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Recommended Citation

Kazantzis, Nikolaos; Wakefield, Amber; Deane, Frank P.; Ronan, Kevin; and Johnson, Malcolm: Public attitudes toward people with mental illness in New Zealand, 1995-1996 2009, 74-91.
<https://ro.uow.edu.au/hbspapers/394>

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Abstract

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Keywords

1996, zealand, toward, attitudes, illness, mental, people, public, 1995

Disciplines

Arts and Humanities | Life Sciences | Medicine and Health Sciences | Social and Behavioral Sciences

Publication Details

Kazantzis, N., Wakefield, A., Deane, F. P., Ronan, K. & Johnson, M. (2009). Public attitudes toward people with mental illness in New Zealand, 1995-1996. *The Australian Journal of Rehabilitation Counselling*, 15 (2), 74-91.

Public Attitudes Toward People With Mental Illness in New Zealand, 1995–1996

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Archival data from a cross-sectional survey of two cohorts of community-residing New Zealand adults ($n = 157$; $n = 141$) was analysed to examine social attitudes towards people with mental illness in a historical period associated with the establishment of a community mental health facility. Participants completed the Opinions about Mental Illness (OMI; Cohen & Struening, 1959), and the Comfort in Interaction Scale (CI, Beckwith & Mathews, 1994); the latter a measure of level of prior contact with people with mental illness. Across cohorts, the OMI Mental Hygiene subscale and the CI scale had significant variability. Older participants endorsed more Authoritarian, Social Restrictiveness and Interpersonal Ideology attitudes in their perception of people with mental illness than younger participants. Data supported the hypothesis that attitudes towards people with mental illness were influenced by social attitudes, and by opportunities to interact with people with mental illness in work settings.

Keywords: public attitudes, mental illness, New Zealand, survey

Individuals with a mental illness have historically been treated in large psychiatric hospitals located on the perimeter of local communities. The integration from the hospital to the community in many societies has proven difficult because of the stigma regarding mental illness, and also because of the logistics in servicing community residing individuals (e.g., Mehta, Kassam, Leese, Butler, & Thornicroft, 2009; Mirsky, 2009; Pantusa et al., 2007; Thornicroft, Brohan, Rose, Sartorius, & Leese, 2009; Vanheusden et al., 2009). There is also evidence to support the assertion that such stigma is extended to those with alcohol and drug problems (i.e., Corrigan, Kuwabara, & O'Shaughnessy, 2009).

Community members residing close to outpatient psychiatric centers may have a unique perspective on mental illness from opportunities to interact with, or the visibility of, people with mental illness. For instance, the contact hypothesis (Allport, 1954) suggested that cooperative contact with a member of a negatively stereotyped

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social group might (a) ameliorate specific attitudes toward the members interacted with, and (b) generalise to less negative general attitudes toward the group as a whole. Yet, few studies have examined social attitudes towards people with mental illness in community citizens as influenced by their proximity to a mental health service centre at the time they are being transferred to the community. This lack of awareness was clearly evident during the closure of New Zealand's largest and last standing psychiatric hospital near Marton (i.e., Lake Alice Psychiatric Hospital). Articles in the local newspaper at the time highlighted the negative attitudes of the local community toward the transition of chronic patients to community based care.

Existing research has produced inconsistent findings on the effects of proximity to mental health facilities to people with mental illness. Several studies have reported that closer proximity to a community mental health facility was associated with an increase in negative attitudes toward those with mental illness and fear of personal safety (Jivanjee, Kruzich, & Gordon, 2008; Wolf & Stuber, 2002). In contrast, other studies found no evidence to suggest that such a relationship exists (see review in Corrigan, Wassel, & Rafacz, 2008). Another limitation of prior research in this area has been the dependence on samples, such as university students, that are clearly a specialised sample of the population (Norman, Sorrentino, Windell, & Manchanda, 2008). Given the inconsistencies and limitations of prior research findings, and the specific need to examine community attitudes in the New Zealand context, the present study was conceived to gather data before and after the relocation of mental health patients to the community. That is, the study was conducted before and after the establishment of a community mental health facility in Wanganui, New Zealand, with one year between cohorts (i.e., 1995 and 1996). Understanding trends in public attitudes towards people with mental illness informs the assessment of ongoing severity of stigma and evaluation of antistigma campaigns.

Research on New Zealand Community Attitudes

Research in New Zealand from the 1950s through the mid 1990s investigated variables that are likely to influence attitudes toward people with a mental illness. For example, Ng, Martin, and Romans (1995) investigated attitudes among 164 randomly selected community members. The Ng et al. study used the Californian Attitudes towards Mental Illness Scale which measures attitudes towards minority groups. The study found that participants of older age had significantly stronger Authoritarian views (i.e., mentally ill people are inferior and require coercive management). It also found that individuals with higher education had lower scores on the social restrictiveness scale (i.e., they did not view people with mental illness as a threat to society). High scores on the Benevolence subscale (i.e., sympathetic and paternalistic attitude toward people with mental illness) was found among: (a) younger respondents, (b) those who were female, and (c) those with more contact with people with mental illness. The Ng et al. report concluded that there is a positive outlook for future planning of community-based rehabilitation for people with mental illness.

