UTILISATION OF MENTAL HEALTH SERVICES IN NEW ZEALAND

A Thesis presented in partial fulfillment of the requirements for the degree of Master of Science in Psychology at Massey University, Wellington, New Zealand

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ABSTRACT

Worldwide there is an increasing prevalence of psychological disorders. Despite this, research has indicated few people ever use mental health services or receive treatment. Exploration of mental health service use has shown it to be complex and influenced by many personal as well as structural factors. The New Zealand research is limited in its comprehensive examination of the causative factors regarding use of mental health services. It is for this reason that this thesis examined patterns and predictors of mental health service use by using an expanded version of Andersen's Behavioural Model of Health Care Utilisation. This framework enabled a comprehensive exploration of the nature and extent of formal and informal mental health service utilisation in the lower North Island of New Zealand. The results indicated that informal help was used more than formal mental health services. The highest users of mental health services were the least satisfied. Furthermore, the most significant predictors of formal utilisation were having a positive attitude towards mental health services; being female; identifying as Māori; possessing a Community Services Card; and perceived psychological need. However, it emerged that availability of services was the predominant barrier to formal mental health use. In conclusion, the current findings show that certain groups are more likely to utilise a higher frequency of services than other community groups. This suggests mental health services are not distributed equally among communities in the lower North Island of New Zealand. Furthermore, the importance of availability as a predictor of service use indicates that improvements are required at the structural level of the mental health system.

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EXAMINING MENTAL HEALTH CARE UTILISATION – AN HISTORICAL PERSPECTIVE

Mental health has been defined by the World Health Organisation as a "state of complete physical, mental and social well being". Mental health is influenced by socio-cultural determinants such as cultural values and beliefs, as well as individual determinants such as a person's own psychological and behavioural functioning (Ellis & Collings, 1997). Mental health and well-being will be apparent in a person's moods and feelings; their psychological clarity and stability; their satisfaction with relationships; the sufficiency with which their cultural and spiritual needs are met; and their sense of place and value in society, MHF (1995, cited in Ellis & Collings, 1997). This definition highlights the fact that mental health is crucial to the well being of individuals, societies and countries (World Health Organisation, 2001).

In New Zealand, Durie (1994) has developed a definition of mental health, which encompasses the holistic approach that Maori have traditionally adopted. This definition states mental health is that which nurtures: spirituality (taha wairua); family (taha whānau); psychological/emotional well being (taha hinengaro); religion (taha haahi); physiology (taha tinana); social responsibility (taha tikanga); old world (tea o tawhito); new world (tea o pakehatanga) and self (taha tangata).

Mental health problems are usually described as behaviours or emotional and psychological reactions that are outside the normal range of experience, which cause distress to the individual or others (Ellis & Collings, 1997). A mental health problem that becomes severe can develop into a mental illness. Mental illness or mental disorders are defined as "…. a clinically significant behavioural or psychological syndrome or pattern that occurs in a person and that is associated with present distress (e.g. a painful symptom) or disability (ie. Impairment in one or more important areas of functioning) or with a significantly increased risk of suffering death, pain, disability, or an important loss of freedom" (American Psychiatric Association, 1994).

Mental illness affects all strata of the world's population. World wide there is approximately 450 million people suffering from a mental illness or mental health problem. Furthermore, mental illness and mental health problems are estimated to account for 12 percent of global disease (World Health Organisation, 2001). In New

Zealand the Christchurch Psychiatric Epidemiology Study found the six-month prevalence rate for mild to severe impairment for all disorders was 28 percent, whereas the lifetime prevalence was 36.6 percent (Oakley-Browne, Joyce, & Wells, 1989; Wells, Bushnell, & Hornblow, 1989). World wide, society is experiencing an ever-increasing prevalence of psychological disorders. In addition, there is a widening treatment gap between those who need mental health services and those who actually receive mental health services. Research has consistently indicated that despite the high prevalence of mental health problems and disorders only small minorities of people ever receive any treatment (World Health Organisation, 2001).

The Epidemiologic Catchment Area (ECA) Program and the National Comorbidity Survey (NCS) in the United Sates found that more than 70 percent of people with a recent mental health disorder received no treatment from a mental health service. While less than 13 percent of respondents reported they had obtained treatment from a mental health professional (ECA; Regier et al., 1993; NCS; Kessler et al., 1994, cited in Howard, Thomas, Lyons, Vessey, Lueger, & Saunders, 1996). The Camberwell Needs for Care Survey, Bebbington et al. (1997, cited in Rabinowitz, Gross, & Feldman, 1999) carried out in London found a 1-year prevalence rate of 12.3 percent for mental health disorders. However, less than half of these respondents received care. In New Zealand the Christchurch Epidemiology Study found that only 29 percent of their participants with an identified psychiatric disorder had visited a mental health service or mental health professional (Hornblow, Bushnell, Wells, Joyce, & Oakley-Browne, 1990). These results alarmingly illustrate the discordance between mental health problems and utilising services.

The gap between service need and service utilisation is of growing concern and has therefore, received a great deal of attention from research and policy delivery organisations. One way in which this gap has been conceptualised by researchers is a problem with barriers that inhibit utilisation. Numerous studies have examined the nature and severities of these barriers, in order to better understand why people are not utilising mental health services (Stefl & Prosperi, 1985). These barriers include individual characteristics, which can facilitate or impede utilisation. Examples of individual barriers include age (Currin, Hayslip, Schneider, & Kooken, 1998); gender (Fosu, 1995), ethnicity (Snowden, 2001); education (Aoun, Pennebaker, & Wood,

2004); attitudes (Leaf, Livington Bruce, Tischelr, & Holzer, 1987); and social structure (Mitchell, 1989). Research has also been conducted on barriers within the mental health system. These involve resources (volume and distribution of resources) and organisation (access and structure of the service) (Andersen & Newman, 1973). The availability of resources, the affordability and accessibility of the organisation can all affect mental health service utilisation (Stefl & Prosperi, 1985).

However, there are many inconsistencies within the literature regarding these barriers, highlighting the need for yet further research in this area. The research also illustrates the complexities involved in mental health service utilisation. It is for this reason that several authors have developed theoretical frameworks to help explain a person's propensity to use a mental health service. One such framework that has gained wide spread recognition for its elegance in explaining utilisation is Andersen's Behavioural Model of Health Care Utilisation (Andersen, 1968; Andersen & Newman, 1973; Andersen & Aday, 1978; Andersen, 1995). This framework will be discussed in more detail.

THE FRAMEWORK - ANDERSEN'S BEHAVIOURAL MODEL OF HEALTH CARE UTILISATION

The behavioural model of health care utilisation (Andersen, 1968; Andersen & Newman, 1973; Andersen & Aday, 1978; Andersen, 1995) is one of the most widely used models describing the factors that affect the use of health care services (Wolinsky & Johnson, 1991). The purpose of the model is to discover conditions that either limit or enable utilisation of services (Andersen, 1995). Although the model was originally used to explore the use of hospitals, physicians and dental services, it has been further applied to the utilisation of various different health services, including mental health services (Goodwin, Koenen, Hellman, Guardino, & Struening, 2002; Hines-Martin, Malone, Kim, & Brown-Piper, 2003; Parslow & Jorm, 2000; Portes, Kle, & Eaton, 1992; Sommers, 1989; Song, 2000)

The Behavioural Model of Health Care Utilisation explains the use of health care services as a function of three components. These are depicted in figure 1. The first components are the predisposing variables. These are characteristics present prior to the onset of illness and include personal information social support and structure as well as

attitudes and beliefs about health. The second components are the enabling variables. These features facilitate how health services are obtained for example, accessibility, affordability and availability of services. The third component is the need variable or the perception of illness. These components interact to explain service utilisation (Andersen & Newman, 1973).

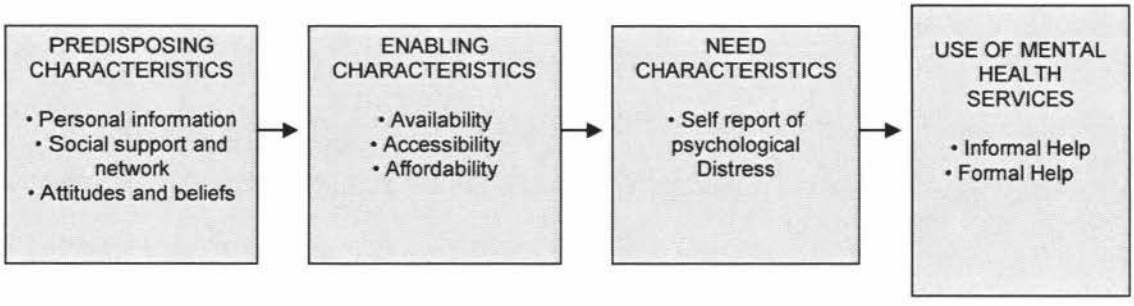

Figure 1.1. The Behavioural Model of Health Care Utilisation

Note. From "Revisiting the behavioural model and access to medical care: Does it matter?" by R.M. Andersen, 1995, *Journal of Health and Social Behaviour, 36,* p.2.

Predictors of Service Use

Predisposing characteristics:

The predisposing characteristics indicate one's tendency to use a mental health service prior to the onset of illness (Andersen 1968; Wolinsky & Arnold, 1988). The first of the predisposing characteristics is personal information, which includes a person's age, gender, region, employment status, ethnicity and education. The second of the predisposing characteristics represent a person's place in a social structure. Social structure refers to both social support and social network. Finally predisposing characteristics encompass attitudes and beliefs about mental health services. Each of these predisposing characteristics can affect a person's tendency to utilise a mental health service.

Enabling characteristics:

The enabling characteristics represent resources that facilitate or impede a person's ability to use mental health services. The enabling characteristics therefore represent both individual and community resources, such as affordability, accessibility and availability. Affordability refers to the individuals' ability to pay for a mental health

service, (eg. health insurance, and community service card options). Accessibility includes knowledge of how to access a service, transport difficulties and other responsibilities or commitments. Availability examines appointment-waiting time, travel distance to a mental health service, and an adequate number of services in the geographical region. Enabling characteristics can therefore, affect mental health service utilisation.

Need characteristic:

The need characteristic refers to a person's perceived level of impairment or illness prompting them to use a mental health service. If predisposing and enabling factors are facilitating, then need is the activator for service utilisation (Sommers, 1989).

Service Use

Informal help:

Informal help sources refer to any person or organisation that an individual relies on for mental health concerns. For example, a person may turn to friends, family/whanau, or colleagues for psychological problems. Informal help can facilitate or impede mental health service utilisation.

Formal help (Service utilisation):

The formal services are defined as the help that is received from a Mental Health professional. Mental health professionals may include general practitioners, psychologists, counsellor/therapist, psychiatrist, social worker, nurse, occupational therapist, family therapist, drug and alcohol counsellor, or marriage/couples therapist. Help received from a mental health professional indicates mental health service utilisation.

Outcomes

Satisfaction:

Satisfaction is only relevant to prior users of mental health services (consumers) and is therefore considered an outcome measure of service use. However, satisfaction can also impact on the continued use of these services by consumers. Satisfaction includes factors such as the quality of the service; cultural appropriateness; comfort; feeling listened to; contributing to the decisions made in treatment; and usefulness of treatment.

Summary:

The literature has indicated only a small minority of people with mental health problems and disorders ever receive any treatment. Utilisation is a complex concept and there are many factors that can affect mental health service utilisation. It is for this reason that frameworks of utilisation have been developed. One such framework is the Behavioural Model of Health Care Utilisation. This model explains utilisation of health services as a function of predisposing, enabling and need characteristics. Predisposing characteristics are present prior to the onset of illness and include personal information regarding age, gender, region, employment status, ethnicity and education social support and structure as well as attitudes and beliefs about health. Enabling characteristics are features facilitating how services are obtained. These include accessibility, affordability and availability of services. The need variable refers to the perception of illness. Personal service use refers to the use of informal help sources that can facilitate or impede formal service utilisation. These components interact to explain service utilisation (Andersen & Newman, 1973). Satisfaction regarding previous experience of mental health use is an outcome measure but can also affect continued utilisation.

The following chapters will examine specific evidence regarding the effect of each of these predictors in terms of mental health service utilisation.

PREDICTORS OF SERVICE USE

Predisposing characteristics

The predisposing characteristics are pre-existing factors that indicate a propensity to use a service (Andersen 1968; Wolinsky & Arnold, 1988). Predisposing characteristics do not provide a direct reason for accessing mental health care (Andersen & Newman, 1973). However, predisposing variables have a close relationship with wellbeing and distress, which result in different psychological disorders and a propensity to seek help. If a mental health system is equitable, then service care should be distributed according to need. Predisposing characteristics should have minimum influence on the use of services (Andersen and Newman, 1973). If analyses indicate that a specific group does not have equal access to mental health services, then the predisposing component of the model provides indicators that can be targeted for future interventions.

Personal Information

The following sections will examine the available body of literature regarding personal information and its important relationship with mental health care use.

Gender:

Many international empirical studies have indicated that women are more likely to seek help from a mental health professional than men (Parslow & Jorm, 2000; Cauce, Paradise, Domench-Roderguez, Cochran, Munyi Shea, Srebnik, & Baydar, 2002; Millman, 2001; Smith, 1998). One such study found that 31.4 percent of males and 41.6 percent of females with a perceived mental health need had sought help (Rabinowitz, et al., 1999). This pattern appears to be consistent across age groups. For instance, several studies have found that both early and late adolescent girls report more positive attitudes toward help seeking than boys of a similar age (Cauce et al., 2002; Cook, 1984; Garland & Zigler, 1994). It has been suggested that these differences are the product of norms in the social environment, which encourage girls to express their worries and reward boys for being courageous and independent (Cauce et al., 2002). However, in New Zealand, a large study has found that more men are seen as clients in the mental health services. This pattern was most apparent at the 0 to 19 age group and there was little difference in the utilisation of services between men and women in the 20 to 64 age group. In addition, women were seen more often as mental health clients in the older age group of 64+ (New Zealand Information Source, 2004). This is

depicted in Figure 2.1.

	Total	Age group		
		0–19	20–64	64+
Total:	83 841	19 561	57 560	6720
Male:	43 022	11 463	28 998	2561
Female:	40 819	8098	28 562	4159

Figure 2.1: Clients seen by age group and sex.

Note. From "*Mental Health Service Use in New Zealand 2001*" (p.12), by New Zealand Health Information Source, 2004, Wellington: Ministry of Health. Copyright 2004 by the New Zealand Health Information Source. Reprinted with permission.

Age:

Age appears to be related to an individual's likelihood of using a mental health service. Most research has indicated that older and younger age groups are less likely to seek help for psychological problems. Studies have suggested that the middle age groups are more likely to seek help than older or younger individuals. For example, a study conducted in Israel, found that people within a 35-55 age group sought help more often than other age groups (Rabinowitz et al., 1999).

Mental disorders are common in older people and the estimated prevalence rate for elderly persons with mental illness is 15-25 percent (Kessler, Berglund, Bruce, Koch, Kaska, Leaf, Manderscheid, Rosenheck, Walters, Wang, 2001 et al., 1998; Shapiro, 1986,). However, Parslow and Jorm (2001a) in an Australian study found that older age was associated with less use of mental health professionals. Further research (specifically addressing older persons) suggested that younger cohorts of older people held more positive attitudes toward mental health services than older cohorts (Currin et al., 1998). Furthermore, those elderly that do seek assistance tend to have poorer psychological well being and have experienced a higher level of stressful events, Phillips & Murrell (1994, cited in Lambert, 2004).

Several studies have indicated that approximately one in five adolescents will experience emotional disturbance at any one time (Feldman, Hodgson, Corber, & Quinn, 1986; Dubow, Lovko, & Kausch, 1990, Saunders, Resnick, Hoberman, & Blum, 1994). Interestingly, research has also found that youth frequently fail to seek help. Dubow et al. (1990) found that two thirds of adolescents with significant problems have been found not to seek help when required. The reasons given for this lack of help-seeking included a sense that the problems were too personal, worries about confidentiality, and the belief that problems could be dealt with without help (Dubow et al., 1990).

Geographical Region:

Findings have suggested that there is an association between geographical region and utilisation of services. Many studies have suggested that urban dwellers are more likely to use mental health services than people living in rural areas (Goldstrom & Mandersheid, 1982; Herman, 1985; Parslow & Jorm, 2000). A number of factors have been credited with the under-utilisation of rural residents, which include lack of resources, distance, and lack of knowledge about existing services. Mental health services also vary across geographical areas and this can affect the utilisation of these services. Further research has suggested that living in a rural area is not necessarily negatively related to service utilisation. Rather, rural communities tend to utilise different services than the urban communities (Herman, 1985; Kessler et al., 2001; Parslow & Jorm, 2000; Sommers, 1989). For instance, Sommers (1989) found that clients in rural areas were more likely to use crisis and supportive housing services, but less likely than urban clients to use family support and psychosocial services.

Employment Status:

Unemployment is associated with an increased risk of developing a psychological disorder. This is due to the stigma, poverty and social isolation often associated with unemployment (Ellis & Collings, 1997). Several studies have found that unemployed individuals reported greater levels of psychological distress, anxiety, and depressive symptoms than individuals who were employed (D'Arcy & Siddique, 1985; D'Arcy, 1986, Horwitz & Scheid, 1999).

However, there does not appear to be conclusive findings regarding the association

between employment status and utilisation of mental health services. Parslow and Jorm (2000) found that unemployment was associated with using a health professional for mental health reasons. Consistent with this, research has indicated that being employed decreased help seeking intention (Goodwin, Koenen, Hellman, Guardino, & Struening, 2002). However, further research has reported no relationship at all between employment status and service use or help-seeking behaviour (Kessler et al., 2001, Olfson, & Pincus, 1994).

Ethnicity:

Ethnicity is closely related to help seeking and utilisation of mental health services. The overall incidence of mental illness is similar across all racial and ethnic groups (Hines-Martin et al., 2003). However, research has noted mental health service disparities exist within various ethnicities. These disparities are of particular importance when examining access and utilisation of mental health services. (Hines-Martin et al., 2003). Some ethnic groups receive higher levels of diagnoses than others, some groups seek higher levels of mental health services and yet others appear to receive higher levels of mental health treatment (Cauce et al., 2002). These trends appear to be particularly apparent in minority groups, recent immigrants and refugees. The research is consistent in showing that these minority groups, immigrant groups, and refugee groups have needs, symptoms and help-seeking behaviours that are unique to their ethnicity (Atkinson & Gim, 1989; Cauce et al., 2002; Cheung & Snowden, 1990; Hines-Martin et al., 2003; Lasser, Himmelstein, Woolhandler, McCormick & Bor, 2002; Leong & Lau, 2001; McMiller & Weiz, 1996; Portes, Kyle, & Eaton, 1992; Snowden, 1998; Snowden, 2001;Yeh, McCabe, Hough, Dupuis, & Hazen, 2003).

It has therefore, been suggested that ethnicity has a profound effect across the entire help-seeking pathway, from identification of need to choice of treatment and service providers (Cauce et al., 2002). Many overseas studies with minority, immigrant and refugee ethnic groups have found that few seek treatment from mental health services and those that do are at risk of dropping out (Cauce et al., 2002; Cheung & Snowden, 1990; Hines-Martin et al., 2003; Lasser et al., 2002; Leong & Lau, 2001; McMiller & Weiz, 1996; Portes et al., 1992; Rabinowitz et al., 1999; Snowden, 2001; Yeh et al., 2003). One recent study found that minority groups receive half the amount of outpatient mental health care than Caucasian groups receive (Lasser et al., 2002).

