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5

Psychological distress, mental health problems and use of health services in Ireland

Donna Tedstone Doherty, Rosalyn Moran, Yulia Kartalova-O'Doherty

Improving people's health through research and information

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The Health Research Board (HRB) is the lead agency supporting and funding health research in Ireland. We also have a core role in maintaining health information systems and conducting research linked to national health priorities. Our aim is to improve people's health, build health research capacity, underpin developments in service delivery and make a significant contribution to Ireland's knowledge economy.

Our information systems

The HRB is responsible for managing five national information systems. These systems ensure that valid and reliable data are available for analysis, dissemination and service planning. Data from these systems are used to inform policy and practice in the areas of alcohol and drug use, disability and mental health.

Our research activity

The main subjects of HRB in-house research are alcohol and drug use, child health, disability and mental health. The research that we do provides evidence for changes in the approach to service delivery. It also identifies additional resources required to support people who need services for problem alcohol and drug use, mental health conditions and intellectual, physical and sensory disabilities.

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The **HRB Research series** reports original research material on problem alcohol and drug use, child health, disability and mental health.

HRB Research Series publications to date

Ward M, Tedstone Doherty D and Moran R (2007) *It's good to talk: distress disclosure and psychological wellbeing*. HRB Research Series 1. Dublin: Health Research Board.

Tedstone Doherty D, Moran R, Kartalova-O'Doherty Y and Walsh D (2007) *HRB national psychological wellbeing and distress survey: baseline results*. HRB Research Series 2. Dublin: Health Research Board.

Daly A, Tedstone Doherty D and Walsh D (2007) *Re-admissions to Irish psychiatric units and hospitals 2001–2005*. HRB Research Series 3. Dublin: Health Research Board.

Gallagher S, Tedstone Doherty D, Moran R and Kartalova-O'Doherty Y (2008) *Internet use and seeking health information online in Ireland: Demographic characteristics and mental health characteristics of users and non users*. HRB Research Series 4. Dublin: Health Research Board.

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Summary

There is little information available on the level of psychological distress in the Irish population and the need for a national morbidity study has been highlighted (Department of Health and Children – DofHC, 2006; Mental Health Research Unit – MHRU, 2006). The Health Research Board National Psychological Wellbeing and Distress Survey (HRB NPWDS) provided some information to address this gap in our knowledge by measuring the extent of psychological distress and self-reported mental health problems in the Irish population (Tedstone Doherty *et al.*, 2007). This report adds further to our knowledge by providing a more in-depth analysis of the data from the NPWDS.

The NPWDS was a telephone survey of a nationally representative random sample of 2,711 adults aged 18 years and over and living in private households. The data were collected by the Economic and Social Research Institute (ESRI), on behalf of the HRB, between the period December 2005 and April 2006 over three two-week intervals. Telephone numbers were drawn on a random, probability basis. In order to ensure geographical coverage, an initial set of sampling areas was selected from the GeoDirectory. This initial sample of areas was then employed to generate a random telephone sample using random digit dialling. The survey received ethical approval from the HRB Research Ethics Committee. In line with best practice the completed sample was re-weighted to ensure that it was representative of the population from which it had been selected. Comparisons with relevant census data showed that the profile of the sample was comparable to that of the general population aged 18 years and over.

The main aims of this report are to determine the socio-demographic characteristics of the Irish adult population who were experiencing symptoms of psychological distress or who had reported mental health problems in the previous year. In addition, the report describes primary care service use for mental health problems and secondary mental health services use over a one-year period. The findings were extrapolated to the general population and set against other available data relating to mental health service use in Ireland. This information is the most comprehensive to date on the extent of psychological distress and mental health problems in Ireland and the use of services by people seeking help with these problems.

The key findings are as follows:

- A total of 12% had high GHQ12 scores indicative of psychological distress and 14% of the sample reported experiencing mental health problems in the previous year.