The relationship between gender and attitudes toward mental illness has produced similarly conflicting results. The majority of New Zealand studies conducted prior to deinstitutionalisation report that gender and age do not significantly impact on attitudes (Green, Walkey, Taylor, & McCormick, 1987), whereas

data gathered after deinstitutionalisation report more positive attitudes among females (i.e., Read & Law, 1999) and less prejudiced attitudes among those aged 25 years and older (Read & Harre, 2001). The effect of gender also warrants consideration in the investigation of community attitudes.

There are several important limitations to existing research investigating community attitudes toward people with mental illness in New Zealand: (a) existing data on attitudes have been obtained using university samples (e.g., Green et al., 1987, Read & Harre, 2001, Walkey et al., 1981), (b) there is a lack of consistency in measures used which has limited the ability of findings to be generalised to prior studies and the wider community, (c) a holistic viewpoint has yet to be considered in research on community attitudes toward mental illness, and (d) limited research has investigated whether attitudes change in relation to changes in psychiatric services. Most research has investigated causes of attitudes as opposed to the impact of changes to service delivery.

At the time of the present study, one of New Zealand's largest psychiatric institutions was preparing to close in Wanganui. A new facility in the nearby community was proposed to accommodate the remaining psychiatric patients. This provided an opportunity to investigate the impact of demographic variables on community attitudes over two points in time (i.e., before and after relocation to the community). It was hypothesised that: (a) participants who are younger in age would have more positive attitudes than other age-groups (hypothesis 1), (b) that there would be no gender differences in attitudes (hypothesis 2), (c) that attitudes would not be affected by status of employment (hypothesis 3), (d) that respondents who had previous contact with individuals who have a mental illness would have more positive attitudes than respondents with no previous contact (hypothesis 4) and, (e) that respondents who lived closer to the mental health facility would hold more negative attitudes toward people with mental illness than those who lived further away (hypothesis 5). Thus, while the study is based in historical context, the topic is still pertinent to contemporary issues for people with mental illness.

Method

Participants

Two samples were obtained in the present study. One sample was taken in 1995 and a second sample was taken in 1996. The 1995 sample contributed to 53% of the overall data collected for the study. It consisted of 157 participants, 100 females ($M = 44.1$ years, $SD = 16.0$) and 54 males ($M = 47.5$ years, $SD = 16.3$). The 1996 sample consisted of 141 participants, 95 females ($M = 45.1$ years, $SD = 16.2$), and 43 males ($M = 51.2$ years, $SD = 17.9$). Overall, both samples were similarly matched in terms of respondents' gender, mean age and standard deviation, ethnicity and employment status. On both samples, NZ European respondents accounted for four fifths of the data collected. Just under half of the respondents were employed. Ninety-eight percent of respondents indicated that they had prior contact with people experiencing a mental illness.

Measures

There were two measures used to evaluate attitudes towards mental illness. The Opinions about Mental Illness Scale (OMI, Cohen & Struening, 1959) and the

Comfort in Interaction Scale (CI, Beckwith & Mathews, 1994). These measures along with demographic information relating to age, gender, ethnicity, and employment, level of awareness of the proposed facility, agreement of the proposed facility and level of contact with people with mental illness formed the basis of the questionnaire.

Opinions about Mental Illness Scale (OMI)

The OMI was originally developed by Cohen and Struening in 1959. It measures attitudes and opinions about the aetiology and treatment of mental illness. It consists of 51-items presented via a 6-point Likert scale. The response options range from 1 (*Strongly Agree*) to 6 (*Strongly Disagree*). It takes around 15 minutes to complete. Factor analysis of the 51 items gave way to five subscales (a) Authoritarianism (b) Unsophisticated Benevolence (c) Mental Illness Ideology (d) Social Restrictiveness and (e) Interpersonal Etiology. Higher scores on the OMI generally indicate positive or accepting attitudes towards people with mental illness. However, on some subscales lower scores are indicative of positive attitudes (Antonak & Livenh, 1995).

The OMI was chosen for the present study based on its widespread use in attitude research to measure attitudes towards mental illness (Drolen, 1993). It has also been used in prior New Zealand research on attitudes towards mental illness (Rowe, 2001). The OMI has sound psychometric properties. The internal consistency reliability of the OMI subscales range from .38 (Mental Hygiene), .77 (Authoritarianism), .70 (Unsophisticated Benevolence), .71 (Social Restrictiveness), .65 (Interpersonal Etiology, Antonak & Linveh, 1995).

Comfort in Interaction Scale (CI)

The Comfort in Interaction (CI) scale (Beckwith & Mathews, 1994) enabled the evaluation of a wider range of characteristics involved in attitudes towards people with mental illness. The CI measures the level of comfort in interacting with a person who has a disability. The CI consists of 20 items and uses a 6-point likert scale. It takes five minutes to complete (Beckwith & Mathews, 1994). Scores range between 20 and 120. Higher scores indicate greater comfort in interaction with people who have a disability. In order to fit the focus of the study the CI items were slightly modified. The words 'intellectual disability' were replaced with 'mental illness' where applicable. The CI produces internal reliability coefficients $r = .88$, and test-retest reliability $r = .91$ (Beckwith & Mathews, 1994).