Another study found that in addition to the low level of formal mental health care sought or received, minority groups were less likely than Caucasians to use informal sources of help, such as friends or family (Snowden, 1998). Explanations for these trends have included, a greater number of barriers to access, stigma associated with seeking psychological help, characteristic coping styles, and lack of resources (Atkinson & Gim, 1989; Hines-Martin et al., 2003; Snowden 2001).

New Zealand ethnicity studies have found differing results regarding utilisation of mental health services. In New Zealand, there is a clear trend showing Māori have higher rates of admission rates to psychiatric hospital than non-Māori. Māori have different needs from non-Māori, they receive different diagnoses, enter hospital through different pathways and also have higher readmission rates (Durie, 2001). The most comprehensive study of Māori admission rates was researched by Te Puni Kōkiri (1994, 1996, cited in Durie, 2001). It was found that from 1960 to 1990, Māori admission rates increased dramatically and became higher than pakeha rates. This study found that 14 percent of first admissions and 18 percent of readmissions were accounted for by Māori clients, Te Puni Kōkiri (1996, cited in Durie, 2001). Māori males have twice the admission rates for alcohol and drug related disorders, for affective psychosis, and for schizophrenic disorders than non-Māori. Māori women have been diagnosed with drug and alcohol related disorders at three times the rate of non-Māori. Māori women also have high rates of stress and adjustment disorders, Te Puni Kōkiri (1994, cited in Ellis & Collings, 1997)

One possible explanation for these trends is that admission rates do in fact represent a higher utilisation of mental health services by Māori (Durie, 2001). Durie (2001) has also suggested that these high admission rates could be due to a cultural bias. The application of the diagnostic criteria is based on the professional's interpretation, which is influenced by their own values and beliefs and is therefore, open to misinterpretation and misdiagnosis, particularly with minority groups. Another explanation is that Māori have a lower level of mental health service utilisation in the early stages of illness possibly due to limited information about symptoms, how to access services, and what services to access. This leads to more severe symptoms at the later stages of illness and results in compulsory hospital admissions (Ellis & Collings, 1997). A final explanation for the high admission rates is the huge changes that have occurred within Māori

communities over the last few decades. These changes have resulted in higher rates of unemployment, welfare dependency, lower socioeconomic status, and poorer health outcomes (Te Puni Kokiri, 2000). These changes all increase the risk of mental illness for Māori populations (Ellis & Collings, 1997, Durie, 2001).

The New Zealand utilisation of mental health services by ethnicity is depicted in Figure 3.1. This indicates that Māori and Other ethnic groups (which include pakeha, immigrant's etc) account for the majority of mental health utilisation within New Zealand. Just over16 percent of all mental health clients are Māori. While 80 percent of mental health clients are from Other ethnicities (New Zealand Information Source, 2004)

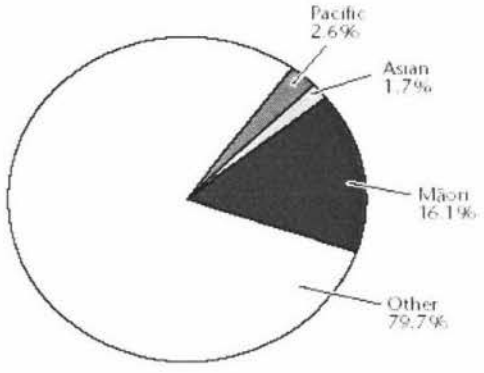

Figure 3.1: Clients seen by ethnic group, 2001.

Note. From "*Mental Health Service Use in New Zealand 2001*" (p.13), by New Zealand Health Information Source, 2004, Wellington: Ministry of Health. Copyright 2004 by the New Zealand Health Information Source. Reprinted with permission.

The Pacific Island population in New Zealand has increased 21 percent since 1991, Statistics New Zealand (1997, cited in Gherardi & Tanoi, 2000). Currently one in sixteen people in New Zealand are of Pacific Island ethnicity. Between 1989 and 1993, 574 Pacific Island people were admitted to psychiatric hospitals (Ellis & Collings, 1997). In addition, further studies have indicated that Pacific Island clients account for 2.6 percent of people utilising mental health services within New Zealand as depicted in Figure 3.1 (New Zealand Information Source, 2004). This would indicate that few Pacific Island people are using mental health services and are less likely to seek care. These results are consistent with findings from overseas studies, indicating that minority groups under-utilise mental health services.

Education:

Education also appears to have a relationship with an individual's likelihood of seeking care at a mental health service and their knowledge of services and treatments. Research has suggested that higher education predicted a client's readiness to seek treatment, suggesting they were more likely to be help-seekers at mental health services (Aoun et al., 2004; Goodwin et al., 2002). People with higher levels of education were more likely to be specific in their choice of mental health services indicating more knowledge about services (Parslow & Jorm, 2000). Research has also indicated that people with less than 12 years of education are less likely to receive psychotherapy (Olfson, & Pincus, 1994). Furthermore, those with less education are likely to have un-met expectations of receiving medication for their mental health problems, possibly indicating less knowledge of appropriate treatment (Parslow & Jorm, 2001b).

Social Support and Social Network:

Predisposing characteristics represent a person's social structure by describing their living arrangements as well as their social support network. The concepts of support and network are multifaceted; they encompass larger social structures, personal relationships and individual personalities (Peirce, Sarason, & Sarason, 1996; Holschuh & Segal, 2002). The effect of social network size and social support on service utilisation is therefore, dependent on a large number of cultural variables and is influenced by both communities and individuals (Greenley & Mechanic, 1976; Gochman, 1997).

Supportive social relationships and functional social networks are generally associated with well-being and provide more resistance to the psychological consequences of stress (Green, Hayes, Dickinson, Whittaker, & Giheany, 2002; Lepore, Evans, Scheider, 1991; Peirce et al., 1996). In addition, social support and network provides an informal service for psychological support, lowering the necessity for mental health services (Rickwood & Braithwaite, 1994; Green et al., 2002). Predictably then, individuals with a lack of supportive relationships utilise more mental health services. This has been consistently found in the literature. A substantial amount of research indicates that individuals with lower levels of social support and smaller support networks tend to exhibit higher help-seeking behaviour (Aday & Awe, 1997; Bass, Looman & Ehrlich,

1992; Rickwood & Braithwaite, 1994, Birkel & Reappucci, 1983, cited in Lambert, 2004).

However, due to the complexities regarding the relationship between service utilisation and social support and network, there have been inconsistent findings. It would appear that some social networks encourage use of mental health services, while other networks may encourage the use of informal help services (Albert, Becker, McCrone, & Thornicroft, 1998; Chadda, Agarwal, Singh, Raheja, 2001; Gochman, 1997; Mitchell, 1989; Rickwood & Braithwaite, 1994). It has therefore, been suggested that families and friends can impede service utilisation by transmitting values and norms about help seeking (Hirsch, 1980; Mitchell, 1982, cited in Mitchell, 1989). However, families and friends can facilitate access as well. Further research has found that the number of services utilised grew as social network size increased, Becker, Thornicroft, Leese, McCrone, Johnson, Albert, & Turner (1997, cited in Albert et al., 1998). Sherbourne (1988) for example, found that people suffering a loss event were more likely to utilise mental health services if they had good social support.

Attitudes and Beliefs:

Finally predisposing variables encompass attitudes and beliefs about mental health services by looking at a person's willingness to use a service; their concerns around stigma; their beliefs about being understood by a mental health professional; and their beliefs about the usefulness of treatment such as therapy and/or medication. Many studies have found that attitude towards professional psychological help is a highly predictable variable in mental health service utilisation (Deane & Chamberlain, 1994; Fuller, Edwards, Procter, & Moss, 2000; Surgenor, 1985; Wells et al., 1994). For instance, an individual or family that strongly believes in the value of mental health professionals and mental health services is more likely to seek help sooner than others who have less belief in the services.

The public's knowledge and attitudes towards mental health services is improving, although it would appear there is still an indication that fear, stigma, lack of knowledge and lack of awareness affects utilisation (Jorm, Medway, Christensen, Korten, Jacomb, & Rodgers, 2000; Leaf, Livington Bruce, Tischelr, & Holzer, 1987, Surgenor, 1985). Research has consistently shown that treatment fears decrease the likelihood of utilising

a mental health service (Deane & Chamberlain, 1994; Kushner & Sher, 1989; Kushner & Sher, 1991; Swartz, Swanson, & Hannon, 2003). In addition, the stigma involved with seeking help for mental health issues has been well documented. Research has indicated that seeking help for mental health problems is associated with a degree of stigma and persists as an inhibiting factor for utilisation (Fuller et al., 2000; Leaf et al., 1987; Surgenor, 1985).

Research has also shown that a lack of knowledge about mental health professionals and interventions can impede service utilisation (Fan, 1999; Farberman, 1997; Jorm, Korten, Jacomb, Christensen, Rodgers, & Pollitt, 1997; Jorm et al., 2000; Jorm, Griffiths, Christensen, Korten, Parslow & Rodgers, 2003; Kessler et al., 2001; Leaf et al., 1987; Murstein & Fontaine, 1993; Paykel, Hart, & Priest, 1998; Richardson, 2001; Surgenor, 1985). It is suggested that when individuals have a good knowledge of the available interventions they are more likely to seek care. Levers, Brown, Drotar, Caplan, Pishevar, & Lambert (1999, cited in Richardson, 2001). Furthermore research has indicated that prior mental health professional contact results in more favourable attitudes and greater help-seeking behaviour (Cash, Kehr, & Salzbach, 1978; Dadfar & Freidlander, 1982).

New Zealand studies have found that attitudinal factors were the main reasons for not seeking care. Feelings that the problem could be handled alone or that it would get better by itself were the strongest predictors of under-utilisation (Hornblow, Bushnell, Wells et al., 1990; Wells et al., 1994).

Summary:

Predisposing variables present prior to the onset of illness affect mental health care use. These factors represent the socio-cultural element of utilisation. Personal information, social structure and attitudes represent a person's lifestyle position and their cultural environment. The above research highlights the influence of predisposing variables on mental health service utilisation. Inconsistencies in the current literature further suggest that predisposing variables are an important factor, worthy of further research.

PREDICTORS OF SERVICE USE

Enabling factors

The enabling characteristics represent resources that facilitate or impede a person's ability to use mental health services. The presence of enabling resources (e.g. adequate availability of services) provides a measure of potential access to mental health services. This access will become inequitable when enabling resources (e.g. income) determines who has access to mental health services. Therefore, enabling characteristics provide a measure of whether services are equitably distributed (Andersen, 1995). The enabling factors include affordability, accessibility and availability.

Affordability: Utilisation

Affordability refers to the ability to pay for a mental health service (adequate income), health insurance, and community service card options. New Zealand provides a government funded public health system. Some services therefore, do not require an individual to pay for the visit. However prescription items, private services and GP visits do cost. The community services card is a government subsidy scheme, providing subsidised prescription items and GP visits. The community services card therefore, facilitates access by helping to remove financial barriers to health care.

Income provides the means by which individuals access health care. Lower incomes can impede equitable access to mental health care. Higher incomes enable access to private mental health professionals. Income also affects the ability to purchase health insurance.

Overseas research has indicated that financial barriers are frequently reported as reasons for not seeking psychological treatment. Some research has found that affordability is the predominant barrier to utilisation of mental health services (Farberman, 1997; Steft & Prosperi, 1985). One study found that 46 percent of their participants reported financial concerns as a barrier to mental health care utilisation (Kessler et al., 2001). Having health insurance is seen as playing a facilitative function on service utilisation. For example, Farberman (1997) found that 61 percent of participants stated that lack of insurance coverage would be a barrier to using mental health services. In addition, individuals with higher incomes are able to afford to seek help from private mental health professionals. Consistent with this, research has indicated people with higher

incomes prefer seeking help privately (Rabinowitz et al., 1999). Furthermore, many studies have found that people with a lower socioeconomic status under-utilise mental health facilities (Aoun et al., 2004; Briones, Heller, Chalfant, Roberts, Aguirre-Hauchbaum, & Farr, 1990; Howard, Cornille, Lyons, Vessey, Lueger, & Saunders, 1996; Leaf et al., 1987; Millman, 2001).

However, in New Zealand, the findings appear inconsistent. The Christchurch Psychiatric Epidemiology study found that affordability was not a major barrier in service utilisation (Hornblow et al., 1990). One New Zealand study found that the most deprived areas in their study had three times the admission rate than those living in the least deprived areas (Abas, Vanderpyl, Robnison, & Crampton, 2002), indicating that service use was actually higher for lower socioeconomic groups. However, another study comparing a New Zealand city with an American city found that lower socioeconomic groups in both countries mentioned cost as a factor limiting access to mental health services (Wells et al., 1994).

Accessibility: Utilisation

Accessibility includes knowledge of how to access a service, transport difficulties and other responsibilities or commitments. All these factors can contribute to whether a person chooses to seek help or not.

Research has indicated that lack of knowledge on how to access mental health services may play a role in the under-utilisation of mental health services. Several studies have found that not knowing where to go for help and how to access services were barriers to service utilisation (Aoun et al., 2004; Farberman, 1997; Goodwin et al., 2002). However, the Christchurch Epidemiology Study found that lack of knowledge regarding access was not a major barrier to utilisation (Hornblow et al., 1990).

Transport difficulties and time restrictions due to other commitments can make service utilisation difficult. However the effect that these factors have on utilisation is unclear. Wells et al. (1994) found that 24 percent of their American participants reported transport difficulties as a reason for not getting help, while only 6 percent of their New Zealand participants reported the same difficulties. Yet other research has indicated that these barriers do not have a large connection with the help-seeking process (Hornblow

et al., 1990; Richardson, 2001). Further research has indicated that accessibility; encompassing knowledge, transport and responsibilities are barriers to service utilisation (Chadda et al., 2001; Stefl & Prosperi, 1985).

Availability:

Availability refers to the volume of services in relation to the consumer demand (Andersen, 1968). In other words availability is defined as an adequate supply of mental health services. Availability examines appointment-waiting time, travel distance to a mental health service, and an adequate number of services in a persons region. These factors have been shown to have some influence on a person's tendency to utilise a mental health service. For instance, services may be used more frequently if there are an adequate number of services and they can be used easily (Andersen & Newman, 1973).

Several studies have reported lack of availability of mental health services and lack of professionals as a barrier to utilisation of mental health services (Chadda et al., 2001; Goodwin & Andersen, 2002; Stefl & Prosperi, 1985). Kessler et al. (2001) found that 52 percent of their population sample reported situational barriers (eg. travel distance and not being able to get an appointment) as reasons for not seeking treatment.

Research on availability has emphasised the nearer an individual is to a service the greater the likelihood of utilisation. In addition, individuals who are living in areas with more services have more potential for utilisation (Song, 2000). Therefore, on the whole, it has been suggested that rural residents are less likely to utilise mental health services due to the lack of specialty services and long travel distances (Parslow & Jorm, 2000; Sommers, 1989). Due to this lower availability in rural areas there is a trend for people to utilise their general practitioner more frequently for psychological problems (Herman, 1985; Parslow & Jorm, 2000). However, urban residents appear to encounter availability issues as well. Urban residents often experience long waiting times for appointments due to a larger population size and this can also present as a barrier to mental health service use (Kessler et al., 2001).

Summary:

Enabling characteristics represent features that facilitate how services are obtained. The

research on these enabling variables has indicated they play an important role affecting how services are obtained. The discrepancies found in the research indicate that more research is needed on these variables.

Need Factors

The need characteristic refers to a person's perceived level of psychological symptoms or distress that requires them to use a mental health service. Need is the best predictor of mental health service use. However, the relationship between need and service use is complex, and as discussed above, many factors interact to influence service utilisation.

Research has suggested that people with greater need and symptom severity are more likely to seek and receive treatment (Goodwin et al., 2002; Pescosolido & Boyer, 1999; Rickwood & Braithwaite, 1994; Saunders et al., 1994). In addition, research has found that people with higher need are more likely to have sought care in the specialised mental health sector, for example psychiatrists; (Stefl & Prosperi, 1985). Parslow and Jorm (2000) found that a diagnosis of mental illness or self-identified mental health problems were the main predictors of using a mental health service. Another study examining panic attacks, found that perception of poor mental health was strongly associated with increased treatment (Goodwin & Andersen, 2002). Consistent with these findings further studies have found that lack of perceived need or doubt about the need for professional help was a prevalent reason for not seeking help (Kessler et al., 2001; Wells et al., 1994).

However, research on youth suicide ideation has suggested differing results. High suicide ideation appears to be related to a higher probability of recognising a need for help, but related to a lower likelihood of obtaining help (Saunders et al., 1994). For example, one recent New Zealand study on suicidal ideation in adolescents found that higher levels of suicidal ideation led to lower levels of help-seeking intentions (Carlton & Deane, 2000).

Summary:

Need typically accounts for most of the variance explaining use of mental health services. Perception of need is derived from an individual's self report. The majority of research indicates that the greater the need the higher the utilisation of services. However, research on suicidal ideation has found inconsistent results, indicating further research that is required on this variable.

SERVICE USE

Informal Help

Informal service use refers to any source of personal help (eg. friends/family) for mental health concerns. These have the potential to interact with the use of formal health services.

There is evidence to suggest that informal sources of help are often the predominant source of care (Angermeyer, Matschinger, & Riedel-Heller, 2001; Kenneth et al., 1996; Rabinowitz et al., 1999; Rickwood & Braithwaite, 1994). For example, one study found that 86 percent of the respondents sought help from their social network, while only 14 percent of respondents sought help from a professional source (Rickwood & Braithwaite, 1994). Further research has indicated that informal help sources are usually the first step to care. Informal help can assist the individual to recognise the problem and decide what action needs to be taken. Informal help sources can be supportive of professional help and are often used as a referral source to professional services. However, some informal sources of help are not so inclined and can act as a barrier to utilisation (Kenneth et al., 1996; Murstein & Fontaine, 1993; Rickwood & Braithwaite, 1994; Smith, 2003). It has been suggested that people deal most effectively with psychological problems when they use a combination of informal and formal help, Litwak (1988, cited in Kenneth, 1996; Snowden, 1998).

Summary:

These results indicate that informal help plays an important role in service utilisation and is often the prevailing source of help.

SERVICE USE

Formal Service Use

Formal service use refers to help received from a Mental Health professional. These include general practitioners, psychologists, counsellor/therapist, psychiatrist, other mental health professional (social worker, nurse, and occupational therapist), family therapist, drug and alcohol counsellor, and marriage/couples therapist.

As previously mentioned utilisation of mental health services is dependent on a large number of factors, the predisposing, enabling and need variables as well as informal help seeking. As the above research indicates each of these variables play an important role in the utilisation of mental health services. In addition, the predisposing, enabling, need variables and informal help seeking behaviour interact to affect the tendency to seek help from a mental health service. Furthermore, these factors influence the specific choice of mental health service and mental health professional. For instance, the choice of seeking help from a psychologist as apposed to seeing a psychiatrist.

Research has overwhelmingly indicated that the most frequent choice of mental health professional is the general practitioner (Angermeyer et al., 2001; Farberman, 1997; Hornblow et al., 1990; Kenneth et al., 1996; Murstein & Fontaine, 1993; Rabinowitz et al., 1999; Wells et al., 1994). General practitioners (GPs) serve as a gateway for specialist mental health care. GPs are often the first source of help for people with psychological problems; clients can then be potentially referred on to specialised mental health services. This trend appears to be particularly true in New Zealand. For example, one study that compared a New Zealand city with an American city found that 29 percent of their New Zealand participants had sought psychological help from a GP, whereas only 14 percent of their American participants had done the same (Wells et al., 1994). However, research has also indicated that GPs often treat psychological problems and have been found to refer on less often than is required (Hornblow et al., 1990; Wells et al., 1994; Wilson & Read, 2001). Studies have indicated that GPs reported limited referrals due to the poor availability, difficulty accessing and high cost of psychological treatment (Conaglen & Evans, 1996; Griffiths & Cormack, 1993; Wilson & Read, 2001).

