 minutes, and then you will be asked to fill out some questionnaires asking for your opinions.

Your identity will be completely anonymous. I do not need to know your name, so please do NOT sign your questionnaires. Your answers will be confidential and I will not be able to tell who you are.

Your participation is completely voluntary and you have the right to withdraw from the study at any time and/or not answer whatever questions you prefer to leave out. If you do not wish to participate, please make this known to Professor Levine and she will provide you with an article you will read and critique for your own learning.

You may find participating in the study intense or upsetting, especially if you have had personal experience with mental illness. If this is the case, please approach me and I will offer you assistance.

This study has been approved by the Joint-Faculty Research Ethics Board. If you have any complaint regarding a procedure please report it to one of the following: the Human Ethics Secretariat (474-7122); Dr. Sid Frankel (474-9706); Dr. Robert Mullally, the Dean of Social Work (474-9869).

The benefit of this research is that it will help us learn more about what Social Work students think about mental illness and complementary and alternative medicines. If you would like to know the results of my research please fill out the accompanying form and hand it in separately, and I will ensure you receive them.

Please feel free to contact me if you have any questions or concerns.

Erica White ( )