Design and Procedure

A stratified sampling process was employed to elicit respondents for the present study. Following the methods of prior community attitude research (e.g., Dear & Taylor, 1982), socioeconomic status (SES) of the Wanganui area was used to identify three (nonrandomly chosen) residential areas matched by economic similarity. The three areas included in the present study design were defined as low to medium income areas (Statistics New Zealand, 1991). The proposed community mental health unit (Area 1) was located in a light industrial area with relatively low socioeconomic status (Statistics New Zealand, 1991).

The first area (Area 1) where the new mental health facility was to be located was the main focus area of the study. The proposed physical facility had previously been used for the community care of the Intellectually Handicapped. The second area (Area 2) had an existing mental health outpatient facility as part of the hospital

inpatient service. Area 2 was chosen due to its socioeconomic similarities to Area 1. The third area (Area 3) was closely located to both the proposed facility in Area 1 and the inpatient service in Area 2. It was selected as it had no proposed or existing link to mental health services and was matched by socioeconomic status with Area 1.

Questionnaires were hand delivered to the mailboxes of approximately 300 residential homes in each of the three areas at both points in time. The distribution of questionnaires involved starting in the centre of each area and moving outwards in all directions until all questionnaires were delivered. Respondents identified as residents in Area 1 were within one kilometre of the proposed site. Approximately two and a half kilometres separated Area 1 from Area 2. Three kilometres separated Area 2 from Area 3. There was a total distance of five and a half kilometres separating Area 1 from Area 3.

The first questionnaire was distributed in August 1995 a month before the facility in Area 1 opened. The second questionnaire was distributed in July 1996. Slightly more questionnaires were distributed in 1995 than 1996. However, the response was consistent at around 15% for both collections. In 1995, 977 questionnaires were distributed to the mailboxes of residential homes in Areas 1, 2, and 3. Data was collected via a prepaid return addressed envelope to Massey University, School of Psychology. One hundred and fifty-seven questionnaires were returned. In 1996, 930 questionnaires were distributed to the mailboxes of approximately the same residential houses to the 1995 distribution. One hundred and forty-one questionnaires were returned.

Analytic Approach

Analysis was conducted using the Statistical Package for the Social Sciences (SPSS) version 11. Multiple regression, analysis of covariance (ANCOVA), analysis of variance (ANOVA) and parameter estimates of the variables were carried out as part of the data screening and inferential analysis. It is important to note that the data from both the 1995 and 1996 were pooled for the analysis to increase sample sizes.

Multiple regression was used to assess the variables and covariates used in ANCOVA and their influence on the dependent variables used in the present study analyses (Tabachnick & Fidell, 1996). The method of stepwise multiple regression was chosen based on its ability to develop a subset of independent variables (IVs) that are useful in predicting the dependent variable. It was also chosen due to its ability to eliminate IVs that do not provide any additional prediction in the equation. As there was no theoretical framework guiding research on community attitudes toward mental illness the order of the variables used in stepwise multiple regression were based on statistical criteria. Independent variables used in the multiple regression equation included the demographic variables of age, gender, ethnicity, employment, and contact, awareness and agreement. The dependent variables used in the multiple regression equation were the OMI subscales and the Comfort in Interaction Scale.

Outliers can also impact the regression solution. Therefore the SPSS frequency test was run prior to analysis. Findings showed no outliers present in the data. ANCOVA is relatively robust against the violation of homogeneity of variance as long as the ratio of largest to smallest sample size is not greater than 4:1 (Tabachnick & Fidell, 1996). Using the 4:1 ratio as a guideline, ethnicity was excluded from the present study analysis. As a higher than 4:1 ratio existed among awareness, agreement and employment, only age and gender were included as covariates for the

analysis of attitudes between 1995 and 1996 data collections. Contact was analysed by excluded cases which were in the 'no prior contact' matrices. Inclusion of these would have violated the assumption of homogeneity of variance. Separate analyses using ANCOVA were conducted on awareness, and agreement, employment, and contact to avoid violation of the cases to DV ratio had these variables been included.

The first set of analyses was directed at investigating the effect of demographic variables on attitudes towards individuals with a mental illness. The second set of analyses examined the effect of proximity to a mental health facility on attitudes. Multiple regression analyses were conducted to determine the covariates to be used in the ANCOVA analysis for each of the hypothesis. The independent variables included in the Multiple regression analyses were the differences in responses at the two time points (as indicated by 1995 versus 1996 collected data) and the sample area respondents came from. The covariates were awareness, agreement, contact and demographic variables, age, ethnicity, gender and employment. The dependent variables used in each multiple regression analysis were the five OMI subscales; Authoritarianism, Unsophisticated Benevolence, Mental Health Ideology, Social restrictiveness, and Interpersonal Etiology, and the Comfort in Interaction Scale. Variables that were found to have significance were included in the ANCOVA analysis.