Research has indicated that psychiatrists are the most preferred source of help for the

most severe disorders; psychologists were the most preferred help for less disturbing disorders; whereas GPs were the most preferred source of help for emotional problems (Farberman, 1997; Murstein & Fontaine, 1993). This Suggests that choice of mental health provider is partly related to severity of need. For instance, Stefl & Prosperi (1985) found that respondents with higher need are more likely to have sought help from the specialised mental health sector. Research has further indicated that source of help is related to individual characteristics. For example, people with higher socioeconomic status and higher education are more likely to use specialty mental health services rather than general practitioners, Wells et al. (1986, cited in Pescosolido & Boyer, 1999).

Summary:

Predisposing, enabling, need and health practices individually and interactively affect mental health service utilisation. Choice of service is also affected by these variables. The most preferred choice of professional for emotional problems is the GP. However GPs refer less frequently than is desirable due to difficulties utilising the mental health system. This is an extremely impeding aspect of utilisation particularly in New Zealand and therefore, requires additional research.

OUTCOMES

Satisfaction

In addition to utilisation, the inclusion of satisfaction has been suggested as part of the Behavioural Model of Health Care Utilisation, as it is seen as an important outcome measure. Client satisfaction is an important quality of care outcome and measure of the quality of mental health services. Satisfaction is a vital aspect of planning and evaluation and enables an understanding of how to modify care to better to meet client's expectations (Lora, Rivolta, & Lanzara, 2003). In addition, client satisfaction is associated with future help seeking, cooperation with providers and continuation with treatment (Swanson, Andersen, & Gelberg, 2003).

Research in the area of satisfaction has been relatively limited despite its relevance as an important outcome measure. Several studies have indicated that about 25 percent of all clients are dissatisfied with services (Lora et al., 2003; Leese, Johnson, Parkman, Kelly, Phelan, & Thornicroft, 1998; Ruggeri, Lasalvia, Agnola, Van Wijngaarden, Knudsen, Gaite, Tansella & the Epsilon Study group, 2000). Studies have found that clients were less satisfied with compulsory treatment (Glass & Arnkoff, 2000); appropriateness of referrals by their GP; and the information about specific interventions used (Lora et al., 2003). Research has further indicated that clients are dissatisfied with assistance or advice regarding future planning (Smith, 2003); social interventions (Parslow & Jorm, 2001b; Smith, 2003) and information on mental health problems and treatment (Parslow & Jorm, 2001b).

The results on the relationship between medication use and satisfaction have produced mixed results. Use of medication for psychological problems has increased rapidly since the 1980s. Despite the fact the research on the efficacy of medication (particularly antidepressants) over psychotherapy has produced very modest results (Cohen, McCubbin, Collin, & Pérodeau, 2001). Several studies have indicated that clients are often dissatisfied with medication as it increases the stigma involved with mental illness. However, it also noted that clients are able to function more adequately when taking medication (Garfield, Smith, & Francis, 2003; Karp, 1994; Knusden, Holme, & Traulsen, 2002).

Further research on dissatisfaction has indicated that acute services and emergency

services are often over used by clients who are dissatisfied (Badger, McNiece, & Gagan, 2000; Blixen & Lion, 1991). These services are used by many of their participants because their illness had not been managed satisfactorily within the usual services. Furthermore, Badger et al. (2000) found that participant's dissatisfaction was related to the inability to obtain care, due to the complexity of the mental health system. This is consistent with other research that has suggested clients who have difficultly accessing and obtaining help are less satisfied (Chitwood, Comerford, & McCoy, 2002).

Research on factors of satisfaction has indicated that clients are more satisfied with mental health professional's skills and behaviour (Lora et al., 2003). The literature has indicated that a collaborative relationship between client and mental health professional is a strong predictor of satisfaction (Glass & Arnkoff, 2000; Orlinsky, Ronnestad, & Willutzki, 2004, Spurgeon & Barwell, 2000). Another area related to satisfaction is the development of cultural appropriateness by the mental health professional. Training in cultural awareness for mental health professionals has been an important trend in effective service provision. The limited research on cultural appropriateness has indicated that clients are more likely to rate interventions as effective if the mental health professional has received cultural training, Penn & Mueser (1996, cited in Solomon, 2000; Zane, Nagayama Hall, Sue, Young, & Nunez, 2004).

In addition to the mainstream services in New Zealand there are Kaupapa Māori services for Māori clients. Kaupapa services were developed due to concern that the existing mainstream services were unable to meet the needs of Maori clients. Maori clients are able to choose whether to use a Kaupapa service or a mainstream service. For that reason it is important that mainstream services maintain a level of cultural competence (Durie, 2001). This requires awareness and respect for other cultures worldview, values and practices. Furthermore, it requires a thorough knowledge and implementation of the Treaty of Waitangi (Durie, 2001; Love & Whittaker, 2000). However, research on the relationship between cultural competence and satisfaction is extremely limited.

Satisfaction is potentially a predictor of continuity of care. Research on this association however, is limited and inconsistent. The literature suggests that greater satisfaction is associated with continued care (Druss, Rosenback, & Stolar, 1999), while

dissatisfaction is described as a reason for discontinuation with care (Hansen, Hoogduin, Schaap, & deHann, 1992; Kessler et al., 2001; Larsen, Nguyen, Green, & Attkisson, 1983). However, Lora et al. (2003) found that satisfaction with mental health services does not appear to predict continued care.

Summary:

Client satisfaction is an important measure of outcome in mental health services. Research has indicated that clients are less satisfied with convenience factors (e.g. availability, access); interventions (e.g. social interventions); and information provided (e.g. treatment options). Clients are more satisfied with mental health professionals, their skill and behaviours (e.g. cultural competence). Satisfaction is necessary to make changes with the mental health system, despite this there is limited research in this area.

DEVELOPMENT OF THE MODEL

Andersen's Behavioural Model of Health care utilisation provides a comprehensive examination of health service use. Several changes have occurred since the conception of the initial model. The model was originally developed to explain the use of formal personal health services. It focused on using the family unit as a measure of individual health care use. The rationale for this was that the medical care an individual receives is a function of the social, demographic and economic characteristics of the family unit. This model however, was criticised for being too broad and insensitive. There were also difficulties developing measures at the family level that take into account the variability of family members (Andersen, 1968; Andersen, 1995).

The second phase of this model focused on the individual as the unit of analysis. It included the health care system as a determinant of service use. Also included were additional measures of service use, such as service type, the site of the service and purpose of the service. Another addition was consumer satisfaction as an outcome measure of health services. This included convenience, availability, financing, provider characteristics and quality (Andersen & Newman, 1973; Andersen, 1995).

The third phase of the model was developed out of recognition that health services should assist in maintenance and improvement of the population's health. This model therefore included health status outcomes. These were described as an individual's personal evaluation of his or her own health and an individual's health as evaluated by a heath professional, in addition to consumer satisfaction. The third phase of the model included the external environment as important for understanding the use of health services. This incorporates physical, political and economic components that affect service use. It also adds informal service uses such as informal care that interact with use of services to influence outcomes (Andersen, 1995).

In addition to the above three phases of model there is an emerging fourth phase. This phase of the model emphases the multiple factors influencing service utilisation. It includes a feedback loop, which demonstrates that outcome affects population characteristics (predisposing, enabling and need characteristics) as well as service use (use of services and informal service uses). However, implementation of this model requires "...challenging conceptualisation, longitudinal and experimental study designs"

(Andersen, 1995, p.7).

Methodological and Research issues

Strengths

The structure of the Behavioural Model of Health Care Utilisation provides a clear platform to analyse the use of health care services. Each category of the model contributes to an explanation of service use. It is able to describe the complex reasons individuals use services and the relationships between these explanations (Andersen, 1968; Andersen, 1995). This model extends beyond the idea that individuals use a service just because of need. It incorporates many important variables that help explain the use of health services, such as access to services and satisfaction with previous use. In addition, the model incorporates different measures of use, such as frequency of use and contact measures.

Prior research using this model has often used large samples (Keiko, 2004; Kilbourne, Andersen, & Asch, 2002; Wolinsky & Johnson, 1991) drawn randomly from community based samples (Corey-Lisle, 2001; Lynch, Harrington, & Newcomer, 1999). Therefore, this model is able to describe and identify the needs of the general population. In addition, the model is able to describe and identify the needs of groups with special needs. Research has been conducted with the elderly for example, (Noelker, Ford, Gaines, Haug, Jones, Stange, Mefrouche, 1998; Wan, & Thomas, 1989; Slivinske, Fitch, & Mosca, 1994) and ethnic minorities, (Portes et al., 1992; Hines-Martin et al., 2003).

Furthermore, this model is flexible and can be applied to various health services, including mental health services. Utilisation of mental health services has not been as well researched as general health service use with Andersen's model. However, this model is able to thoroughly describe the additional issues that are relevant to the use of mental health services (Sommers, 1989; Parslow & Jorm, 2000). For example attitudes and stigma towards mental illness and mental health services can be adequately incorporated within the category of predisposing characteristics.

Criticisms

One criticism of the model is that there is an over emphasis placed on need variables,

often at the expense of predisposing and enabling variables (Wolinsky & Johnson, 1991). The reason for this perceived over emphasis is that predisposing and enabling variables generally account for less variance than need.

Another issue is that that the model is less effective in analysing the patterns of people who use health services frequently. This is due to the use of continuous variables, which only analyse health care users and therefore, are almost always skewed. This is particularly evident when only a few respondents use the service frequently and it becomes difficult to examine normal linear relationships. The people who use health services frequently are generally adjusted into the group of people who use services moderately, which increases the models accuracy in predicting service use. Therefore, the model appears better able to analyse patterns of people who use health services moderately rather than frequently. It has been argued however, that this measurement problem would apply to any research on utilisation over a 12-month period and is not an issue specific to this particular model (Smith, 1998).

PRESENT STUDY

The present study will test part of the fourth phase of the Behavioural Model of Health Care Utilisation. Due to time restrictions and therefore the inability to utilise a longitudinal design (as recommended by Andersen (1995) only part of the model is included in this research. Two units of analysis, the environment, and evaluated and perceived health status, have not been included in this research. These units of analysis were not retained, as it would have required employment of an unsuitable research design and sample group for this study. To have effectively studied the environmental factors a longitudinal design would have been required. To have effectively studied perceived and evaluated health status would have required an evaluation from a mental health professional for each participant. Therefore, it was decided to investigate only part of the fourth phase of Andersen's model. The components within this study are depicted in figure 4.1. These include population characteristics (predisposing; enabling; and need factors), service use (informal and formal use of services) and outcome (consumer satisfaction). The feedback loop indicates that the three population characteristics of predisposing; enabling; and need factors interact to affect service use. In addition, outcome in turn is expected to affect subsequent population characteristics and service use.

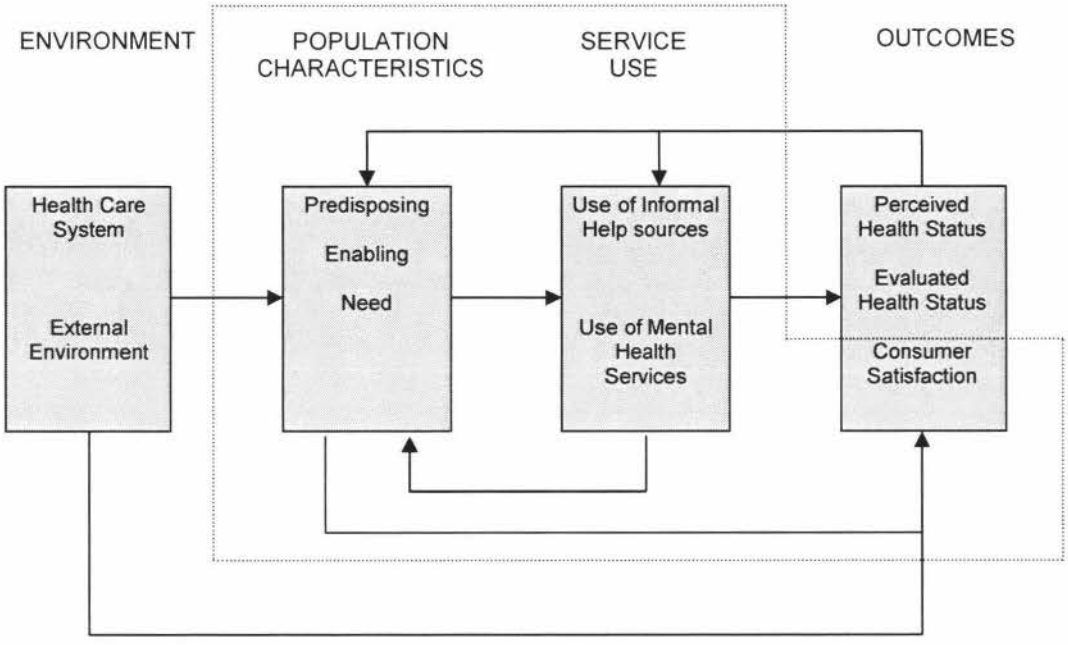

Figure 4.1. An Emerging Model – Phase 4

(The dotted line around the model indicates the components of the model that are used within this study).

Note. From "Revisiting the behavioural model and access to medical care: Does it matter?" by R.M. Andersen, 1995, *Journal of Health and Social Behaviour, 36,* p.7.

As this fourth phase of the model has yet to be comprehensively researched, this is an extension of previous studies. This study will use measures of predisposing, enabling and need characteristics that are relevant specifically to mental health services. These predictors of service use are based on findings from previous studies of mental health care utilisation and comprise indicators such as satisfaction, informal service use (personal service use) specific treatment and attitudes to mental illness as well as mental health services. Service use will be examined, to determine whether services were used or not, this will include contact with professional mental health services and informal help. Volume measures will be used to determine how many services were used and how often they are used. This will enable an analysis of the extent to which predisposing, enabling and need characteristics predict use of mental health services. It will also profile users and non-users of mental health services, the treatment they have

received and satisfaction with services. This study will therefore, provide a detailed description of who is receiving mental health services and why, in the lower North Island of New Zealand.

Rationale for Objectives:

The model has been criticised for explaining low amounts of variance. However, most research has used restricted measures, under representing important aspects of utilisation. The fourth phase of the model proposed within this study is an extension of previous research. This model more accurately represents additional indicators that affect utilisation. This study will measure enabling characteristics through a more sensitive framework as described by Penchansky and Thomas (1981). It will include informal service use as a measure of personal service use as well as its relationship to formal service use. Within this study satisfaction is included as an outcome measure. Satisfaction towards specific treatment as well as satisfaction toward mental health services and mental health professionals will be examined.

The research on mental health utilisation within New Zealand is limited. Few studies have used Andersen's Behavioural Model of Heath Care Utilisation. Our knowledge regarding the impact that predisposing, enabling, and need variables have on mental health utilisation within New Zealand is poor. Further, the affect of informal use on formal utilisation is unknown in New Zealand. In addition, the affect of other characteristics on the use of informal help is also unknown. Satisfaction studies within New Zealand are extremely limited. The importance of satisfaction is yet to be comprehensively studied using this model. This study will therefore, examine a variety of aspects of mental health service use in New Zealand. In summary the present study will focus on three main objectives and hypotheses:

Objectives and Hypotheses

Objective One

To provide a descriptive account of the nature and extent of formal and informal mental health service utilisation in the lower North Island of New Zealand.

Hypothesis One

Predisposing, enabling, and need characteristics will be related to the extent of formal and informal service use.

Objective Two

To provide a descriptive account of satisfaction with formal mental health services in the lower North Island of New Zealand.

Hypothesis Two

Predisposing, enabling, and need characteristics will be related to satisfaction with formal mental health services.

Objective Three

To test part of the fourth phase of Andersen's model and determine the extent to which predisposing, enabling and need characteristics account for variance among users and non-users of mental health services in the lower North Island of New Zealand.

Hypothesis Three

Predisposing, enabling, and need characteristics will predict contact with formal and informal help sources.

METHOD

Participants

The sample of participants was obtained from the New Zealand/Aotearoa electoral roll database. Participants were adults aged 18 years or over who had registered on the general or Maori electoral roll. Participants residing in rural or urban areas of the lower North Island were available to be sampled. Since all New Zealanders must register to vote, the electoral roll was chosen to provide a representative sample of participants from Aotearoa/New Zealand.

The sample size consisted of 500 randomly selected participants. Eight people were residing at overseas addresses so four hundred and ninety two questionnaires were actually sent out. Of the sent questionnaires, 7 (1.4%) were returned undelivered and 5 (1.0%) were returned uncompleted. One hundred and twenty eight questionnaires were returned completed from 492 people contacted, providing a return rate of 25.6%.

Respondents included 47 men (37%) and 80 women (63%), which is not representative of the general population and is perhaps reflective of an increased interest in emotional issues by women. The majority of participants identified as New Zealand European or Pakeha (78%), while 14.2 % of participants identified as Maori. These findings are similar to ethnic percentages found in the general population. The 2001 census reported 80% of New Zealanders identify as New Zealand Europeans and 14.3% Maori (Statistics New Zealand, 2005).

Employment, age, and education characteristics of participants were similar to those of the general population. Eighty-eight people sampled were in paid employed (69.3%), while 30.7% of participants received no paid employment (this included students and home makers). These percentages closely matched the Statistics New Zealand 2001 census, which found 62% of the people nationally were in the workforce, while 33% of people were not working. Participants ranged in age from 19 years to 69 years. A substantial percentage of respondents reported having no educational qualifications at all (18.3%), while 103 (81.7%) participants reported having some qualifications.

The majority of respondents were residing in urban areas (91.3%), while only 11 (8.7%) people reported living in a rural region. This is slightly lower than the 14.3% of people

nationwide, living in rural areas (Statistics New Zealand, 2005). Thirteen (10.3%) participants were living alone, while 113 people were living with others.

There were 34 participants who reported using a formal mental health service accounting for 26.6% of the total sample size. This is slightly higher than the expected one in five (20%) people with mental illness in the general population. This is possibly an indication that users of mental health services are more interested in these issues and have therefore accounted for a higher percentage of participants than would be found in the general population. A summary of demographic information for the present sample is provided in Table 1.

Table 1.

Percentage, number, and mean of participants characteristics

Population Characteristics	Description	N	Percentage %	M (SD)
Gender	Male	47	37.0	
	Female	80	63.0	
Geographical region	Urban	116	91.3	
	Rural	11	8.7	
Education	No educational qualifications	23	18.3	
	School certificate	22	17.5	
	University entrance	6	4.8	
	Trade or professional certificate	38	30.2	
	University degree	37	29.4	
Ethnicity	Pakeha	99	78.0	
	Maori	18	14.2	
	Other	10	7.9	
Employment	Employed full time	58	45.7	
	Employed part time	15	11.8	
	Student	6	4.7	
	Self employed	15	11.8	
	Home maker	19	15.0	
	Not in paid employment	14	11.0	
Age	19-36	44	34.6	
	37-52	41	32.3	
	53-69	42	33.1	44.54 (13.53)
Living arrangement	Living alone	13	10.3	
	Living with others	113	89.7	

The Questionnaire

A questionnaire was developed based on previous research using Andersen's framework for mental health utilisation. Findings from a questionnaire development study also contributed to the final questionnaire. The results of this study are presented at the end of this section. The questionnaire (see Appendix A) used in this present study consisted of ten sections. The following measures were included:

Predisposing Characteristics

Demographics:

The background information of participants was obtained due to the important relationship these variables have with mental health care utilisation. Questions enquired about gender, age, geographical region, employment, ethnicity, and qualifications. Region was coded into rural or urban area based on the Statistics New Zealand criteria for geographical locations (Statistics New Zealand, 2005). Employment was categorized as employed fulltime; employed part time; student; self-employed; home maker; and not in paid employment. Ethnicity was broken into categories of NZ European; NZ Māori; Pacific Island; Asian; Indian; European and other. Qualifications were coded into five categories that incorporated, no educational qualifications; school certificate; University entrance; Trade or professional certificate; and University degree.