Results

Overall, there were higher mean scores on most subscales on the 1996 data collection compared to the 1995 data collection. These data suggested attitudes particularly in the later collection were generally positive and accepting of people with mental illness.

Influence of Location on Attitudes

Using stepwise multiple regression, agreement with the facility was entered first on all five of the OMI subscales. Agreement with the proposed facility was found to influence attitudes towards mental illness. Agreement explained 12% of the variance on Authoritarianism, $F(1, 224) = 30.99, p < .001$, 11% of the variance on Unsophisticated Benevolence, $F(1, 224) = 28.58, p < .001$, 15% of the variance on Mental Health Ideology ($F(1, 224) = 38.10, p < .001$), 23% of the variance on Social Restrictiveness, $F(1, 224) = 68.15, p < .001$, and 8% of the variance on Interpersonal Etiology, $F(1, 224) = 20.43, p < .001$. The variables awareness and employment were also entered second, $F(1, 223) = 18.20, p < .05$, and third, $F(1, 222) = 13.64, p < .05$, in the stepwise multiple regression of the OMI subscale Authoritarianism. Each explained a further 2% of the variance. Employment was additionally entered second on the OMI illness subscale Social Restrictiveness, explaining a further 3% of the variance, $F(1, 223) = 40.19, p < .05$. The variable time, was entered second on both the OMI subscale Unsophisticated Benevolence, $F(1, 223) = 16.94, p < .05$, and Mental Health Ideology, $F(1, 223) = 24.64, p < .05$, explaining a further 2% and 4% respectively of the variance.

At the 1995 data collection, Area 1 had the highest mean scores on all OMI subscales except on the OMI subscale Unsophisticated Benevolence, showing a mix of positive and negative attitude responses, In contrast, Area 3 had the lowest mean scores on all OMI Subscales (Table 1). At the 1996 data collection, OMI mean scores were lower than those from 1995, and were similar among the three Areas.

TABLE 1
Scores on the OMI and CI Measures by Location

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

Note: Recoding has been carried out for negative scores. Pooled 1995 and 1996 data represents data merged into a single data set. OMI = Opinions about Mental Illness scale (Cohen & Struening, 1959); Authoritarianism subscale measures the belief that people with mental illness are inferior and a threatening subgroup of society (1959); Unsophisticated Benevolence subscale measures the belief that people with a mental illness are not failures in life but are in need of care; Mental Hygiene Ideology subscale measures the belief that people with a mental illness are no different from people without a mental illness in terms of their needs; Social Restrictiveness subscale measures the belief that people with a mental illness are a threat to society; Interpersonal Etiology subscale measures the belief that mental illness is developed from interpersonal experiences. CI = Comfort in Interaction scale (Beckwith & Mathews, 1994). The CI measures individual's level of comfort in interacting with people who have a mental illness.

^a1995 *n* = 157.

^b1996 *n* = 141.

^c1995 and 1996 pooled data *n* = 298.

Area 1 had higher mean scores on the OMI subscales, Authoritarianism, and Interpersonal Etiology. Area 2 had the highest mean score on the OMI subscale Social Restrictiveness. Area 3 had higher OMI subscales on Unsophisticated Benevolence, and Mental Hygiene Ideology. CI mean scores did not differ by Area.

Influence of Cohort on Attitudes

There were relatively equal numbers of respondents across the two data sets. However, the 1995 data set did have a higher response rate with 16 more cases. Overall, observation of mean scores on the OMI subscales indicated that attitudes have remained relatively stable over time. There was a slight increase in mean scores across the two data collections independent of area. Mean scores increased on Authoritarianism, Social Restrictiveness and Interpersonal Etiology subscales. There was also an observed increase in total mean scores on the CI measure between 1995 and 1996 (see Table 2). Overall, increases in scores on both measures have been associated with an increase in positive attitudes and interaction with people who have a mental illness.

Influence of Age on Attitudes

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

TABLE 2

Scores on the OMI and CI Measures for 1995 and 1996 Data Collections

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

Note: Recoding has been carried out for negative scores. OMI = Opinions about Mental Illness scale (Cohen & Struening, 1959); Authoritarianism subscale measures the belief that people with mental illness are inferior and a threatening subgroup of society (1959); Unsophisticated Benevolence subscale measures the belief that people with a mental illness are not failures in life but are in need of care; Mental Hygiene Ideology subscale measures the belief that people with a mental illness are no different from people without a mental illness in terms of their needs; Social Restrictiveness subscale measures the belief that people with a mental illness are a threat to society; Interpersonal Etiology subscale measures the belief that mental illness is developed from interpersonal experiences. CI = Comfort in Interaction scale (Beckwith & Mathews, 1994). The CI measures individual's level of comfort in interacting with people who have a mental illness.

^a1995 $n = 157$.

^b1996 $n = 141$.

Interpersonal Etiology subscale, $F(1, 223) = 14.50, p < .05$, explaining a further 3% of the variance. On the Comfort in Interaction scale, time was entered first and found to explain 16% of the variance, $F(1, 224) = 41.62, p < .001$. Agreement was entered second, and found to explain a further 7% of the variance, $F(1, 223) = 32.92, p < .001$. Comfort in Interaction was associated with both changes in time, and agreement with the facility in Area 1 of the present study. Demographic variables, gender, ethnicity, and prior contact with people with mental illness were not found to be significantly related to attitudes towards people with mental illness on any of the OMI subscales or the CI scale. Therefore, these variables were excluded from the ANCOVA analyses of time and location.

Similar percentages of each age group were found across the 1995 and 1996 data collections. A lower proportion of total responses in both data collections came from respondents aged 65 and above. This age group consisted of approximately 8% of the response sample. In both the data collections the older age group tended to have higher mean scores on the OMI subscales, Authoritarianism, Social restrictiveness and Interpersonal Etiology (see Table 3). Higher scores on these subscales indicated positive attitudes towards people with a mental illness. The older age group also had lower mean scores on the Comfort in Interaction scale in both 1995 and 1996 data collections. Higher mean scores on the CI scale were observed among the younger age group in the first data collection, and the middle age group in the second data collection. Results from the ANCOVA analysis show age was a significant influence on attitudes towards mental illness on three of five OMI subscales. Namely, Authoritarianism, $F(5, 272) = 6.63, p < .05$, Social Restrictiveness, $F(5, 272) = 11.61, p < .05$, and Interpersonal Etiology, $F(5, 272) = 11.05, p < .05$. Age was not found to be a significant influence on the level of comfort in interacting with people who have a mental illness as indicated by the Comfort in Interaction scale, $F(5, 272) = 6.63, p > .05$.

Influence of Gender on Attitudes

Over half of respondents to the survey were female (65%), with similar proportions of male and female respondents between the 1995 and 1996 data collections. On average, males tended to have lower overall mean scores on the OMI and CI scales in both data collections (see Table 4). Females had slightly higher scores on Authoritarianism, Mental Hygiene Ideology, Social Restrictiveness, and Interpersonal Etiology subscales of the OMI. Results from the ANCOVA analyses, found that gender was not a significant influence on attitudes on any of the OMI or CI scales (all $p > .05$).

Influence of Employment Status on Attitudes

Another demographic variable that was of interest in the present study was status of employment. Similar percentages were found across the two data collections. Just under half of the respondents indicated that they were currently employed at the time of completing the questionnaire. Around one fifth of respondents were retired and nearly two-fifths were unemployed. Overall, respondents who were retired tended to have higher scores on the OMI in the 1995 data collection (see Table 5). Respondents tended to have higher scores on the OMI subscales in the 1996 collection.

TABLE 3

Scores on the OMI and CI Measures as a Function of Age

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

Note: Recoding has been carried out for negative scores. Pooled 1995 and 1996 data represents data merged into a single data set. OMI = Opinions about Mental Illness scale (Cohen & Struening, 1959); Authoritarianism subscale measures the belief that people with mental illness are inferior and a threatening subgroup of society (1959); Unsophisticated Benevolence subscale measures the belief that people with a mental illness are not failures in life but are in need of care; Mental Hygiene Ideology subscale measures the belief that people with a mental illness are no different from people without a mental illness in terms of their needs; Social Restrictiveness subscale measures the belief that people with a mental illness are a threat to society; Interpersonal Etiology subscale measures the belief that mental illness is developed from interpersonal experiences. CI = Comfort in Interaction scale (Beckwith & Mathews, 1994). The CI measures individual's level of comfort in interacting with people who have a mental illness.

^a1995 $n = 157$.

^b1996 $n = 141$.

^c1995 and 1996 pooled data $n = 298$.

TABLE 4
Mean Gender Scores on the OMI and CI Measures

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

Note: Recoding has been carried out for negative scores. Pooled 1995 and 1996 data represents data merged into a single data set. OMI = Opinions about Mental Illness scale (Cohen & Struening, 1959); Authoritarianism subscale measures the belief that people with mental illness are inferior and a threatening subgroup of society (1959); Unsophisticated Benevolence subscale measures the belief that people with a mental illness are not failures in life but are in need of care; Mental Hygiene Ideology subscale measures the belief that people with a mental illness are no different from people without a mental illness in terms of their needs; Social Restrictiveness subscale measures the belief that people with a mental illness are a threat to society; Interpersonal Etiology subscale measures the belief that mental illness is developed from interpersonal experiences. CI = Comfort in Interaction scale (Beckwith & Mathews, 1994). The CI measures individual's level of comfort in interacting with people who have a mental illness.

^a1995 *n* = 157.

^b1996 *n* = 141.

^c1995 and 1996 pooled data *n* = 298.

Results from the ANCOVA analyses showed that employment status was not a significant variable in influencing attitudes on any of the OMI subscales (all $p > .05$). However, employment status was found to be a significant influence on the level of comfort in interaction with people who have a mental illness, $F(2, 256) = 4.729, p < .05$. Findings indicated that unemployed and retired respondents had slightly higher mean scores.