Social Support and Network:

Questions regarding social support and network were derived from three sources. Household composition was based on findings from Cafferata (1987) and coded into a dichotomous variable indicating a person's living arrangements. A more comprehensive description of social network was derived and adapted from Nelson (1993). Social network was indicated in the questionnaire by the number of contacts occurring within the past week. These were spending time with someone who does not live with you, talking on the telephone with friends, relatives or others and going to meetings, clubs, religions or other groups. This was scored as a total number of contacts occurring in one week. A social support score was obtained using two items. The first asked whether a person could talk about their deepest problems with at least some of their friends or family. This was scored on a 3-point likert scale of hardly ever (1), some of the time (2), most of the time (3). The second asked how many people an

individual felt close to and could depend upon. Scoring options were as follows none, 1-2 people, more than 2 people.

Attitudes and Beliefs

A measure of attitudes was based on Leaf et al's (1987) research. Attitudes were assessed in Leaf et al's (1987) study by asking six questions regarding a person's receptivity to mental health services. However, within this study two of the six questions were altered. The changes were based on Fischer and Turner's (1970) attitude scale that incorporates four categories of attitudes toward seeking professional psychological help. The recommended categories were, recognition of need for psychotherapeutic help; stigma tolerance, interpersonal openness; and confidence in mental health practitioner.

These categories have gained empirical support; and have been used in further developments of attitude measures (Atkinson & Gim, 1989; Cash et al, 1978; Dadfar & Friedlander, 1982). The internal reliability of Fischer and Turner's scale has been reported as .86, with a test-re-test reliability ranging from .73 to .89 (Fischer & Turner, 1970). Leaf et al's (1987) measures were therefore; altered to assimilate these questions into the four recommended categories of Fischer and Turner (1970). The questions in this study were as follows, other people should seek help for psychological distress (recognition of need); I prefer handling psychological distress on my own (recognition of need); I think a mental health professional could understand my problems (openness); I would be concerned about what people think of me should I access a mental health service (stigma); If I had a mental health problem, I think it would get better with talking to a mental health professional (confidence in profession); If I had a mental health problem I think it would get better with medication (confidence in profession). Responses were rated on a five-point likert scale, ranging from strongly agree (1) to strongly disagree (5).

After this scale was assessed for reliability using factor analysis, two of the items were dropped from this scale, as they did not relate to the other items. These two items were: I would be concerned about what people would think of me should I access a mental health service (Stigma); and I prefer handling psychological distress on my own

(recognition of need). This resulted in adequate reliability, with a Chronbach alpha coefficient of .64

Enabling Characteristics

The original enabling characteristics of Andersen's Behavioral Model were community resources (physician-population ratio, hospital bed population ratio, residence and region) and family resources (savings, income, health insurance and welfare care) (Andersen, 1968). However, Penchansky and Thomas (1981) suggested that to examine both initial contact and continued use; access could be explored through five categories. These include affordability, acceptability, accessibility, accommodation and availability.

These categories were developed for general health care use and do not necessarily have the same relevance to mental health care utilisation. On examination of these categories, it would seem that although all five categories may have some influence on utilisation, only four of the categories are likely to be highly influential on mental health care use. Therefore accommodation was not included within this study. Accommodation refers to waiting room time. As mental health professionals usually have strict one-hour appointment times, this was considered less relevant as a predictor of service use. Acceptability refers to the client's reaction to the provider. This was included under the satisfaction section of the questionnaire, as it is only relevant to participants who have used mental health services.

Therefore, affordability, accessibility and availability were included within this section of the questionnaire. Affordability refers to the ability to pay for a mental health service, health insurance, and community service card options. Accessibility includes knowledge of how to access a service, transport difficulties and other responsibilities or commitments. Availability examines appointment waiting time, travel distance to a mental health service, and an adequate number of services in the geographical region.

Accessibility:

Respondents were asked if they know how to access mental health services, their opinion on transport difficulties and difficulties using services due to other responsibilities. Responses were rated on a five-point likert scale, ranging from strongly agree (1) to strongly disagree (5).

Affordability:

Affordability was measured by assessing how often the cost of mental health services prevented respondents from using these services. Participants responded to a five-point likert scale that ranged from strongly agree (1) to strongly disagree (5). Respondents were asked to indicate whether or not they had health insurance and a community services card on two "yes, no, I don't know" items.

Availability:

Availability was measured by asking participants to indicate whether they have to wait to get an appointment at a mental health service; whether they have to travel a long way to use a service; and whether they thought the availability of services in their area was satisfactory. Responses were again reported on a five-point likert scale that ranged from strongly agree (1) to strongly disagree (5).

Need Characteristic

Andersen (1968, 1995) recommended that need should be measured through a persons own perceived level of impairment as well as a professional's evaluation of impairment. However due to the design of this study, perceived need only (reported by respondents) will be measured here. The need characteristic in this study therefore, refers to a person's perceived level of impairment or illness that requires them to use a mental health service.

Need was measured using a self-report screening instrument to assess participants general psychological status. The General Health Questionnaire designed by Goldberg (1978) was used to assess need. The GHQ-12 used in this study, is a shortened instrument of the full version, the GHQ-60, but is equally as reliable and valid (Goldberg, 1992). The GHQ -12 (Goldberg, 1992) is a widely used self-report instrument for the detection of mental health difficulties and degree of disorder in the

community. It is not a diagnostic screening questionnaire; rather it is a non-specific screen and measures general psychiatric morbidity (Schmitz, Kruse & Tress, 2001). The GHQ-12 was used in this study to compare psychological difficulties between participants rather than identification of disorders.

The GHQ-12 measures aspects of anxiety, depression and level of social function. Each of the 12 items asks respondents to report on experiencing a particular behavior or symptom over the last few weeks. There are two scoring systems of the GHQ. The first method provides response scores of 0,0,1,1 respectively and a range from 0 to 12. The second method uses a 4-point continuous response likert scale, with response scores of 0,1,2,3 respectively, resulting in a score of 0 to 36. However, within this study responses were scored from 1,2,3,4 resulting in a score of 12 to 42. This scoring was chosen as zeros were used to score 'no service utilisation' in other parts of the questionnaire. Therefore, the inclusion of zeros was thought to be confusing. This scoring method gives a less skewed distribution of scores and is useful for comparing degree of disorder. This method was therefore, used in this study. Higher scores indicate a greater probability of a psychological disorder and higher distress (Goldberg, 1978).

This questionnaire has been shown to have reasonable sensitivity and specificity in detection of mental health difficulties in a wide variety of settings and cultures (Banks, Clegg, Jackson, Kemp, Stafford, & Wall, 1980; Goldberg, 1978, Goldberg, 1992). Internal consistency as assessed by Cronbach's alpha ranged from .82 to .90 in a series of studies. The test-retest reliability has been reported at .73 (Hardy, Shapiro, Haynes, & Rick, 1999), with a split-half reliability of .83 (Goldberg, 1988). Examining its sensitivity in detection of psychological disorders has assessed validity. The original validation sensitivity was 93.5 per cent and the specificity in detecting disorder was 78.5 per cent. There have been further studies validating the GHQ-12 and each has produced satisfactory sensitivity and specificity (Banks et al, 1980; Goldberg, 1992; Hardy et al, 1999; Winefield, Goldney, Winefield, & Tiggemann, 1989). In the current study the Chronbach alpha coefficient was .89.

Service Use

Informal help seeking:

Personal health practice defined by Andersen (1968) refers to activities an individual undertakes that interact with the use of formal health services. As the model has been designed to analyze general health care utilisation, previous examples of personal health practices include diet, exercise and self care (Andersen, 1995). However, as this research is exploring Mental Health services, the personal health practices that interact with formal use of mental health services differ from Andersen's suggestions. It was decided based on previous studies on Mental Health utilisation that diet and exercise for example could be important, but were not the most relevant contributing factors to use of formal Mental Health Services. Therefore, within this study personal health practices refer to informal help sources for mental health concerns.

These informal help sources are culturally appropriate for New Zealanders, particularly Māori The informal help variables include friends, family/whanau, colleagues, clergy/spiritual guidance, self-help groups, telephone support, iwi, tohunga, and kaumatua. These measures included service *contact* (whether or not the help was used) and *frequency* (how many help variables were used and how often) over a defined period of time (Wolinsky & Arnold, 1988). Participants in this study were asked to report their use of the above help variables (contact) and indicate how often they have sought that help (frequency) in the last year (defined period of time). The frequency measures included every day, every week, every month, every 3-6 months, every 6-12 months and none.

Service Use

Formal Mental Health Utilisation:

To measure the use of mental health service utilisation, participants were asked to state whether they had received help from a mental health professional for a mental health problem in the last year. The professional help options included general practitioners, psychologists, counsellor/therapist, psychiatrist, other professional (social worker, nurse, and occupational therapist), family therapist, drug and alcohol counsellor, and marriage/couples therapist. Participants in this study were asked to report their use of the above professionals (contact) and indicate how often they have seen the professional (frequency) in the last year (defined period of time). The frequency measures included

every day, every week, every month, every 3-6 months, every 6-12 months and none.

Outcome

Satisfaction:

Research investigating the relationship between satisfaction and health care utilisation has either treated satisfaction as a predictor of service use or an outcome of service use. In fact it has been suggested that the relationship between satisfaction and utilisation is reciprocal in nature (Chitwood et al, 2002). Andersen's model, has previously examined satisfaction as an outcome variable (Andersen, 1995). Therefore, adhering to this model it was decided to also treat satisfaction as a measure of outcome. Client satisfaction is an important measure of the current quality of mental health services and vital to future modifications of services (Lora, Rivolta, & Lanzara, 2003). In addition, client satisfaction is associated with future help seeking and continuation with treatment (Swanson, Andersen, & Gelberg, 2003)

Only participants who had utilized mental health services answered this section of the questionnaire. A measure of satisfaction was adapted and modified from The Verona Services Satisfaction Scale (VSSS-54; Ruggeri, & Dell Agnola, 1993). The sensitivity, content validity, and test retest reliability have all been well established for this scale (Ruggeri, & Dell Agnola, 1993). Participants were asked to state their level of satisfaction on a five-point likert scale ranging from strongly agree (1) to strongly disagree (5). This differed from the original VSSS-54 5 point likert scale that ranged from terrible (1) to excellent (5). The original VSSS-54 comprised seven dimensions, however, due to time constraints within this study only two dimensions were included. These were chosen based on research findings regarding satisfaction that have highlighted the importance of mental health professional's skills and behavior (Lora et al, 2003); cultural appropriateness (Penn & Mueser, 1996, cited in Solomon, 2000); medication (Garfield, Smith, & Francis, 2003; Karp, 1994; Knusden et al., 2002) and information about specific interventions (Lora et al, 2003).

Several questions from these two dimensions of satisfaction were included from the VSSS-54 scale. The first dimension asked questions about the satisfaction with the mental health professional's skills and behaviour. There were four choices included in this measure. These asked about contribution, feeling listened to, able to discuss issues, and cultural appropriateness. The second asked questions regarding satisfaction with

treatment or intervention. Participants were asked to indicate what treatment they had received, and then rate their satisfaction with this treatment. Three choices were included in this measure, asking about the usefulness of treatment, satisfaction, and preference for another treatment. In the current study the satisfaction scale had good internal consistency with a Chronbach alpha coefficient of .97.

Procedure

Approval for this study was gained from the Massey University Ethics Committee. The questionnaire was sent out with two covering letters, one in English and one translated into Māori (reproduced in Appendix B). The covering letter detailed the purposes of the research and how the data was to be used. Sources of support were also included on the letter, should participants require this information. At the back of the questionnaire was a form that enabled participants to request a summary of the results of this research (see Appendix C). Sixty-three respondents filled this form out and requested a summary of results. Confidentiality was maintained by removing these forms immediately from the questionnaire on their arrival at the School of Psychology at Massey University. Participants were therefore, de-identified, so that any information provided was not linked with names or addresses. Participants indicated their consent to participate by returning the questionnaires in a pre-paid envelope. The original response yielded 85 replies. Two weeks after the initial posting a follow up letter was distributed to participants (shown in Appendix D). The letter thanked those who had returned their questionnaires and further invited those who had not done so to participate in the study. This second posting yielded 51 returned and completed questionnaires.

The Questionnaire Development Study

A small pilot study was conducted to evaluate any concerns participants may have with the questionnaire. The original questionnaire used in the pilot study is presented in Appendix E.

Participants

A sample of seven people was used to pilot test this questionnaire. Participants ranged in age from 27 to 55 years. The sample respondents included three men and four females. Five of the participant sample identified as NZ pakeha, one identified as European and one identified as Māori. Three of the seven sample participants were users of mental health services. The respondents were approached through a community support facility for people with mental illness and through acquaintances.

Questionnaire Evaluation

The aim of this pilot was to evaluate the questionnaire items. As a result of this several changes were made to the questions. Five of the seven sample respondents indicated that the utilisation scales needed improvement. The original questions asked participants to indicate if they had ever sought help from the options provided by ticking a box marked "Yes". They were then asked in another question to indicate how often this help was sought. There was evidence to suggest that participants found this format confusing and it was filled out incorrectly on at least one occasion. Several participants commented that they were unsure which help source to refer to when indicating how often the help was sought. This confusion was addressed by incorporating the questions together. Participants were therefore, be asked to state whether they had sought help and how often within the same question in the final questionnaire.

Furthermore, the original contact time options (i.e. how often help was sought) included none, weekly, fortnightly, or monthly, 2-3 times a year or less. These were altered to every day, every week, every month, every 3-6 months, every 6-12 months or none. Another addition to the original questionnaire was the inclusion of telephone support, and priest or spiritual guidance to the informal help options.

There were several changes made to the satisfaction section. Those participants utilizing mental health services offered several recommendations for improvement. Respondents indicated that their satisfaction was partly dependent on being listened to

and contributing to the decision making process. The original questions asked if the professional was culturally appropriate, if they were offered an appointment with a professional of the same ethnicity and whether they were able to discuss their problems easily with the professional. These questions were changed to tap into factors that would be most influential in participant's satisfaction with mental health services. The additional questions included whether their opinion was listened to, and whether they contributed to the decisions being made about their treatment. The question on cultural appropriateness and the question on discussion of problems were retained.

The section within the questionnaire asking about accessibility was also altered. There was evidence to suggest that the articulation of the questions could be improved for this section. Comments were made about the strength of wording of these questions, indicating they were too polarized. The original questions were as follows: "lack of transport would prevent me from using mental health services" and "I would be unable to drop my commitments to go to an appointment at a mental health service". These were changed to "it is difficult for me to use a mental health service due to lack of transport" and "it is difficult to use a mental health service due to other responsibilities"

An important outcome of this pilot study was the inclusion of qualitative information from the sample of participants. In particular, the information gathered from participants using mental health services. This information stems from their experiences with mental health services and is therefore thought to enrich the study.

Statistical Analysis

Descriptive statistics

Descriptive statistics were used to investigate hypotheses one and two. Correlations were used to examine the relationships between the predictor variables and the outcome measures. Chi-squared analysis was employed for testing the group differences for categorical variables. T-tests and Analysis of Variance (ANOVA) were used to test the group differences for continuous variables.

Multivariate Analysis

Hypothesis three investigates contact with mental health services, therefore, dichotomising users from non-users. Logistic regression was used as the appropriate

method of analysis to deal with dichotomous dependent variables in a sample size of less than 1,000 cases (Tabachnick & Fidel, 2001). The aim of logistic regression is to identify the most economic model describing the relationship between a dependent variable and a set of independent variables. Wald statistics were also reported in this analysis. The Wald statistic is used to accept or reject the null hypothesis. In addition, the goodness-of-fit tests -2LL, log likelihood were explored. The -2LL is the deviance from the log likelihood, where a small value indicates a good fit. Snell R^2 and Nagelkerke R^2 were also reported. These measures examine the variance of the dependent variable that is explained by the independent variable. Chi-squares were reported and indicate the significance of the variables in the model. Finally, the constant was reported, which controls the logistic curve along the x-axis (Grim & Yarnold, 2001; Tabachnick & Fidel, 2001).

RESULTS

Data Handling

All data was analysed using SPSS Version 11.0 for Windows. Missing data was dealt with using SPSS missing values analysis (MVA). An expectation maximisation (EM) method was used. This method forms a data correlation matrix by assuming the distribution shape of the missing data and estimates missing values based on inferences from that distribution. These expected values then replace the set of missing values. Missing values were only replaced if the result of analysis was close to statistical significance. Analysis was repeated with and without missing data as recommended by Tabachnick & Fidel (2001). There was little difference in the results therefore; analysis proceeded without transformation of the missing values.

In order to determine if the sample satisfied the demands of the normal distribution curve, measures of skew and kurtosis were obtained. Histograms with normal distribution curves were also obtained to further examine the demands of normality. Box plots were used to examine the homogeneity of variance. These indicated that the assumption of homogeneity was not violated for the majority of variables as there were no outliers, marked skewness or great disparity of variance. However, the assumption of homogeneity of variance was violated for measures of ethnicity, employment and education. These variables were therefore, collapsed into dichotomous variables in order to rectify this. Frequency of use was converted to a continuous variable by calculating the daily visits per year (the catchment period). Every day was given a value of 100, every week a value of 52, every month=12, every 3-6 months=2.67, and every 6-12 months=1.33. This enabled meaningful intervals between the measures of frequency of use.

Descriptive analysis

The descriptive analysis explored differences in various predisposing, enabling, and need characteristics among users and non-users of mental health services.

Initially overall mental health service use was examined. Next, frequency of informal and formal service use was described in relation to the predisposing, enabling and need factors of the population sample. An exploration of satisfaction among users was then compared to differences in predisposing, enabling and need characteristics. Following satisfaction, the analysis examined contact with informal and formal mental health services in relation to the predisposing, enabling and need characteristics of participants. Correlations, Chi-square statistics, T-tests and ANOVAs were employed for descriptive analyses.

Utilisation of formal and informal mental health services in New Zealand

The sample as depicted in Table 2 consisted of 34 (26.6%) people who were using formal mental health services and 81 (63.3%) who were using informal sources of help for psychological distress. Of the total sample, 46 (35.9%) people were not using any help for psychological problems whatsoever.

Table 2.

Number and percentage of people using formal and informal mental health services

Utilisation	Type	N	Percentage
Formal help	No formal help used	94	73.4
	Used formal help	34	26.6
Informal help	No informal help used	47	36.7
	Used informal help	81	63.3

The types of informal help and frequency of use over the last year are depicted in table 3. Friends (53.9%) are the most commonly used source of informal help. Telephone support (.8%), Iwi (.8%), and other support (.8%) are the least used sources.

Table 3.

Percentages of informal help and frequency of use.