Effects of Location and the Two Periods of Time on Attitudes

A 2×3 between-subjects analysis of covariance was performed on the six dependent variables: OMI subscales, Authoritarianism, Unsophisticated Benevolence, Mental Hygiene Ideology, Social Restrictiveness, Interpersonal Etiology, and the Comfort in Interaction scale score. Independent variables were time (data collection) and Area. The results from the ANCOVA analyses indicated that both location to a mental health facility and a comparison of the data collected over the two points in time was not statistically significant in influencing attitudes towards people with mental illness on four of the five OMI subscales; Authoritarianism, $F(5, 272) = 0.431, p > .05$, Unsophisticated Benevolence, $F(5, 272) = 1.169, p > .05$, Social Restrictiveness, $F(5, 272) = 0.887, p > .05$, and Interpersonal Etiology, $F(5, 272) = 0.403, p > .05$. However, the Mental Hygiene Ideology, $F(5, 272) = 6.969, p < .05$, subscale of the OMI and the CI scale, $F(5, 272) = 39.126, p < .05$, were significant.

Influence of Contact on Attitudes

The majority of respondents to the questionnaire indicated that they had had prior contact (96%) with people who have a mental illness. In general, those respondents who had had no prior contact with people with mental illness (4%), tended to have higher mean scores on the OMI and CI scales in the 1995 and 1996 data collections (see Table 6). ANOVA was used to analyse prior contact and attitudes towards mental illness. The category *none*, was excluded from the analyses as cases were low and would have exceeded the less than 4:1 ratio assumption of the test. Results from the analyses found contact to be a significant influence on attitudes towards mental illness on the Comfort in Interaction scale, $F(1, 310) = 11.53, p < .001$. Contact was not found to be significant on any of the OMI subscales.

Discussion

The present study had several limitations that should be acknowledged before the results are discussed. The response rate was not as large as we would have preferred, and this may have been due to the sampling strategy employed. As with the data from any survey, generalisability is directly influenced by the methods in which they were gathered. Therefore, these data gathered in the mid-1990s cannot be considered representative of population opinions or attitudes towards mental illness either then, or in 2009. However, the issues regarding public opinion towards mental illness are still pertinent to contemporary society. Moreover, the study was novel in that it surveyed community opinions before and after the closure of a large psychiatric hospital and transfer of patients to the community. Such research is rare in the evaluation of attitudes among community-residing

TABLE 5
Mean Occupation Scores on the OMI and CI Measures

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

Note: Recoding has been carried out for negative scores. Pooled 1995 and 1996 data represents data merged into a single data set. OMI = Opinions about Mental Illness scale (Cohen & Struening, 1959); Authoritarianism subscale measures the belief that people with mental illness are inferior and a threatening subgroup of society (1959); Unsophisticated Benevolence subscale measures the belief that people with a mental illness are not failures in life but are in need of care; Mental Hygiene Ideology subscale measures the belief that people with a mental illness are no different from people without a mental illness in terms of their needs; Social Restrictiveness subscale measures the belief that people with a mental illness are a threat to society; Interpersonal Etiology subscale measures the belief that mental illness is developed from interpersonal experiences. CI = Comfort in Interaction scale (Beckwith & Mathews, 1994). The CI measures individual's level of comfort in interacting with people who have a mental illness.

^a1995 *n* = 157.

^b1996 *n* = 141.

^c1995 and 1996 pooled data *n* = 298.

TABLE 6

Scores on the OMI and CI Measures as a Function of Prior Contact

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

Note: Recoding has been carried out for negative scores. Pooled 1995 and 1996 data represents data merged into a single data set. Significance is indicative of levels of contact, rare to moderate and often to extensive. OMI = Opinions about Mental Illness scale (Cohen & Struening, 1959); Authoritarianism subscale measures the belief that people with mental illness are inferior and a threatening subgroup of society (1959); Unsophisticated Benevolence subscale measures the belief that people with a mental illness are not failures in life but are in need of care; Mental Hygiene Ideology subscale measures the belief that people with a mental illness are no different from people without a mental illness in terms of their needs; Social Restrictiveness subscale measures the belief that people with a mental illness are a threat to society; Interpersonal Etiology subscale measures the belief that mental illness is developed from interpersonal experiences. CI = Comfort in Interaction scale (Beckwith & Mathews, 1994). The CI measures individual's level of comfort in interacting with people who have a mental illness.

^a1995 $n = 157$.

^b1996 $n = 141$.

^c1995 and 1996 pooled data $n = 298$.

individuals. The scant data on attitudes in New Zealand mean that the present data still represent a useful contribution.

The present study did not obtain data to support the hypothesis that younger respondents (under 29 years of age) would have more positive attitudes toward people with mental illness. In contrast, the middle-age group (aged 39 to 64) were found to hold more positive attitudes toward people with mental illness. Age was found to be a significant predictor of Authoritarianism, Social Restrictiveness and the Interpersonal Etiology subscales of the OMI measure. This finding indicated that older people were more likely to regard people with mental illness as suffering from a medically caused illness that is treatable, and in need of support and care, and was consistent with research using the OMI on a similar age group (Rowe, 2001; Sellick & Goodear, 1995). Clear gender and employment status differences were not obtained in the present study. There is conflicting data on the influence of these demographic variables on attitudes towards mental illness (c.f. Mukherjee, Fialho, Wijetunge, Checinski, & Surgenor, 2002).

The hypothesis that those with prior contact with people with mental illness would have more positive attitudes was only partially supported in the present study. Respondents with high levels of prior contact with people who have a mental illness were more comfortable in interacting with people who have a mental illness. Prior research has consistently reported that contact with people with mental illness influences positive attitudes, as well as increases the level of comfort in interacting with people with mental illness (e.g., Arens, 1993; Beckwith & Mathews, 1994; Gething & Wheeler, 1992). The majority of the present sample (98%) reported prior contact with a person with a mental illness. It is unclear what the base rates of prior contact with people with mental illness is in the general New Zealand population. The incidence of mental illness in the general population may be such that at some point in their lives most individuals may have had prior contact. However, it is also possible that the high rate of prior contact reported in the present sample may also reflect the previously acknowledged limited sampling strategy.

There was partial support for the hypothesised differences in attitudes between the two data collection periods. Significance was found on the Mental Hygiene Ideology subscale of the OMI, and Comfort in Interaction scale. This observed difference indicated that there was an increase in the community's readiness to accept and interact with people who have a mental illness. This finding corroborated prior research and contradicted the data suggesting attitudes measured with the OMI simply increase over time (Drolen, 1993; Ng, Martin & Romans, 1995). Of course, it is possible that respondents to the survey in 1995 were of a particular subgroup that had more positive attitudes toward people with mental illness.

The hypothesis that people who lived in closer proximity to the community mental health facility would have more negative attitudes toward people with mental illness was not supported. However, this particular finding is consistent with prior research (e.g., Rothbart, 1973; Smith, 1981). One explanation for the lack of difference in attitudes by location in the present study was that residents were made aware of the facility prior to its placement and educated about the community mental health facility, its patients and level of security involved. The high degree of awareness was also likely to be due to the increase in media atten-

tion that the facility received prior to its establishment in 1995 following the closure of Lake Alice psychiatric hospital.

The present study illustrates the importance of surveying attitudes (and associated behaviours) among community residing individuals. It cannot be assumed that the attitudes of convenience samples, such as university students or trainee mental health practitioners are reflective of the broader community (c.f. Buckley et al., 2007). Future research could be usefully directed towards extending the present data, and those demonstrating that social norms are implicated in understanding attitudes toward mental illness. That is, past research on stigmatisation of the mentally ill has emphasised the importance of beliefs about mental illness in determining preferred distance to those with such illnesses. We suggest that the importance of perceived social norms could be examined in reducing stigmatisation and the public's willingness to live close to, and socialise with, those community members with mental illness.

Implications for Practice

The study is based on archival data and of historical rather than contemporary interest. However, there is an importance of historical aspects to understanding contemporary issues. The present study examined the perceptions of adults regarding individuals with mental illness before and after the integration of a mental health unit to the community. Participants identified a pervasive lack of understanding and prevalent stigmatising of those with illness. Implications of the study relate to roles for behavioral health services in encouraging empowerment, choices, and connections so that young people with mental health disorders may achieve their preferred levels of community integration. These data also underscore the need to address the stigma experience among people with mental illness in New Zealand.

We take this opportunity to remind readers of the evidence-based interventions as strategies that facilitate community-based treatments proposed by Corrigan et al. (2008). These strategies include: (a) assertive community treatment that helps people live independently in their communities; (b) supported employment and education to help people achieve vocational goals; (c) family therapies that teach better management skills for all relevant people in family environments; (d) integrated treatment for people with dual disabilities (psychiatric and substance induced); and (e) illness management and recovery (largely cognitive strategies that help the person manage disability-related symptoms). Further evidence is required to evaluate the effectiveness of these strategies on the individual's relocation to the community, as well as the supports provided by immediate (i.e., family) and broader systemic contexts (i.e., local communities and employers).

References

- Allport, G.W. (1954). *Nature of prejudice*. New York: Doubleday.
- Antonak, R.F., & Livneh, H. (1995). Direct and indirect methods to measure attitudes toward persons with disabilities, with an exegesis of the error-choice test method. *Rehabilitation Psychology*, 40, 3–24.
- Arens, D.A. (1993). What do the neighbors think now? Community residences on Long Island, New York. *Community Mental Health Journal*, 29, 235–245.
- Beckwith, J.B., & Mathews, J.M. (1994). Measuring comfort in interacting with people with intellectual disabilities. *Australian Journal of Psychology*, 46, 53–57.