Frequency of use	Friends %	Whanau %	Work colleagues %	Clergy/spiritual guidance %	Self-help group %	Phone support %	Iwi %	Kaumatua %	Other %
Every day	1.6	3.1	.8	1.6	0	0	0	0	0
Every week	11.7	6.3	3.9	.8	1.6	0	0	0	0
Every month	7.8	10.9	1.6	.8	1.6	.8	0	.8	0
Every 3-6 months	15.6	18.0	7.8	2.3	.8	0	0	0	.8
Every 6-12 months	17.2	14.8	10.9	6.3	1.6	0	.8	.8	0
Total	53.9	53.1	25	11.8	5.6	.8	.8	1.6	.8

Table 4 shows the types of mental health services the sample population have used over the last year. The results indicate that the majority of participants (24.3%) are receiving help from a GP for psychological problems. Psychologists (3.1%) and marriage/couple counsellors (3.1%) and psychiatrists (4%) are seen the least.

Table 4.

Percentages of formal mental health and frequency of use

Frequency of use	GP %	Psychologist %	Counsellor %	Psychiatrist %	Other MH professional %	Marriage counsellor %
Every day	.8	0	0	.8		0
Every week	0	0	1.6	0	2.3	0
Every month	5.5	0	2.3	0	.8	0
Every 3-6 months	6.3	.8	1.6	1.6	2.3	0
Every 6-12 months	11.7	2.3	3.9	1.6	2.3	3.1
Total	24.3	3.1	9.4	4	7.7	3.1

Frequency of Informal Utilisation

Predisposing characteristics

Independent t-tests were conducted on dichotomised variables to examine differences in frequency of informal utilisation for geographical region, living arrangement, and gender. There was no significant difference in frequency of use for urban (M=25.91, SD=47.74), and rural participants (M=10.66, SD=21.12), t(21.60)=1.97, p=.062. There were no differences in frequency of use for those living alone (M=34.56, SD=64.20) and those living with others (M=23.69, SD=44.04), t(124)=.800, p=.425. However, there were significant differences in gender. Females (M=33.31, SD=53.42) reported higher use than males (M=9.73, SD=24.21), t(118.93)=-3.399, p=.001. The magnitude of differences in the means was moderate (eta=.08).

A one-way between group analysis of variance (ANOVA) was conducted to explore the impact of age, education, ethnicity and employment on frequency of informal use. There were no differences in frequency of use for the three age groups (19-36 years, 37-52 years, and 53-69 years) [F(2, 124)=1.67, p=.192]. There were also no differences found in frequency of use for education [F(4, 121)=.861, p=.490], or ethnicity [F(2, 124)=.290, p=.748]. Significant differences were found in frequency of use for employment [F(5, 121)=2.687, p=.024]. The actual difference between mean frequency

of use was moderate (eta squared = .09). Post-hoc comparisons for employment, using the Tukey HSD test (Table 5) indicate significant mean differences between students and every other employment option for frequency of informal use. Students use informal help more frequently than people in other types of employment.

Table 5.

Multiple Comparisons between employment types for informal use

Variable	Comparisons between variables	Frequency of Informal use Mean Differences between variables
Student	Employed full time	65.9998*
	Employed part time	64.2213*
	Self employed	72.1347*
	Home maker	71.4751*
	Not in paid employment	64.7624*

$p<.05$* $p<.001$**

The relationship between frequency of informal use and attitude was investigated using Pearson product-moment correlation coefficients (see Table 6). Preliminary analyses were performed to ensure there were no violations of the assumptions of normality and homoscedasticity. There was a small negative correlation between the two variables, indicating that higher frequency of use is associated with more positive attitudes. The coefficient of determination indicates that attitude explains 4% of the variance in frequency of informal use. Social support and social network were also explored through correlations. Table 6 depicts social network as social contact and living arrangement, while social support is represented by "talk to others about problems" and "feel close to others". There was a small positive correlation between frequency of informal use and having people to talk to about emotional problems (social support). Having people to talk to (social support) explains 5% of the variance in frequency of informal use, calculated by the coefficient of determination.

Table 6.

Predisposing variables showing means, *SD*, and pearsons *r* correlation coefficients with frequency of informal use.

Variable	*M* (*SD*)	N	Pearson's *r*
Attitude	9.618 (2.11)	123	-.200(*)
Living arrangement (social network)	1.90 (.305)	126	.041
Social contact (social network)	10.656 (4.46)	128	-.160
Talk about deepest problems (social support)	1.88 (.730)	127	.016
Feel close to others (social support)	2.29 (.621)	126	-.181(*)

p<.05* *p*<.001**

Enabling Characteristics

Table 7 depicts the correlations between frequency of informal use and the enabling characteristics. There were no violations of the assumptions of normality and homoscedasticity. The results show a medium negative correlation between frequency of use and affordability, and between frequency of use and having a Community Services Card. This indicates that high frequency of informal use is associated with difficulty affording mental health services. Affordability explains 16% of the variance, while the Community Services Card explains 12.1% of the variance in frequency of informal utilisation.

Table 7.

Enabling variables showing means, *SD*, and pearsons *r* correlation coefficients with frequency of informal use.

Variable	*M* (*SD*)	N	Pearson's *r*
Accessibility	8.309 (4.31)	123	.004
Availability	4.302 (3.86)	126	.050
Affordability	3.19 (1.11)	122	-.399(**)
Health insurance	1.58 (.528)	123	.143
Community Services Card	1.72 (.488)	123	-.349(**)

p<.05* *p*<.001**

Need Characteristics

The relationship between frequency of informal use and need (as measured by the GHQ), was also investigated using correlations. There was a medium positive correlation between the two variables [r=.336, N=128, p, .001], with high levels of psychological need associated with higher frequency of informal help used. The coefficient of determination was calculated indicating that scores on the GHQ explain 11.3% of the variance in frequency of informal utilisation.

Frequency of Formal Utilisation

Predisposing Characteristics

To examine the relationship between the dichotomous predisposing variables (living arrangement, gender, and geographical region) and frequency of formal use, independent t-tests were conducted. There were no differences between frequency of formal use for those living alone (M=2.56, SD=6.54) and those living with others (M=5.68, SD=24.08), $t(124)$=-.462, p=.645. The differences in frequency of formal use for males (M=3.06, SD=17.34) and females (M=6.67, SD=25.50), $t(125)$=-.858, p=.392 was not significant. There were also no significant differences between frequency of formal use and those living in urban areas (M=3.04, SD=11.04) and those living in rural areas (M=29.45, SD=66.76), $t(10.05)$=-1.310, p=.219.

One way between groups analyses of variance were calculated to examine the impact of the categorical predisposing variables on frequency of formal mental health service use. Homogeneity of variance was calculated with the Levene's test; no assumptions were violated. Age [F(2,124)=.954, p=.388], education [F(4, 121)=.786, p=.536], ethnicity[F(2,124)=1.192, p=.307], and employment [F(5, 121)=1.166, p=.330] were explored. No significant results were found for these variables.

Table 8 shows the correlation coefficients for the relationship between frequency of formal use and attitude, social network (living arrangement and social contact) and social support ("talk to others about problems" and "feel close to others"). There was a small negative correlation between frequency of formal use and attitudes, with higher frequency use associated with more positive attitudes. Attitude explains 3.2% of the variance in frequency of formal use, calculated by the coefficient of determination. There was also a small negative correlation between frequency of formal use and

feeling close to others (social support). This indicates that higher frequency use is associated with feeling close to fewer people. The coefficient of determination was calculated indicating that feeling close to others explains 3.3% of the variance in frequency of formal utilisation.

Table 8.

Predisposing variables showing means, *SD*, and pearsons *r* correlation coefficients with frequency of formal use.

Variable	*M* (*SD*)	N	Pearson's *r*
Attitude	9.618 (2.11)	123	-.179(*)
Living arrangement (social network)	1.90 (.305)	126	.041
Social contact (social network)	10.656 (4.46)	128	-.160
Talk about deepest problems (social support)	1.88 (.730)	127	.016
Feel close to others (social support)	2.29 (.621)	126	-.181(*)

$p<.05$* $p<.001$**

Enabling Characteristics

The relationships between the frequency of formal mental health service use and the enabling characteristics are depicted in Table 9. These relationships were investigated using correlation coefficients. The results indicate there was a small positive correlation between frequency of formal use and availability of services, with high frequency of use associated with high levels of availability. Availability explains 7% of the variance in frequency of formal use, calculated by the coefficient of determination. In addition, there was a medium negative correlation with frequency of use and the Community Services Card. This indicates that higher frequency of use is associated with having a Community Services Card. The coefficient of determination was calculated showing that the Community Services Card explains 8% of the variance in frequency of formal utilisation. No assumptions were violated in these analyses.

Table 9.

Enabling variables showing means, *SD*, and pearsons *r* correlation coefficients with frequency of formal use

Variable	*M* (*SD*)	N	Pearson's *r*
Accessibility	8.309 (4.31)	123	-.035
Availability	4.302 (3.86)	126	.263(**)
Affordability	3.19 (1.11)	122	.041
Health insurance	1.58 (.528)	123	.111
Community Services Card	1.72 (.488)	123	-.297(**)

$p < .05^{*}$ $p < .001^{**}$

Need Characteristics

A correlation coefficient was used to examine the relationship between frequency of formal service use and psychological need (as measured by the GHQ-12). The results indicated no significant correlations between the two variables [r=.146, N=128, p=.101].

Satisfaction with Formal Mental Health Services

Predisposing Characteristics

Independent t-tests were performed on the dichotomous predisposing variables to examine the mean differences for satisfaction. Living arrangement, geographical region, and gender were examined. These tests looked at three aspects of satisfaction, satisfaction with the mental health professional's behaviour and knowledge; satisfaction with the intervention and service received; and the actual treatment that was provided. The results of these t-tests, indicated significant differences in satisfaction scores for gender. The mean scores on both satisfaction with professional behaviour [t=-2.138, p<.001] and satisfaction with intervention [t=-2.079, p<.001] were different for males and females. There were no differences found between living arrangement, geographical region and the three aspects of satisfaction.

The impact of categorical predisposing characteristics on satisfaction was examined through one way between groups ANOVAs. The results are reported in Table 10. The impact of education and ethnicity on satisfaction with professional's behaviour was

significant at the $p<.05$ level. The effect size was calculated using eta squared. This was medium (.08) for education and small effect (.05) for ethnicity. There was a difference in satisfaction with intervention scores for education. The effect size was medium (eta square=.08). There was also a significant difference at the $p<.05$ level in treatment received for ethnicity. The actual difference in mean scores between ethnic groups was (eta square=.08).

Table 10.

ANOVA scores showing the relationship between age, education, ethnicity and employment and three aspects of satisfaction.

Variable	Satisfaction *F*			N
	With behaviour	With intervention	Treatment	
Age	1.793	1.655	.171	126
Education	2.869*	2.684*	.727	125
Ethnicity	3.331*	2.769	5.966*	126
Employment	1.572	2.018	1.017	126

$p<.05$* $p<.001$**

Post-hoc comparisons using the Tukey HSD test are depicted in Table 11. Looking first at satisfaction with professional's behaviour, the results indicate that the mean score for people with University Entrance qualifications was significantly different from people with other qualifications. In addition the mean score for Māori was significantly different from the mean score for Pakeha. Examining satisfaction with intervention, there were different mean scores for people with University Entrance qualification compared to those with University degrees. There were also significant differences in the treatment that was received across ethnicity. The treatment Māori receive is different from both Pakeha and other ethnic groups. Māori were the only respondents to receive hospitalization or culturally based treatments.

Table 11.

Multiple Comparisons between education and ethnicity for satisfaction.

Variable	Comparisons between variables		Satisfaction Mean Difference		
			With behaviour	With intervention	Treatment
Education	University Entrance	No educational qualifications	3.645(*)	2.609	-.04
		School certificate	4.030(*)	3.182	-.05
		Trade or professional certificate	3.545(*)	2.189	-.11
		University degree	4.086(*)	3.270(*)	-.03
Ethnicity	Māori	Pakeha	1.747(*)	1.341	.19(*)
		Other	2.444	2.222	.22(*)

$p<.05$* $p<.001$**

Correlation coefficients were conducted to examine the relationship between satisfaction and the continuous predisposing variables. Attitude, social network (living arrangement and social contact), and social support ("talk to others about problems" and "feel close to others") were explored. There were no differences found between the variables. See Table 12.

Table 12.

Pearson's *r* Correlations between satisfaction and predisposing variables

Variables	Satisfaction with professionals behaviour	Satisfaction with intervention	Treatment received
Attitude	.115	.094	.062
Living arrangement	-.096	-.045	-.031
Social contact	-.084	-.102	-.019
Talk about deepest problems (social support)	.095	.011	.037
Feel close to others (social support)	-.039	-.056	-.170

$p<.05^{*}$ $p<.001^{**}$

Enabling Characteristics

The relationship between satisfaction and the enabling characteristics was examined using correlations. There was a medium positive correlation between availability and satisfaction with professional's behaviour (accounting for 10% of the variance); a small positive correlation between availability and satisfaction with interventions (accounting for 6.8% of the variance); and a small positive correlation between availability and treatment received (accounting for 7.9% of the variance). These results indicate that a high level of satisfaction and treatment options is associated with greater availability of mental health services.

In addition, there were significant differences in Community Services Cardholders across all aspects of satisfaction. There was a medium negative correlation between the Community Services Card and satisfaction with the professional's behaviour (accounting for 9.4% of the variance); a small negative correlation between the Community Services Card and satisfaction with intervention (accounting for 8% of the variance); and a small negative correlation between the Community Services Card and treatment received (accounting for 8.9% of the variance). These results indicate that holders of Community Services Cards are less satisfied with all aspects of the mental health system.

Table 13.

Pearson's *r* Correlations between satisfaction and enabling variables

Variables	Satisfaction with professionals behaviour	Satisfaction with intervention	Treatment received
Access	.113	.163	.089
Availability	.323**	.261**	.281**
Affordability	-.119	-.111	-.139
Health insurance	.111	.167	.068
Community card	-.307**	-.282**	-.294**

$p<.05$* $p<.001$**

Need Characteristics

Correlation coefficients were also used to explore the relationship between satisfaction and psychological need (as measured by the GHQ). There were small positive correlations for each aspect of satisfaction, with higher levels of satisfaction associated with lower levels of psychological need. The correlations were significant for satisfaction with professional's behaviour [r=.287, N=127, p<.001], for satisfaction with intervention and service provided [r=.233, N=126, p<.001], and with treatment received [r=.269, N=126, p<.001]

Contact with Informal help sources in New Zealand

Predisposing characteristics

Chi square calculations were used to examine differences in predisposing characteristics among users and non-users of informal help. The results showed gender differences between users of informal help sources and non-users. Table 14 shows a higher percentage (72.5%) of females use informal help, compared to 46.8% of males using informal help. Significant age differences were also found between users and non-users of informal help. The 53-69 year old age group was found to use fewer sources of informal help (42.9% users) than the 19-36 year olds (72.2% users) and the 37-52 year olds (73.2% users).

Table 14.

Chi Square values for predisposing characteristics by contact with informal help sources

Variables	Description	Used Informal help %	No informal help used %	χ^2
Gender	Male	46.8	53.2	
	Female	72.5	27.5	8.383**
Age	19-36 years	72.7	27.3	
	37-52 years	73.2	26.8	
	53-69 years	42.9	57.1	10.915**
Education	No qualifications	47.8	52.2	
	Qualifications	67	33.0	2.979
Employment	No paid employment	61.5	38.5	
	Paid employment	63.6	36.4	.051
Ethnicity	Pakeha	62.6	37.4	
	Māori	66.7	33.3	
	Other	60.0	40.0	.148
Geographical region	Urban	63.8	36.2	
	Rural	54.5	45.5	.369

$p<.05$* $p<.001$**

Table 15 shows the relationship between contact with informal help sources and the continuous predisposing variables using correlation coefficients. The results show a medium negative correlation between attitude and contact with informal sources, with higher levels of contact associated with more positive attitudes. Attitude explains 8.5% of the variance with informal utilisation. The table also indicates that there was a small positive correlation between informal use and having people to talk to about psychological problems (social support). Social support (talking about problems) explains 5.5% of the variance in use of informal help sources.

Table 15.

Predisposing variables showing means, *SD*, and pearsons *r* correlation coefficients with contact of informal use

Variable	*M* (*SD*)	N	Pearson's *r*
Attitude	9.618 (2.11)	126	-.292**
Living arrangement (social network)	1.90 (.305)	126	-.095
Social contact (social network)	10.656 (4.46)	128	-.063
Talk about deepest problems (social support)	1.88 (.730)	127	.234**
Feel close to others (social support)	2.29 (.621)	126	.048

$p < .05$* $p < .001$**

Enabling Characteristics

The relationship between contact with informal help sources and enabling characteristics was examined using correlations. The results depicted in Table16 show a small negative correlation between informal use and affordability, with higher informal contact associated with lower levels of affordability. Affordability explains 4.5% of the variance in informal use. In addition, there was a small negative correlation between informal use and the Community Services Card. This indicates that higher informal contact is associated with having a Community Services Card. The Community Services Card accounts for 5.2% of the variance in informal use.

Table 16.

Enabling variables showing means, *SD*, and pearsons *r* correlation coefficients with contact of informal use.

Variable	*M* (*SD*)	N	Pearson's *r*
Accessibility	8.309 (4.31)	123	.070
Availability	4.302 (3.86)	126	.047
Affordability	3.19 (1.11)	122	-.212(*)
Health insurance	1.58 (.528)	123	.077
Community Services Card	1.72 (.488)	123	-.228(*)

$p < .05$* $p < .001$**

Need Characteristics

Pearson product-moment correlation coefficients were also used to explore the relationship between contact with informal help and psychological need (as measured

by the GHQ). There was a small positive correlation between the two variables (r=.203, N=128, p<.05).

Contact with Formal Mental Health Services in New Zealand

Predisposing characteristics

The Chi square calculated for formal mental health use that showed significant gender differences between users and non-users. The percentages from these groups indicate that users of formal mental health services are more often female (33.8% users) than male (14.9% users). Significant ethnic differences were also found between users and users. Fifty percent of Māori in this sample use mental health services, compared to 23.2% of Pakeha who use mental health services. See Table 17.

Table 17.

Chi Square values for predisposing characteristics by contact with formal help sources

Variables	Description	Used formal help %	No formal help used %	χ^2
Gender	Male	14.9	85.1	
	Female	33.8	66.3	5.370*
Age	19-36 years	29.5	70.5	
	37-52 years	31.7	68.3	
	53-69 years	19.0	81.0	1.960
Education	No qualifications	26.1	73.9	
	Qualifications	26.2	73.8	.000
Employment	No paid employment	33.3	66.7	
	Paid employment	23.9	76.1	1.236
Ethnicity	Pakeha	23.2	76.8	
	Māori	50.0	50.0	5.492*
Geographical region	Urban	73.3	72.7	
	Rural	26.7	27.3	.002

p <.05* p <.001**

The relationship between the continuous predisposing variables and contact with formal mental health services was examined using correlation coefficients. The results are shown in Table 18 and indicate a small negative correlation between attitude and formal utilisation, with higher formal contact associated with more positive attitudes towards

mental health services. The coefficient of determination indicates that attitude accounts for 8.4% of the variance in formal utilisation.

Table 18

Predisposing variables showing means, *SD*, and Pearsons *r* correlation coefficients with contact of formal use

Variable	*M* (*SD*)	N	Pearson's *r*
Attitude	9.754 (3.90)	123	-.289**
living arrangement (social network)	1.90 (.305)	126	-.095
social contact (social network)	10.656 (4.46)	128	-.069
Talk about deepest problems (social support)	1.88 (.730)	127	.096
Feel close to others (social support)	2.29 (.621)	126	-.049

$p < .05$* $p < .001$**

Enabling Characteristics

Correlations were used to investigate the relationship between contact with formal mental health services and the enabling variables. There was a medium positive correlation between availability and formal use, indicating that higher formal contact was associated with higher levels of availability. Availability explains 12.4% of the variance in formal contact as calculated by the coefficient of determination. There was a small positive correlation between formal contact and health insurance, where higher contact was associated with not having health insurance. In addition, there was a medium negative correlation between contact and Community Services Card, with higher use associated with having a community service card. The coefficient of determination indicated that having a Community Services Card accounts for 9.7% of the variance in contact with formal mental health services. See Table 19.

Table 19.

Enabling variables showing means, *SD*, and pearsons *r* correlation coefficients with contact of formal use

Variable	*M* (*SD*)	N	Pearson's *r*
Accessibility	8.309 (4.31)	123	.104
Availability	4.302 (3.86)	126	.352**
Affordability	3.19 (1.11)	122	-.123
Health insurance	1.58 (.528)	123	.186*
Community Services Card	1.72 (.488)	123	-.311**

$p < .05$* $p < .001$**

Need Characteristic

The relationship between psychological need (as measured by the GHQ) and contact with formal mental health services was examined using correlations. There was a medium positive correlation [r=.294, N=128, p<.001], with higher contact associated with greater psychological need. Need explains 9% of the variance in contact with mental health services, as calculated by the coefficient of determination.

Multivariate analysis

The order of entry of variables into the logistic regression equation was predisposing, enabling, and then need. This was based on the expectation that need should account for the greatest variance in utilisation as suggested by Andersen (1968, 1995).

Informal Mental Health utilisation in New Zealand

Step One

The predisposing variables were entered into the logistic regression first. It has been recommended that there should be a minimum of 20 cases per predictor with a minimum of 60 cases in total (Leech, Barrett, & Morhan, 2005). Only the predisposing variables that were found to have a significant correlation with informal use were entered in the model. These included attitude, social support (having others to talk to about problems), gender, and age. The results are presented in Table 20. Prediction success for "used informal help" was calculated from the linear combination of independent variables, with 80% of people using informal help correctly predicted for. The overall success rate however, was only 68.6%. According to the Wald criterion, social support did not make a unique contribution to the prediction of informal mental

health use z= 1.793, p>.001. Social support was therefore not included in any further analysis.

Table 20.

Logistic Regression analysis of significant predisposing variables: The prediction of contact with informal mental health services.

Variable	*B*	*SE*	*Wald (z-ratio)*	*Odds Ratio*	*P*
Attitude	-.226	.109	4.327	.797	.038*
Social support (talk to others)	.401	.299	1.793	1.493	.181
Gender	-.846	.429	3.880	.429	.049*
Age	-.043	.016	6.944	.958	.008**
Constant	4.274	1.500	8.118	71.798	.004

-2 Log likelihood 135.770 Cox & Snell R Square .186 Nagelkerke R Square.254

p<0.05* p<0.001**

Step Two

The next variables entered into the equation were the enabling variables. The Community Services Card and affordability were initially examined as they had significant correlations with informal use. However, affordability did not make a unique contribution to the prediction of informal mental health use over the Community Services Card [z=3.284, p>.001]. Affordability was therefore, not included in the next step.

Prediction success for "used informal help" was 84.1%. The overall success rate was 70.3%, and this was an increase from step one, indicating the model's improvement with the addition of enabling variables. According to the Wald criterion, gender did not make a unique contribution to the prediction of formal mental health use at this stage of the model [z=2.014, p>.001]. See Table 21.

Table 21.

Logistic Regression analysis of significant predisposing and enabling variables: The prediction of contact with informal mental health services.

Variable	*B*	*SE*	*Wald (z-ratio)*	*Odds Ratio*	*P*
Attitude	-.272	.114	5.651	.762	.017*
Gender	-.640	.451	2.014	.528	.156
Age	-.049	.018	7.810	.952	.005**
Community Services Card	-1.125	.546	4.251	.325	.039*
Constant	7.733	1.834	17.784	2281.757	.000
-2 Log likelihood 126.945 Cox & Snell R Square .210 Nagelkerke R Square.288					

$p<0.05$* $p<0.001$**

Step Three

Need was the last variable to be entered in the logistic regression analysis. A test of the full model with all five predictors against a "constant only" model was significant χ^2 (5, N=118) = 31.035, $p<.001$. Prediction success for "used informal help" was 84.0% and the overall success rate was 71.2%. This is an increase from step two indicating an improvement to the model with the addition of need. When all variables were entered in the equation, only attitude [z=4.781, $p=.029$] and age [z=7.285, $p=.007$] made a unique contribution to the prediction of informal mental health. According to the Wald criterion age, makes the greatest prediction to use of informal sources of help. See Table 22.

Table 22.

Logistic Regression analysis of significant predisposing, enabling and need variables: The prediction of contact with formal mental health services.

Variable	*B*	*SE*	*Wald (z-ratio)*	*Odds Ratio*	*P*
Attitude	-.251	.115	4.781	.778	.029*
Gender	-.752	.462	2.647	.471	.104
Age	-.048	.018	7.285	.953	.007**
Community Services Card	-.949	.551	2.959	.387	.085
GHQ	.084	.050	2.813	1.088	.093
Constant	5.333	2.210	5.824	206.983	.016

-2 Log likelihood 123.761 Cox & Snell R Square .231 Nagelkerke R Square .317

$p<0.05$* $p<0.001$**

Table 23 illustrates the three steps of the model and completed logistic regression analysis for formal mental health use. Odds ratios for the predisposing, enabling and need characteristics are presented.

Table 23.

Predictors of informal mental health use (odds ratios with 95% confidence intervals)

Determinants	Predisposing factors	Predisposing and enabling factors	Predisposing, enabling and need factors
Predisposing factors			
Attitude	.797 (.644-.987)*	.762 (.609-.953)*	.778 (.621-.974)*
Gender	.429 (.185-.996)*	.528 (.218-1.276)	.471 (.190-1.167)
Age	.958 (.928-.989)**	.952 (.920-.985)**	.953 (.920-.987)**
Enabling factors			
Community Services Card		.325 (.111-.946)*	.387 (.131-1.141)
Need			1.088 (.986-1.201)
GHQ			

-2 Log likelihood 113.724 Cox & Snell R Square 98.218 Nagelkerke R Square 91.675

$p<0.05$* $p<0.001$**

Step One

The first variables to be entered into the logistic regression model comprised the predisposing variables. Due to the limited number of participants, only the predisposing variables that were found to have a significant correlation with formal use were entered in the model. These included attitude, gender, and ethnicity. Prediction success for "used formal help" was unimpressive, with 26.7% of people using formal help correctly predicted for. The overall success rate however, was 77.9%. According to the Wald criterion, ethnicity did not make a unique contribution to the prediction of formal mental health use z= 2.485, $p>.001$. Ethnicity was therefore not included in any further analysis. The results are presented in Table 24.

Table 24.

Logistic Regression analysis of significant predisposing variables: The prediction of contact with formal mental health services.

Variable	*B*	*SE*	*Wald (z-ratio)*	*Odds Ratio*	*P*
Attitude	-.267	.120	5.004	.765	.025*
Gender	-1.270	.565	5.054	.281	.025*
Ethnicity	.952	.604	2.485	2.591	.115
Constant	.708	1.389	.260	2.030	.610
-2 Log likelihood 113.724 Cox & Snell R Square .140 Nagelkerke R Square .204					

$p<0.05$* $p<0.001$**

Step Two

The next variables entered into the equation were the enabling variables. The enabling variables with demonstrated significant correlations were included. The Community Services Card and availability were therefore examined. Prediction success for "used formal help" was 53.1%. The overall success rate was 83.1%. According to the Wald criterion, with the addition of enabling variables, attitude or gender did not make a unique contribution to the prediction of formal mental health use [z= 3.436, $p>.001$] and [z=3.662, $p>.001$] respectively. See Table 25.

Table 25.

Logistic Regression analysis of significant predisposing and enabling variables: The prediction of contact with formal mental health services.

Variable	*B*	*SE*	*Wald (z-ratio)*	*Odds Ratio*	*P*
Attitude	-.238	.128	3.436	.789	.064
Gender	-1.232	.644	3.662	.292	.056
Community Services Card	-1.196	.498	5.775	.302	.016*
Availability	.272	.069	15.295	1.312	.000**
Constant	2.172	1.467	2.194	8.779	.139
-2 Log likelihood 98.218 Cox & Snell R Square .286 Nagelkerke R Square .415					

$p<0.05$* $p<0.001$**

Step Three

Need was the last variable to be entered in the logistic regression analysis, as it is predicted to make the largest unique contribution to service use. A test of the full model with all five predictors against a "constant only" model was significant χ^2 (4, N=118) = 46.251, $p<.001$. Prediction success for "used formal help" was 56.3% and the overall success rate was 83.9%. According to the Wald criterion, when all variables were entered in the equation, attitude and the Community Services Card did not make a unique contribution to the prediction of formal mental health use z= 2.635, $p>.001$ and z=3.796, $p>.001$ respectively. This is depicted in Table 26.

Table 26.

Logistic Regression analysis of significant predisposing, enabling and need variables: The prediction of contact with formal mental health services.

Variable	*B*	*SE*	*Wald (z-ratio)*	*Odds Ratio*	*P*
Attitude	-.212	.130	2.635	.809	.105
Gender	1.477	.665	4.929	4.381	.026*
Availability	.291	.074	15.300	1.338	.000**
Community Services Card	-1.020	.524	3.796	.361	.051
Need (GHQ)	.125	.051	5.962	1.133	.015*
Constant	-4.222	2.618	2.599	.015	.107
-2 Log likelihood 91.675 Cox & Snell R Square .324 Nagelkerke R Square .470					
$p<0.05$* $p<0.001$**					

Table 27 illustrates the three steps of the model and completed logistic regression analysis for formal mental health use. Odds ratios for the predisposing, enabling and need characteristics are presented. These results show that gender, availability and need significantly contribute to the prediction of formal mental health use. Availability accounts for the greatest variance. This indicates that if participants perceive services as easily available they are more likely to utilise these services.

Table 27.

Predictors of formal mental health use (odds ratios with 95% confidence intervals)

Determinants	Predisposing factors	Predisposing and enabling factors	Predisposing, enabling and need factors
<u>Predisposing factors</u>			
Attitude	.765 (.605-.967)*	.789 (.613-1.014)	.809 (.627-1.045)
Gender	.281 (.093-.850)*	.292 (.083-1.504)	.228 (.062-.841)*
<u>Enabling factors</u>			
Availability		.302 (.114-.802)**	1.338 (1.156-1.548)**
Community Services Card		1.312 (1.145-1.504)*	.361 (.129-1.006)
<u>Need</u>			
GHQ			1.133 (1.025-1.252)*
-2 Log likelihood	113.724	98.218	91.675
$p<0.05$* $p<0.001$**			

DISCUSSION

Summary and Implications of findings

The present study explored patterns of mental health service utilisation and in particular investigated characteristics that facilitate and impede mental health service use in New Zealand. The objectives of this study were to provide a descriptive account of the nature and extent of formal and informal mental health service utilisation; to provide a descriptive account of satisfaction with formal mental health services; and to test part of the fourth phase of Andersen's model and determine the extent to which predisposing, enabling, and need characteristics account for variance among users and nonusers of mental health services in the lower North Island of New Zealand.

Related to these three objectives were the hypotheses that were tested and supported within this study. These three hypotheses were as follows: predisposing, enabling, and need characteristics were related to the frequency of informal and formal service use; related to satisfaction with formal service use; and predicted contact with informal and formal mental health services.

Informal Help Sources

Part of the first research objective was to describe the level of informal mental health service utilisation in the lower North Island of New Zealand. The results indicated that 63.3% of participants use informal sources of help for psychological distress. Friends and family/whānau were the most commonly used sources of help. This result is similar to findings in previous research, which have indicated that informal sources of help are the predominant source of care. Furthermore, seeking informal help is often the first step to obtaining other sources of help (Angermeyer et al., 2001; Kenneth et al., 1996; Rabinowitz et al., 1999; Rickwood & Braithwaite, 1994). It has been suggested that there are multiple steps to seeking help, including recognising the problem, deciding to seek help, and contacting the service (Kenneth et al., 1996). Informal help sources assist the person to recognise the problem and decide what action needs to be taken. The decision to seek formal professional help is therefore highly influenced by consultation with informal sources of help (Angermeyer et al., 2001; Kenneth et al., 1996; Rabinowitz et al., 1999; Rickwood & Braithwaite, 1994).

The informal components of hypothesis one were supported. Predisposing characteristics (gender, social support, age, employment; and attitude), enabling characteristics (affordability and possession of a Community Services Card (CSC)) and need characteristics were related to informal use.

The findings indicated that participants who were female, had good levels of social support; and reported high psychological need were more likely to use informal help and to use this help more frequently than other participants. In addition younger participants were found to be more likely to use informal help than older respondents, but not utilise this help frequently. These findings were consistent with previous research.

Not only are females more likely to seek help; they will also use these sources of help more frequently than men. It has been suggested that women are higher users of informal help than men because society encourages women to express their worries more than men (Parslow & Jorm, 2000; Cauce at al., 2002; Cook, 1984; Garland & Zigler, 1994; Millman, 2001; Smith, 1998). In addition, the availability of social support increased the use of informal help as well as predicted contact with informal help. This was an expected result as social support often provides an informal service for psychological support (Rickwood & Braithwaite, 1994; Green et al., 2002). Furthermore, people are unlikely to seek help from informal supports unless this help is required. Therefore it was a logical finding that people reporting psychological need are more likely to seek informal help and use it more frequently than people who are psychologically well.

The 53-69 year old group in this study utilised less informal help than the other age groups. It is difficult to interpret the findings from this research as the age group in question ranges from middle age into older age (53-69 years). The life stresses and developmental tasks will differ for a person of 53 years compared to that of a person of 69 years. Therefore, there could be several explanations for the low use of informal support found in this study. One possible explanation, for example could be that this age group is at a stable life stage and therefore, have less reason to seek psychological help. These findings are consistent with previous research, which has indicated that

older and younger age groups are less likely to seek help for psychological problems. Studies have suggested that the middle age groups (between 35-55 years) are most likely to seek help (Parslow and Jorm, 2001a; Rabinowitz et al, 1999).

Further users and frequent users of informal help were, students; respondents with positive attitudes towards mental health services; respondents who reported affordability as a barrier to formal mental health use and respondents who possessed a Community Services Card (CSC). These findings were not reported consistently throughout previous literature.

A possible explanation for students reporting as high informal users is that the lifestyles of students provide larger social networks and access to social support. Learning institutions enable high levels of social contact; similarly the flatting environment of many students provides easy access to informal help. Alternatively this finding could suggest that youth use more informal supports, as the majority of students are of a younger age. A more definitive explanation for these findings requires further research and is therefore recommended for future exploration. Furthermore, participants reporting more positive attitudes towards mental health services were more likely to have contact with informal help and use it more frequently than participants who had less favourable attitudes. These findings may be indicative of positive attitudes towards help seeking in general, resulting in a greater likelihood of seeking help and higher continued use.

The findings suggested that people who report financial barriers to utilisation are more likely to seek help from informal sources, and utilise these sources of help more frequently than people reporting no financial barriers to formal use. Related to this was the finding that participants on lower incomes (represented by possession of a Community Services Card) are both more likely to utilise informal help, and use it more frequently. New Zealand research has indicated there are higher mental health care needs among those with lower socio-economic status due to greater stressors this group experience (Abas et al., 2003). Overseas research has indicated that people with lower socioeconomic status tend not to utilise professional help except in extreme circumstances (Briones et al., 1990). These findings may therefore, suggest that people with lower socio-economic status tend to use informal help instead of mental health

services unless the psychological need is high. This is an important finding and warrants further research.

Frequency of Formal Mental Health use

The first research objective also included a descriptive account of formal mental health service utilisation in the lower North Island of New Zealand. Within this study 26.6% of participants used formal mental health services, with the majority of users most frequently receiving help from a GP. This is consistent with the research that has indicated that the first and most frequent choice of assistance for mental health issues is the General Practitioner (Angermeyer et al., 2001; Farberman, 1997; Hornblow et al., 1990; Kenneth et al., 1996; Murstein & Fontaine, 1993; Rabinowitz et al., 1999; Wells et al., 1994). Hornblow et al (1990) suggested that at the primary care level the GPs skills in recognition and management of mental illness, as well as their readiness to refer to speciality sectors, affect access to mental health services. This highlights the importance of primary care and its influence on utilisation of mental health services. It is therefore, recommended that future research examines the impact that professionals at the primary care level play in service utilisation.

Psychologists and psychiatrists were amongst the least frequent source of help used by participants. One explanation for this finding is that these professionals generally work in the specialty mental health sector, treating clients with chronic and acute issues. It is, likely that fewer participants require this level of formal intervention. Consistent with this explanation, research has suggested that choice of mental health provider is related to severity of need. People with higher need are more likely to seek care in the specialised mental health sector (Stefl & Prosperi, 1985). Another explanation is that people are not being referred on to the specialist professionals. Alternatively people could have difficulties accessing the specialty mental health sector. Public mental health services are targeted to people who are considered most in need (Cheyne, O'Brien, & Belgrave, 2000). As a result, access to services is limited due to long waitlists for clients who experience less severe mental health problems.

Hypothesis one also referred to formal mental health use. This hypothesis was only partially supported. Predisposing (attitude, social support, ethnicity and gender) and enabling (availability and CSC) characteristics were related to formal use.

Psychological need was related to contact with mental health services, however need did not appear to be related to frequency of formal use.

Consistent with previous research the results showed those who perceived services as easily available; participants with positive attitudes; lower social support; and people with lower socio-economic status (measure by possession of a CSC) are most likely to use mental health services and utilise them frequently. The results also indicated that Māori and women are more likely to utilise formal mental health services than other participants.

People who perceive mental health services as easily available are more likely to have contact with formal mental health services than those who do not. The perception of availability as a barrier to use can also affect the frequency of use. These findings are similar to those of Chadda et al (2001); Goodwin & Andersen (2002) and Stefl & Prosperi (1985) who suggested availability barriers were reported as a reason for not seeking treatment. As previously mentioned, the results from this study also indicated that participants have difficulty accessing the specialty mental health sector. Therefore, a pertinent availability issue is likely to be the long waitlists experienced by clients with lower psychological need. This result suggests that a greater frequency or more available mental health services could assist with utilisation.

In this study, attitude relates to likelihood of use, as well as continued frequency of use. This is a logical finding suggesting that attitude towards professional psychological help is predictable of mental health service utilisation and frequency (Deane & Chamberlain, 1994; Fuller, et al, 2000; Hornblow, et al, 1990; Surgenor, 1985; Wells et al., 1994). In contrast, negative attitudes towards mental health services were an indicator of infrequent service use. Research has shown that negative attitudes towards mental health services are related to treatment fear, stigma, lack of knowledge and lack of awareness about services (Jorm et al, 2000; Leaf et al, 1987, Surgenor, 1985).

Furthermore, it has been found that individuals with a lack of supportive relationships utilise more mental health services (Rickwood & Braithwaite, 1994; Green et al., 2002). As previously discussed the majority of people predominantly turn to informal help to assist in identifying a problem and deciding whether to seek help (Kenneth et al., 1996).

If the individual has few sources of informal support it is likely they will seek professional help sooner (Kenneth et al., 1996; Murstein & Fontaine, 1993; Rickwood & Braithwaite, 1994; Smith, 2003).