- Buckley, P., Bahmiller, D., Kenna, C.A., Shevitz, S., Powell, I., & Fricks, L. (2007). Resident education and perceptions of recovery in serious mental illness: Observations and commentary. *Academic Psychiatry, 31*, 435–438.
- Cohen, J., & Struening, E.L. (1962). Opinions about mental illness in the personnel of two large mental hospitals. *Journal of Abnormal and Social Psychology, 64*, 349–360.
- Corrigan, P.W., Kuwabara, S.A., & O'Shaughnessy, J. (2009). The public stigma of mental illness and drug addiction: Findings from a stratified random sample. *Journal of Social Work, 9*, 139–147.
- Corrigan, P.W., Wassel, A.K., & Rafacz, J.D. (2008). An evidence-based approach to psychiatric rehabilitation. In L. L'Abate (Ed.), *Toward a science of clinical psychology: Laboratory evaluations and interventions* (pp. 283–305). New York: Nova Science Publishers.
- Dear, M.J., & Taylor, S.M. (1982). *Not on our street: Community attitudes to mental health care*. London: Pion Ltd.
- Drolen, C.S. (1993). The effect of educational setting on student opinions of mental illness. *Community Mental Health Journal, 29*, 223–234.
- Gething, L., & Wheeler, B. (1992). The interaction with disabled persons scale: A new Australian instrument to measure attitudes towards people with disabilities. *Australian Journal of Psychology, 14*, 75–82.
- Green, D.E., Walkey, F.H., Taylor, A.J.W., & McCormick, I.A. (1987). New Zealand attitudes to mental health. *New Zealand Journal of Psychology, 16*, 37–41.
- Hall, M. (1995). *Evaluation of an inpatient programme aimed at preparing "hard-to-place" chronically mentally ill for the community*. Massey University, Palmerston North.
- Jivanjee, P., Kruzich, J., & Gordon, L.J. (2008). Community integration of transition-age individuals: Views of young with mental health disorders. *The Journal of Behavioral Health Services & Research, 35*, 402–418.
- Mehta, N., Kassam, A., Leese, M., Butler, G., & Thornicroft, G. (2009). Public attitudes towards people with mental illness in England and Scotland, 1994–2003. *British Journal of Psychiatry, 194*, 278–284.
- Mirsky, J. (2009). Mental health implications of migration: A review of mental health community studies on Russia immigrants in Israel. *Social Psychiatry and Psychiatric Epidemiology, 44*, 179–187.
- Mukherjee, R., Fialho, A., Wijetunge, A., Checinski, K., & Surgenor, T. (2002). The stigmatisation on psychiatric illness: The attitudes of medical students and doctors in London teaching hospital. *Psychiatric Bulletin, 26*, 178–181.
- Ng, S.L., Martin, J.L., & Romans, S.E. (1995). A community's attitudes towards the mentally ill. *New Zealand Medical Journal, 108*, 505–508.
- Norman, R.M.G., Sorrentino, R.M., Windell, D., & Manchanda, R. (2008). The role of perceived norms in the stigmatization of mental illness. *Social Psychiatry and Psychiatric Epidemiology, 43*, 851–859.
- Pantusa, M.F., Paparo, S., Mottola, P., Scornaienchi, C., Marasco, M., & Fuoco, V. (2007). Stigma and mental illness: Knowledge, stereotypes and prejudices in the community sample of a southern Italy small town. *Il Vaso di Pandora, 15*, 95–115.
- Read, J., & Harre, N. (2001). The role of biological and genetic causal beliefs in the stigmatisation of 'mental patients'. *Journal of Mental Health, 10*, 223–235.
- Read, J., & Law, A. (1999). The relationship of causal beliefs and contact with users of mental health services to attitudes to the 'mentally ill'. *International Journal of Social Psychiatry, 45*, 216–229.
- Report of the Commission of Inquiry. (1971). *Psychiatric services at Oakley Hospital*. Auckland: Government Printers.
- Rothbart, M. (1973). Perceiving social injustice: Observations on the relationship between liberal attitudes and proximity to social problems. *Journal of Applied Social Psychology, 3*, 291–302.
- Rowe, T.M. (2001). *Contacts with, and attitudes towards, the mentally ill in the New Zealand police*. Master of Arts.
- Sellick, K., & Goodear, J. (1985). Community attitudes toward mental illness: The influence of contact and demographic variables. *Australian and New Zealand Journal of Psychiatry, 19*, 293–298.

- Smith, C.J. (1981). Residential proximity and community acceptance of the mentally ill. *Journal of Operational Psychiatry*, 12, 2–12.
- Statistics New Zealand. (1991). *Population by Dwelling*. Wellington: Statistics NZ Te Tari Tatau.
- Tabachnick, B.G., & Fidell, L.S. (1996). *Using multivariate statistics* (3rd ed.): Harper Collins.
- Thornicroft, G., Brohan, E., Rose, D., Sartorius, N., & Leese, M. (2009). Global pattern of experienced and anticipated discrimination against people with schizophrenia: A cross-sectional survey. *Lancet*, 373, 408–415.
- Vanheusden, K., van der Ende, J., Mulder, C.L., van Lenthe, F.J., Verhulst, F.C., & Mackenbach, J.P. (2009). Beliefs about mental health problems and help-seeking behavior in Dutch young adults. *Social Psychiatry and Psychiatric Epidemiology*, 44, 239–246.
- Walkey, F.H., Green, D.E., & Taylor, A.J.W. (1981). Community attitudes to mental health: A comparative study. *Social Science Medicine*, 15, 139–144.
- Walkey, F. H., Green, D. E., & Taylor, A. J. W. (1981). Community attitudes to mental health: A comparative study. *Social Science Medicine*, 15, 139–144.
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