People who have a Community Services Card (CSC), but don't have health insurance, are more likely to have contact with mental health services than people with health insurance but no CSC. Research has indicated that health insurance is facilitative to service utilisation (Farberman, 1997). However, in New Zealand, health insurance is more likely to be purchased by people with higher incomes, as they are better able to afford it. In contrast, people on lower incomes are more likely to be granted a Community Services Card. These results are consistent with the suggestion that people with lower socioeconomic status are more likely to use mental health services than people with higher socio-economic status (Abas et al, 2002). One possible explanation for the high frequency of formal use by CSCs holders is that it is likely this group experience greater pressures than people from higher socioeconomic groups. Previous research has suggested several causative factors that may explain the greater need for mental health care by people experiencing socio-economic deprivation. These include high rates of substance abuse; coexisting physical illness; adverse life events; poor housing; and fewer employment opportunities (Abas et al., 2003; Briones et al., 1990; Millman, 2000). Lower socio-economic groups are vulnerable to these life stressors, which are likely to cause greater psychological distress and the need for more psychological assistance. In addition, possession of a CSC may provide more affordable services for people from lower socioeconomic groups and thereby, facilitate utilisation.

In New Zealand there is a concerning indication that Māori are over represented in the mental health sector Te Puni Kōkiri (1996, cited in Durie, 2001). The findings in this study were consistent with these suggestions. However, the results here show a much higher use than previous research has found. More than twice as many Māori participants were using mental health services in this study compared to Pakeha participants. Te Puni Kōkiri (1996, cited in Durie, 2001) found that Māori clients accounted for 14 percent of first admissions to a psychiatric hospital. Other research has shown approximately 16 percent of all mental health clients are Māori (New Zealand Information Source, 2004). The extremely high rates in this thesis may be

indicative of greater interest in this topic by the Māori people who chose to participate. Alternatively, these results may indicate higher use in the lower North Island of New Zealand, rather than nationwide. Another explanation is that utilisation of mental health services is increasing in Māori populations, possibly due to increased social pressures. Te Puni Kokiri (2000) suggested that high utilisation is in part due to higher rates of unemployment, welfare dependency, lower socio-economic status, and poorer health outcomes in Māori, which all increase the risk of mental illness for Māori populations (Ellis & Collings, 1997, Durie, 2001). Whatever the explanation these results are alarming. It is therefore, imperative that further research is undertaken on Māori mental health service use.

The findings from this research indicated that females were more likely to use formal mental health services than men. As previously mentioned, research has consistently shown that gender is related to help seeking. Women are more likely to use help and will use help more often (Parslow & Jorm, 2000; Cauce at al., 2002; Millman, 2001; Smith, 1998). However, this is not consistent with the research conducted by the New Zealand Information Source (2004), which found that men and women of middle age (20 to 64 years) utilise mental health services equally.

Together these findings show that access and use of services is highly influenced by the predisposing and enabling characteristics. Andersen and Newman (1973) stated that if a mental health system is equitable then the predisposing and enabling characteristics should have minimum influence on service use. The findings here indicate that mental health service access is not equally distributed across groups in the lower North Island of New Zealand.

The results regarding the relationship between psychological need and formal mental health use were mixed. Psychological need was related to contact with formal mental health services. However, need only accounted for 9% of the variance in formal use. This is lower than would be expected if need was the highest predictor of use. This finding is however, comparable to previous research that has indicated only a small percentage of people who require mental health services actually utilise them (ECA; Regier et al., 1993; NCS; Kessler et al., 1994, cited in Kenneth et al., 1996). As

discussed previously, this indicates that mental health service use is dependent on many factors aside from psychological need. A surprising finding from this study was that psychological need was not associated with frequency of mental health care. It is expected that people with higher levels of psychological distress would most likely use mental health services more often. One suggestion for this result is related to the findings regarding satisfaction within this study. This result showed that people with higher psychological need are less satisfied with the services provided. It is therefore; possible they are not using formal help as frequently as might be expected due dissatisfaction.

Satisfaction with Formal Mental Health Services

The second research objective was to identify participants' satisfaction with formal mental health services in the lower North Island of New Zealand. Three categories of satisfaction were explored: satisfaction with mental health professional behaviour and knowledge; satisfaction with the intervention and service received and the actual treatment provided. The overall results indicated the majority of people were satisfied with their experiences with mental health services.

Hypothesis two was supported showing that predisposing, enabling, and need characteristics were related to satisfaction with formal mental health services. Participants who did report dissatisfaction with the service included people with University Entrance qualifications and participants who perceived the availability of mental health services as poor. Furthermore, the results suggest that participants likely to utilise a high frequency of mental health services were the least satisfied. This dissatisfaction was with at least one aspect of their experience of the mental health system and included people reporting greater psychological need; women; Māori and holders of CSC's.

The results indicated that people with University Entrance qualifications (middle level qualifications) were less satisfied with all aspects of the mental health service than people with both higher and lower types of qualifications. It is possible that this particular group of participants had expectations that were not met in the service they received. One previous study showed that lower education was associated with unmet need. In particular, participants had expectations of receiving medication that were not

addressed (Parslow & Jorm, 2001b). It is difficult to interpret this finding, and it warrants further research.

The findings on enabling characteristics indicated that participants rated all aspects of satisfaction higher when they perceived the availability of mental health services to be reasonable. Furthermore, participants who received more treatment indicated that services were easily available. This is consistent with the literature, which has found that clients who have difficultly obtaining help are less satisfied (Badger et al, 2000; Chitwood et al., 2002).

The results of this study indicated that high users of mental health services are dissatisfied with the services they have received. This study showed that lower levels of satisfaction were associated with higher psychological need. In addition, women were less satisfied than men with the mental health professional's behaviour, as well as the intervention and service provided. Furthermore, holders of CSCs were less satisfied with mental health professionals and the service provided. The findings also suggest that Community Services Cardholder's received more treatment than participants without a CSC.

Satisfaction findings also differed across ethnicity. Māori were less satisfied with the mental health professional's behaviour than Pakeha. Interestingly, in the sample studied, Māori received more treatment than Pakeha or other ethnicities. Maori respondents received similar treatment types as Pakeha in all but hospitalisation and culturally based interventions. Less than half of Maori participants however, reported receiving a culturally based treatment. One possible explanation then is that some services may not have been culturally appropriate. Research has indicated that clients are more likely to rate interventions as effective if the mental health professional is culturally literate, Penn & Mueser (1996, cited in Solomon, 2000; Zane et al., 2004). Another possible explanation for this finding is that the experience of hospitalisation may have been negative, thereby resulting in a lower level of satisfaction.

The lack of research on satisfaction with mental health services in New Zealand is concerning as it is an important measure for policy improvements. The findings from

this thesis have suggested that people who frequently use mental health services are the least satisfied. This low level of satisfaction in high service users is alarming and indicates inadequate care in the mental health sector. Exploring consumer satisfaction offers information on the standard of continuous care, as well as the future use of mental health services. In addition, examination of satisfaction can provide information to assist with necessary improvements in access and the effective delivery of care. It is, therefore, recommended that future research focus on satisfaction as a vital aspect of mental health service utilisation.

The Utilisation Model - Informal help

The third research objective was to determine the extent to which predisposing, enabling and need characteristics account for variance among users and non-users of mental health services in the lower North Island of New Zealand. Related to this objective, was hypothesis three which stated that predisposing, enabling, and need characteristics will predict contact with informal help sources. This was tested through logistic regression and supported within this study.

The predisposing characteristics that correlated with informal use were attitude, social support (having others to talk to about problems), gender, and age. When all predisposing characteristics were accounted for, social support no longer made a unique contribution to the prediction of informal mental health use. The enabling characteristics examined in this study included the Community Services Card and affordability. However, affordability did not make a unique contribution to the prediction of informal mental health use over the CSC. With the addition, of the enabling characteristics in the model, the statistical significance of gender disappeared. So that attitude, age, and CSCs were now the significant predictors of informal help seeking.

When all predisposing, enabling and need characteristics were entered in the model, the results indicated that age had the greatest unique contribution to informal use, followed by attitude. This result suggests that predisposing characteristics heavily influence informal use. In other words, the propensity to seek informal help is mostly dependent on an individual's age and attitude.

The Utilisation Model – Formal Mental Health Service Use

The third research objective also explored contact with formal mental health services. Hypothesis three was also relevant to formal mental health use and stated that predisposing, enabling, and need characteristics will predict contact with formal mental health services. Logistic regression was used to investigate the nature and extent of formal utilisation. This hypothesis was supported within this study.

The significant predisposing characteristics entered into the model, included attitude, gender, and ethnicity. The significance of ethnicity disappeared after all predisposing variables were controlled and accounted for. This indicates that ethnicity did not make any unique contribution to formal service use, over and above the characteristics of attitude and gender. After the enabling factors of the Community Services Card and availability were entered into the model, attitude and gender no longer emerged as significant factors.

When all the predisposing, enabling and need characteristics were controlled in the model, availability and need emerged, and gender re-emerged, as significant predictors of use. The findings from this research, therefore, indicated that availability, gender, and need accounted for the most variance in formal mental health use. Availability, however, made the greatest unique contribution to utilisation. Consequently, adequate availability of services predicts utilisation over and above psychological need and gender. This is a concerning finding as it indicates that mental health care is not distributed equally or adequately within the community. The implications of these findings can help identify areas of unmet need and highlight areas of required change in order to improve mental health service access in New Zealand.

Utilisation studies that examine mental health use as an overall outcome are inherently problematic. People with symptoms of mental illness may seek help in different ways, depending on their circumstances at any given time. It has been suggested that this approach may merge the different reasons why contact and continuous use occur (Smith, 1998). However, the examination of specific symptoms of psychological need that may prompt a person to utilise a service could provide a more in-depth investigation of these issues. It is therefore, recommended that future research should

focus on examination of episodes of mental illness and how this motivates use rather than overall service use.

Limitations

Internal validity issues

This study used a cross-sectional design and data was analysed by correlation-based statistics. This design was appropriate for the nature of this thesis. However, causal attributions cannot be made from the results alone. Mental health utilisation is a dynamically complicated process that may change over time. For this reason, it seems that future research would benefit from examining the process of utilisation through the application of a longitudinal design, in order to investigate causal relationships.

External validity issues

There are limitations as to what extent this study can be generalised to the New Zealand population. The sample of participants in this study was not representative for gender or for mental health service use. There was over-sampling of women and users of mental health services, possibly due to an increased interest in this topic from these groups.

Measurement issues

There were a number of measurement issues in this study that may have contributed to the under or over estimation of relationships. The measure of attitude had a lower reliability than was desirable, even after items had been removed (Cronbach alpha coefficient=.64). It was originally decided to use few items on the attitude scale, due to the large number of variables already being measured within this study. However, this variable would have been measured more reliably with more items.

The findings from this study indicated that need was not the predominant predictor of formal mental health services. One possible reason for this result was the need measure used within this study. The GHQ-12 examined well being and distress over a one week period, where as service use was measured over 12 months. This discrepancy could have affected the prediction of need in this study. Another explanation was the use of a single measure of need. Within this study it was decided to use one need indicator as the questionnaire already examined many variables, and a questionnaire that was

considered too lengthy by participants could have resulted in associated validity issues. However, the need indicator is one self-report measure that only examines certain aspects of individual's mental health issues. One option to resolve this problem would have been to include several measures of need. Furthermore, due to the study design, a measure of professional evaluation of mental health was not feasible. This would however, have provided a more accurate measure of mental health status and is recommended for future research.

The frequency measures examined how many services were used as well as how often they were used, which extends prior research. Unfortunately, the frequency measures of "every day, every week, every month, every 3-6 months, every 6-12 months and none" were not originally continuous as there were no regular intervals between them. In order to create meaningful intervals between these measures, each was converted into a number based on its occurrence during the year. For example, one week was converted into 52, to represent the 52 weeks of the year. This transformation was not entirely satisfactory and multivariate analyses were not performed as the results may have been skewed. It would have been more appropriate to measure frequency by asking participants how many times in a one-year period they received help from each professional.

It was the original intention of the present research to examine satisfaction measures using multivariate analysis. However, the response rate did not provide adequate statistical power to analyse these measures accurately (Tabachnick & Fidel, 2001). Consequently satisfaction was examined through descriptive analysis.

Conclusions

Research has consistently indicated that only a small percentage of people who need mental health services ever receive treatment (World Health Organisation, 2001). It is therefore vital that a better understanding is developed of the barriers that inhibit utilisation, in order to increase mental health service utilisation. This study has described what formal mental health services people use, how often and why. In addition, it has examined the types of informal help used; the frequency of use and the reasons people use informal help. The present study has provided a comprehensive account of the nature and extent of formal and informal mental health service utilisation

in the lower North Island of New Zealand. This study has also provided a descriptive account of satisfaction with formal mental health services. Furthermore, this study has contributed to the support of Andersen's Behavioural Model of Health Care Utilisation in New Zealand by examining the fourth part of this model.

The major findings of this research indicated that informal help was used more than formal mental health services. In addition, participants were more likely to use informal help if they perceived barriers to formal services. It was found that the highest users of mental health services were the least satisfied. The majority of participants were receiving formal psychological help from a General Practitioner (GP). Furthermore, the most significant predictors of formal utilisation were having a positive attitude towards mental health services; being female; identifying as Māori; possessing a Community Services Card; and perceived psychological need. However, it emerged that availability of services was the predominant predictor of formal mental health use. These findings must be viewed with caution due to the small sample size and further study is required.

It is vitally important that there is understanding of who uses mental health services and why. It is imperative that there is knowledge regarding the barriers and facilitators to utilisation increase service use. Furthermore, knowledge of the nature of satisfaction with these services is indeed crucial to improve service delivery. This knowledge and understanding is the first step in improving care, assisting in delivery and access of services and in providing equitable mental health services in New Zealand. This thesis has provided a preliminary aid to our understanding in this field and supplied a foundation for future research on mental health service utilisation.

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APPENDIX A

The Questionnaire

Mental health care utilization

This section is about your methods for seeking help. Please answer all the following questions

1. Please indicate how often you have sought help for an emotional, psychological or mental health problem from one of these people in the last YEAR:
(Mark all that apply)

		Every Day	Every Week	Every Month	Every 3-6 Months	Every 6-12 Months	None
a	Friends	O	O	O	O	O	O
b	Family/Whanau	O	O	O	O	O	O
c	Work colleagues	O	O	O	O	O	O
d	Clergy/priest or spiritual guidance	O	O	O	O	O	O
e	Self-help groups	O	O	O	O	O	O
f	Telephone support: for example Samaritans	O	O	O	O	O	O
g	Iwi	O	O	O	O	O	O
h	Tohunga	O	O	O	O	O	O
i	Kaumatua	O	O	O	O	O	O
j	Other. Please state	O	O	O	O	O	O

2. Please indicate how often you have received help for an emotional, psychological or mental health problem from one of these <u>professionals</u> in the last YEAR:
(Mark all that apply)

		Every Day	Every Week	Every Month	Every 3-6 Months	Every 6-12 Months	None
a	General Practioner (GP)	O	O	O	O	O	O
b	Psychologist	O	O	O	O	O	O
c	Counsellor/therapist	O	O	O	O	O	O
d	Psychiatrist	O	O	O	O	O	O
e	Other mental health professional: **for example** social worker, nurse, occupational therapist	O	O	O	O	O	O
f	Family therapist	O	O	O	O	O	O
g	Drug and alcohol counsellor	O	O	O	O	O	O
h	Marriage/couples counsellor	O	O	O	O	O	O

If you answered <u>No</u> to all of question 2 (professional help), please go to question 6

If you answered <u>Yes</u> to any of question 2 (professional help), please answer questions 3-5 (Satisfaction)

Satisfaction

This section is about your overall opinion of the professional help you received in the last YEAR. Remember a mental health service is a range of possible services that are provided by the professionals in the health care system.
Consider the mental health service you received and indicate your view on the following

3.	*(Please tick one circle on each line)*	1. **Strongly Agree**	2. **Agree**	3. **Neither Agree or Disagree**	4. **Disagree**	5. **Strongly Disagree**
a	I contributed to the decisions made about my treatment	O	O	O	O	O
b	My opinion was listened to	O	O	O	O	O
c	I was able to discuss my problems easily	O	O	O	O	O
d	I found the mental health professional to be culturally appropriate	O	O	O	O	O

What help was provided to you in the last YEAR? Please indicate below

4.	*(Please tick all circles that apply to you)*	**YES**
a	Medication or prescription items e.g. antidepressants	O
b	Hospitalisation	O
c	Therapy/counselling	O
d	Culturally based treatment e.g. Maori models of mental health	O
e	Other (Please state)	O

What is you opinion of the help that was provided? Please indicate below

5.	*(Please tick one circle on each line)*	1. **Strongly Agree**	2. **Agree**	3. **Neither Agree or Disagree**	4. **Disagree**	5. **Strongly Disagree**
a	The help provided was useful	O	O	O	O	O
b	I was satisfied with the help that was provided	O	O	O	O	O
c	I would have liked to have been offered another type of help. (Please specify below)	O	O	O	O	O

Accessibility

This section is about access to mental health services. Please indicate your view on the following:

6.	*(Please tick one circle on each line)*	1. **Strongly Agree**	2. **Agree**	3. **Neither Agree or Disagree**	4. **Disagree**	5. **Strongly Disagree**
a	I know how to access a mental health service should I need it	O	O	O	O	O
b	It is difficult to use a mental health service due to lack of transport	O	O	O	O	O
c	It is difficult to use a mental health service due to other responsibilities	O	O	O	O	O

Affordability of mental health services

This section is about your ability to afford mental health services. Please answer the following questions:

7.	*(Please tick one circle)*	1. **Strongly Agree**	2. **Agree**	3. **Neither Agree or Disagree**	4. **Disagree**	5. **Strongly Disagree**
a	It is difficult for me to use a mental health service due to the cost of the service	O	O	O	O	O

8.	**Do you have health insurance?**	1. **Yes**	2. **No**	3. **I don't know**
	(Please tick one circle)			
		O	O	O

9.	**Do you have a community services card?**	1. **Yes**	2. **No**	3. **I don't know**
	(Please tick one circle)			
		O	O	O

Availability

This section is about the availability of mental health services. Please indicate your view on the following:

10.	*(please tick one circle on each line)*	1. **Strongly Agree**	2. **Agree**	3. **Neither Agree or Disagree**	4. **Disagree**	5. **Strongly Disagree**
a	I have to wait to get an appointment at a mental health service	O	O	O	O	O
b	I have to travel a long way to use a mental health service	O	O	O	O	O
c	The availability of mental health services in my area is satisfactory	O	O	O	O	O

Attitudes to Mental Health Services

This section is about your beliefs and attitudes to mental health services. Please indicate your view on the following:

11.	*(Please tick one circle on each line)*	1. **Strongly Agree**	2. **Agree**	3. **Neither Agree or Disagree**	4. **Disagree**	5. **Strongly Disagree**
a	Other people should seek help for psychological distress	O	O	O	O	O
b	I prefer handling psychological distress on my own	O	O	O	O	O
c	I think a mental health professional could understand my problems	O	O	O	O	O
d	I would be concerned about what people think of me should I access a mental health service	O	O	O	O	O
e	If I had a mental health problem, I think it would get better with talking to a mental health professional	O	O	O	O	O
f	If I had a mental health problem, I think it would get better with medication	O	O	O	O	O

Family and Friends

This section is about the support you receive from family and friends. Please indicate your view on the following:

	(Please tick one circle on each line)	None	1	2	3	4	5	6	7 or more
12.	How many times during the past week did you spend time with someone who does not live with you?	O	O	O	O	O	O	O	O
13.	How many times did you talk to someone (friends, relatives or others) on the telephone in the past week?	O	O	O	O	O	O	O	O
14.	How often did you go to meetings (clubs, religion, or other groups) that you belong to in the past week?	O	O	O	O	O	O	O	O

15.	**Do you talk about your deepest problems with at least some of your family and friends?**	**Hardly Ever**	**Some of the time**	**Most of the time**
	(Please tick one circle)	1.O	2.O	3.O

16.	**How many people in your local area do you feel close to and can depend on (other than members of your family)?** *(Please tick one circle)*	None	1.O
		1-2 people	2.O
		More than 2 people	3.O

17.	**Which of the following best describes your living arrangements?** *(Mark all that apply to you)*	
a	Living alone	1.O
b	Living with spouse/partner	2.O
c	Living with mother and/or father	3.O
d	Living with children under 18	4.O
e	Living with adult children	5.O
f	Living with other family members	6.O
g	Living with friends/flatmates	7.O
h	Living in a retirement village	8.O
i	Living in supported accommodation	9.O

Well-being and Distress

This section is about how you have been feeling over the last FEW WEEKS. Please answer ALL the questions simply by <u>circling</u> the answer that you think most applies to you. Remember that we want to know about present and recent complaints, NOT those that you had in the past.

(Please circle one answer on each line)

18.	Have you recently....	1.	2.	3.	4.
a	Been able to concentrate on whatever you're doing?	Better than usual	Same as usual	Less than usual	Much less than usual
b	Lost much sleep over worry?	Not at all	No more than usual	Rather more than usual	Much more than usual
c	Felt that you are playing a useful part in things?	More so than usual	Same as usual	Less useful than usual	Much less useful
d	Felt capable of making decisions about things?	More so than usual	Same as usual	Less so than usual	Much less than usual
e	Felt constantly under strain?	Not at all	No more than usual	Rather more than usual	Much more than usual
f	Felt you couldn't over come your difficulties?	Not at all	No more than usual	Rather more than usual	Much more than usual
g	Been able to enjoy your normal day-to-day activities?	More than usual	Same as usual	Less so than usual	Much less than usual
h	Been able to face up to your problems?	More than usual	Same as usual	Less so than usual	Much less able
i	Been feeling unhappy and depressed?	Not at all	No more than usual	Rather more than usual	Much more than usual
j	Been losing confidence in yourself?	Not at all	No more than usual	Rather more than usual	Much more than usual
k	Been thinking of yourself as a worthless person?	Not at all	No more than usual	Rather more than usual	Much more than usual
l	Been feeling reasonably happy all things considered?	More so than usual	Same as usual	Less so than usual	Much less than usual

Background

This section is asking for background information about our respondents. Please answer all the following questions:

19.	**Are you?**	**Male**	**Female**
		1. O	2. O

20.	**What is your age in years?**	

21.	**Where do you live?** **(Please state that town or city)**	

22.	**How would you describe your main form of employment?** *(Please tick one circle)*	
a	Employed full-time (30 hours a week or more)	1.O
b	Employed part- time (less than 30 hours a week)	2.O
c	Student	3.O
d	Self-employed	4.O
e	Home maker	5.O
f	Not in paid employment	6.O

23.	**Which ethnic group do you identify most with?** *(Please tick one circle)*	
a	NZ European	1.O
b	NZ Maori	2.O
c	Pacific Islander	3.O
d	Asian	4.O
e	Indian	5.O
f	European	6.O
g	Other (please specify)	7.O

Background continued

24.	**What is your highest qualification?** *(Please tick one circle)*	
a	No educational qualifications	1.O
b	School Certificate (or equivalent)	2.O
c	University Entrance (or equivalent)	3.O
d	Trade certificate or professional certificate or diploma	4.O
e	University degree	5.O

APPENDIX B

Covering Letter for the Present Study

Massey University

Utilisation of Mental Health Services

Dear <Name>:

My name is Emily Peterson and I am a Masters Thesis student at the School of Psychology at Massey University. I am supervised by Dr Christine Stephens who is a lecturer from the School of Psychology at Massey University.

We are writing to ask for your help with a survey on New Zealanders' use of and access to mental health services such as psychologists or counsellors and others. This will include information about the current mental health and well-being of participants. At present there is very little information on the factors that assist and prevent access and use of mental health services within New Zealand. We seek to understand the influence of these factors and learn more about people's experiences with these services.

Your name was selected at random from among New Zealanders living in the lower North Island who are registered on the electoral roll. Any information that you provide will be anonymous; it will not be linked to your name or address, and will only be used for the purpose of this study.

We are interested in replies from everyone, including those who have had no experience with mental health services. However, your participation is voluntary.
If you are willing to take part, please answer the questions on the enclosed form and return them to us in the pre-paid envelope (there is no stamp required) within two weeks. Please note that the completion of your questionnaire implies that you consent to participate in this survey. As a participant, you have the right to decline to answer any questions.

If you would like a summary of the results of the study, please complete the request form included with the questionnaire. This request form will be stored separately from the questionnaire as soon as we receive it and the record will be destroyed once we have sent you the information.

If you would like any further information or are concerned about your experiences and would like assistance, please contact:
Dr Christine Stephens at the above address or phone 06 350 5799 extn. 2081
If you feel distressed NOW and would like someone to talk to, you can phone:
SAMARITANS 06 358 2442 or 04 473 9739
WARM-LINE 0800 200 207 (providing a free peer-support help line)

Emily Peterson Dr Christine Stephens

This project has been reviewed and approved by the Massey University Human Ethics Committee, PN Application 04/114. If you have any concerns about the conduct of this research, please contact Professor Sylvia V Rumball, Chair, Massey University Campus Human Ethics Committee: Palmerston North, telephone 06 350 5249, email humanethicspn@massey.ac.nz.

Massey University

Te Whakamahia o ngä Ratonga Hauora Hinengaro

Tënä koe

Tënä tätou. Ko Emily Peterson töku nei ingoa. He äkonga ahau e whai ana i taku tuhinga paerua ki roto i Te Kura Hinengaro Tangata i Te Kunenga ki Pürehuroa. Ko Dr Christine Stephens taku kaiarataki. He kaiwhakaako ia nö roto i te Te Kura Hinengaro Tangata i Te Kunenga ki Pürehuroa.

E tuhi atu ana mätou ki a koe kia äwhina mai i te rangahau nei e titiro ana ki tä te tangata o Aotearoa whakamahi, whakauru ki roto i ngä ratonga hinengaro hauora, përä i ngä kaimätai hinengaro, i ngä kaiärahi, i a wai ake ränei. He kimi körero hoki te mahi mö te hauora o te hinengaro, o ngä ähuatanga katoa o te kaiuru i te wä o te whakawhitinga körero. I tënei wä he itiiti noa iho te pärongo mö ngä ähuatanga e äwhina ana, e whakaärai ana ränei i te whakamahia o te ratonga hauora hinengaro ki roto i Aotearoa. E rapu märamatanga ana mätou i te pänga o ënei ähuatanga me ngä wheako tangata ki ënei ratonga.

Kua tipakohia noatia tö ingoa mai i te rärangi pöti e rehitatia nei e koe. Ko koe me ëtehi anö tängata o Aotearoa e noho whakatetonga ana i te Ika-a-Mäui. Ki te homai he körero, ka noho matatapu taua körero; e kore e whäkina atu tö ingoa, tö wähi noho ränei. Mä tënei rangahau anake taua körero kia whai hua ai.

E hiahia ana mätou kia rongo mai i tënä tangata, i tënä tangata, ahakoa käore anö pea ëtehi kia pä atu ki ngä ratonga hauora hinengaro. Heoi anö rä, kei a koe te whiriwhiri.
Mehemea ka whakaae koe kia uru mai, tënä whakautua mai koa ngä pätai e rau atu nei ka whakahoki ai ki a mätou i roto i te kopaki kore utu (Hei aha te pane kuini) i roto i ngä wiki e rua. Tënä koa, kia möhiotia inä oti ana tö rärangi pätai te whakautu, he tohu tërä kua whakaae mai koe kia uru ki roto i tënei rangahau. He kaiuru koe, nä reira, kei a koe te whiriwhiri kia kaua rä e whakautu i ëtehi pätai.

Ki te pïrangi koe ki te whakaräpopototanga o ngä hua o tënei rangahau, tënä whakakïkï i te puka tono kei roto i te rärangi pätai. Ka pupuritia motuhaketia tënei puka mai i te rärangi pätai ina tae mai ana, ä, ka whakakorehia i te wä ka tukuna ngä körero räpopoto ki a koe.

Ki te hiahia koe ki ëtehi anö körero, kei te äwangawanga ränei i runga i ö wheako, ä, kei te pirangi äwhina, tënä whakapä mai koa ki:

Dr Christine Stephens ki te wähi i runga ake nei, waea mai ränei 06 350 5799 peka. 2081
Ki te äwangawanga koe INÄIANEI, ä, kei te pïrangi koe ki te körero ki tëtehi, me waea atu ki:
SAMARITANS 06 358 2442, 04 473 9739 ränei
WARM-LINE 0800 200 207 (providing a free peer-support help line)

Emily Peterson Dr Christine Stephens

Kua arotakengia, kua whakaaetia tënei kaupapa e Massey University Human Ethics Committee, PN Application 04/114. Mehemea he raruraru nöu mö te whakahaere o tënei kaupapa rangahau, whakapä mai koa ki Professor Sylvia V Rumball, Chair, Massey University Campus Human Ethics Committee: Papaioea, waea 06 350 5249, imëra humanethicspn@massey.ac.nz.

APPENDIX C

Form to Request Summary of Study Results

Massey University

Thank you very much for completing this survey
Your time and effort are very much appreciated

All you need to do now is put this questionnaire into the postage-paid envelope supplied and return it to me as soon as you can. If you would like a copy of a summary of the results of this survey sent to you, please write your name and address in the space below. The information you provide will remain confidential and will be kept separate from your individual responses. The summary will be available early next year, so if you change your address before then, please let me know your new address.

Please complete this box if you wish to receive a summary of the results of this survey

Name: _____

_____

Address: _____

_____

_____

APPENDIX D

Reminder Letter for the Present Study

Massey University

Utilisation of Mental Health Services

Two weeks ago you were sent a questionnaire about your opinion and possible experience with mental health services. If you have already returned the questionnaire please accept our thanks and appreciation.

If you have not responded yet we would very much like to hear from you. If you have any questions about the st or need a replacement questionnaire please phone 06 350 5799 ext.2071 or e-mail to C.V.Stephens@massey.ac.1 Thank you for your time.

Dr Christine Stephens Emily Peterson

This project has been reviewed and approved by the Massey University Human Ethics Committee, PN Application 04/114. If you have any concerns about the conduct of this research, please contact Professor Sylvia V Rumball, Chair, Massey University Campus Human Ethics Committee: Palmerston North, telephone 06 350 5249, email humanethicspn@massey.ac.nz.

APPENDIX E

Original Questionnaire (from the questionnaire development study)

Background

This section is asking for background information about our respondents. Please answer all the following questions:

1. Are you?

Male	**Female**
1. O	2. O

2. What is your age in years?

_____

3. Where do you live?
(Please state that town or city)

_____

4. How would you describe your main form of employment?
(Please tick one circle)

a	Employed full-time (30 hours a week or more)	1.O
b	Employed part- time (less than 30 hours a week)	2.O
c	Student	3.O
d	Self-employed	4.O
e	Home maker	5.O
f	Not in paid employment	6.O

5. Which ethnic group do you identify most with?
(Please tick one circle)

a	NZ European	1.O
b	NZ Maori	2.O
c	Pacific Islander	3.O
d	Asian	4.O
e	Indian	5.O
f	European	6.O
g	Other (please specify)	7.O

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6. What is your highest qualification?
(Please tick one circle)

a	No educational qualifications	1.O
b	School Certificate (or equivalent)	2.O
c	University Entrance (or equivalent)	3.O
d	Trade certificate or professional certificate or diploma	4.O
e	University degree	5.O

Family and Friends

This section is about the support you receive from family and friends. Please indicate your view on the following:

(Please tick one circle on each line)

	None	1	2	3	4	5	6	7 or more
7. How many times during the past week did you spend time with someone who does not live with you?	O	O	O	O	O	O	O	O
8. How many times did you talk to someone (friends, relatives or others) on the telephone in the past week?	O	O	O	O	O	O	O	O
9. How often did you go to meetings (clubs, religion, or other groups) that you belong to in the past week?	O	O	O	O	O	O	O	O

10 Do you talk about your deepest problems with at least some of your family and friends?

(Please tick one circle)

Hardly Ever	Some of the time	Most of the time
1.O	2.O	3.O

11 How many people in your local area do you feel close to and can depend on (other than members of your family)?

(Please tick one circle)

None	1.O
1-2 people	2.O
More than 2 people	3.O

12 Which of the following best describes your living arrangements?

(Mark all that apply to you)

a	Living alone	1.O
b	Living with spouse/partner	2.O
c	Living with mother and/or father	3.O
d	Living with children under 18	4.O
e	Living with adult children	5.O
f	Living with other family members	6.O
g	Living with friends/flatmates	7.O
H	Living in a retirement village	8.O
i	Living in supported accommodation	9.O

Attitudes to Mental Health Services

This section is about your beliefs and attitudes to mental health services. Please indicate your view on the following:

13	*(Please tick one circle on each line)*	1. Strongly Agree	2. Agree	3. Neither Agree or Disagree	4. Disagree	5. Strongly Disagree
a	Other people should seek help for psychological distress	O	O	O	O	O
b	I prefer handling psychological distress on my own	O	O	O	O	O
c	I think a mental health professional could understand my problems	O	O	O	O	O
d	I would be concerned about what people think of me should I access a mental health service	O	O	O	O	O
e	If I had a mental health problem, I think it would get better with talking	O	O	O	O	O
f	If I had a mental health problem, I think it would get better with medication	O	O	O	O	O

Affordability of mental health services

This section is about your ability to afford mental health services. Please answer the following questions:

14	*(Please tick one circle)*	1. Strongly Agree	2. Agree	3. Neither Agree or Disagree	4. Disagree	5. Strongly Disagree
a	The cost of visiting a mental health professional would prevent me from using mental health services	O	O	O	O	O

15 Do you have health insurance?

(Please tick one circle)

1. Yes	2. No	3. I don't know
O	O	O

16 Do you have a community services card?

(Please tick one circle)

1. Yes	2. No	3. I don't know
O	O	O

Accessibility

This section is about how to access mental health services. Please indicate your view on the following:

17 *(Please tick one circle on each line)*		**1. Strongly Agree**	**2. Agree**	**3. Neither Agree or Disagree**	**4. Disagree**	**5. Strongly Disagree**
a	Lack of transport would prevent me from using mental health services	O	O	O	O	O
b	I would be unable to drop my commitments to go to an appointment at a mental health service	O	O	O	O	O
c	I know how to access a mental health service should I need it	O	O	O	O	O

Availability

This section is about the availability of mental health services. Please indicate your view on the following:

18 *(Please tick one circle on each line)*		**1. Strongly Agree**	**2. Agree**	**3. Neither Agree or Disagree**	**4. Disagree**	**5. Strongly Disagree**
a	I have to wait to get an appointment at a mental health service	O	O	O	O	O
b	I have to travel a long way to use a mental health service					
c	The availability of mental health services in my area is satisfactory					

Well-being and Distress

This section is about how you have been feeling over the last FEW WEEKS. Please answer ALL the questions simply by <u>circling</u> the answer that you think most applies to you. Remember that we want to know about present and recent complaints, NOT those that you had in the past.

19	*(Please circle one answer on each line)* **Have you recently....**	**1.**	**2.**	**3.**	**4.**
a	Been able to concentrate on whatever you're doing?	Better than usual	Same as usual	Less than usual	Much less than usual
b	Lost much sleep over worry?	Not at all	No more than usual	Rather more than usual	Much more than usual
c	Felt that you are playing a useful part in things?	More so than usual	Same as usual	Less useful than usual	Much less useful
d	Felt capable of making decisions about things?	More so than usual	Same as usual	Less so than usual	Much less than usual
e	Felt constantly under strain?	Not at all	No more than usual	Rather more than usual	Much more than usual
f	Felt you couldn't over come your difficulties?	Not at all	No more than usual	Rather more than usual	Much more than usual
g	Been able to enjoy your normal day-to-day activities?	More than usual	Same as usual	Less so than usual	Much less than usual
h	Been able to face up to your problems?	More than usual	Same as usual	Less so than usual	Much less able
i	Been feeling unhappy and depressed?	Not at all	No more than usual	Rather more than usual	Much more than usual
j	Been losing confidence in yourself?	Not at all	No more than usual	Rather more than usual	Much more than usual
k	Been thinking of yourself as a worthless person?	Not at all	No more than usual	Rather more than usual	Much more than usual
l	Been feeling reasonably happy all things considered?	More so than usual	About the same as usual	Less so than usual	Much less than usual

Mental health Care Utilization

This section is about your methods for seeking help. Please answer all the following questions

20 Please indicate if you have sought help for an emotional, psychological or mental health problem from one of these people in the last YEAR:
(Mark all that apply)

		Yes
a	Friends	O
b	Family/Whanau	O
c	Work colleagues	O
d	Clergy	O
e	Self-help groups	O
f	Iwi	O
g	Tohunga	O
h	Kaumatua	O
i	Other. Please state	O

21 How often have you received this help in the last YEAR? **Number of days** _____ **Not applicable** O

22 Please indicate if you have sought help for an emotional, psychological or mental health problem from one of these <u>professionals</u> in the last YEAR:
(Mark all that apply)

		Yes	No
a	General Practioner (GP)	O	O
b	Psychologist	O	O
c	Counsellor/therapist	O	O
d	Psychiatrist	O	O
e	Other mental health professional: for example social worker, nurse, occupational therapist	O	O
f	Family therapist	O	O
g	Drug and alcohol counsellor	O	O
h	Marriage/couples counsellor	O	O

23 How often have you received this PROFESSIONAL help in the last YEAR? **Number of days** _____ **Not applicable** O

If you answered <u>No</u> to all of question 21 (professional help), please go to the end of the questionnaire

If you answered <u>Yes</u> to any of question 21 (professional help), please answer questions 24- 26

Satisfaction

This section is about your opinion of the professional help you received. Remember we want to know about help you received for a mental health problem, psychological distress or emotional issue only in the last YEAR.

Consider the mental health professional you saw and indicate your view on the following

24	*(Please tick one circle on each line)*	**Strongly Agree**	**Agree**	**Neither Agree or Disagree**	**Disagree**	**Strongly Disagree**
a	I found the mental health professional to be culturally appropriate	O	O	O	O	O
b	I was offered an appointment with a mental health professional who had the same ethnicity as me	O	O	O	O	O
c	I was able to discuss my problems easily with the mental health professional	O	O	O	O	O

What help did this professional provide in the last YEAR? Please indicate below

25	*(Please tick all circles that apply to you)*	**YES**
a	Medication or prescription items e.g. antidepressants	O
b	Hospitalisation	O
c	Therapy/counselling	O
d	Cultural based treatment e.g. Maori models of mental health	O
e	Other (Please state)	O

What is you opinion of the help that was provided? Please indicate below

26	*(Please tick one circle on each line)*	**Strongly Agree**	**Agree**	**Neither Agree or Disagree**	**Disagree**	**Strongly Disagree**
a	I would rate this help as useful	O	O	O	O	O
b	I was satisfied with the help that was provided	O	O	O	O	O
c	I would have like to have been offered another type of help. (Please specify below)	O	O	O	O	O