- Of the respondents who reported mental health problems in the year previous to the study, almost 50% were still experiencing significant psychological distress at the time of the study.
- The three most important predictors of psychological distress were employment status, access to free medical care and gender.
- The three most important determinants of self-reported mental health problems in the previous year were employment status, access to free medical care and area of residence.
- Almost 10% of the sample had spoken to a general practitioner about mental health problems in the previous year, with an average of four visits per person recorded. Of those who reported mental health problems, almost 60% had discussed mental health problems with a general practitioner in the previous year.
- In relation to secondary community mental health services use, 5% of the sample had contacted outpatient services, approximately 1% had contacted day centres and 1.6% had contacted day hospitals. For those who reported experiencing mental health problems in the last year, these figures increased to 15.3%, 6.3% and 6%, respectively.
- In relation to secondary inpatient mental health services use, 0.6% were in contact with inpatient services, which increased to 4.2% for those who reported mental health problems in the previous year.
- Approximately 87% of respondents had not attended the general practitioner for mental health problems or had not used mental health services in the previous year. Of those who had attended the general practitioner for mental health problems, one fifth had also attended mental health services in the previous year.
- The projected figures from the total population aged 18 years and over suggest that 320,381 people will attend the general practitioner for mental health problems, 160,190 people will attend outpatient clinics, 51,261 will attend day centres and 19,222 will use inpatient mental health facilities over a one year period.

Although the majority of respondents were experiencing good mental health, a significant proportion had current symptoms of psychological distress and also reported subjective mental health problems during the previous year. The point prevalence indicated by high GHQ12 scores, coupled with the findings in both the HRB inpatient census in 2006 and the HRB high support community residence census in 2006, would indicate that 389,258 people in the Republic of Ireland are experiencing minor or major psychiatric problems at any given point in time; this equates to a rate of 12 in every 100 people aged 18 years and over who are experiencing mild to severe mental health problems. Costs associated with mental health problems include social, emotional and economic costs. Mental health problems affect not only the individual, but can impact on family members and friends. Limitations in social and physical activities due to mental health problems can lead to social isolation and further health problems. The economic costs of mental health problems to the individual and society include increased absenteeism from work, difficulties in retaining and maintaining employment and increased costs for health and social services.

Approximately 10% of the respondents had spoken to a general practitioner in the previous year about mental health problems. As expected, service use at the secondary care level was lower than that at the primary care level, thus highlighting the importance of the role played by general practitioners in the care and treatment of people who are experiencing psychological distress. Previous work in the UK has shown that good primary care services employing a stepped care model for the treatment of common mental health problems can significantly reduce referrals to secondary mental health services. The benefits of a stepped care approach to the treatment of common mental health problems have yet to be realised in Ireland. Few, if any, general practitioners have direct access to counsellors and psychologists within the primary care service.

In line with policy changes in the mental health area which tend towards favouring community-based care as opposed to inpatient care, service use at the inpatient level was lower than that at the community care level. Less than 1% of the sample reported that they had had contact with inpatient services and 1% to 5% reported that they had contacted outpatient services such as outpatient clinics, day centres and day hospitals.

Extrapolating the reported general practitioner attendance figures of 10 in every 100 people would indicate that approximately 320,381 people contact general practitioners at least once a year specifically seeking help for emotional or psychological problems. With an average of 4 visits per person, this accounts for 1,281,524 general practitioner consultations for emotional or psychological problems. Those with mental heath problems had more visits on average to the general practitioner than those who attended for physical health problems. In addition, those with mental health problems were also more likely to attend the general practitioner for physical health problems. In relation to community care services such as outpatient clinics, day hospitals and day clinics, approximately 6 people in every 100 or 192,228 people on average will contact one of these services in a one-year period. Not surprisingly, more individuals are likely to be in contact with outpatient clinics than are likely to be in contact with day clinics and day hospitals. Specifically, the rate for contacting outpatient clinics is 5 people in every 100; for day clinics it is one person in every 100, and for day hospitals it is 1.6 persons in every 100. Over a one-year period, the number of individuals contacting inpatient services is likely to be less than one per 100. It is important to note that contact with mental health services refers only to the number of individuals who are likely to be in contact with services; it does not refer to the number of contacts that those individuals may have. It is envisaged that the new HRB information system, WISDOM, which is now in the 'proof of concept' phase, will be able to calculate both the number of individuals using services as well as the number of contacts with community-based services and hospital-based services. Socio-demographic information, inter alia, relating to those who use these services, and information relating to the episodes of care which people receive from the services, are important for service planning and delivery.

The information provided in this report outlines the extent of mental health problems in Ireland and highlights information that is required for a more complete picture of the support needs and mental health service use in Ireland. The next NPWDS will collect information in Northern Ireland as well as the Republic of Ireland. The findings from this report have highlighted a number of important issues for the development and planning of support services for mental health problems. These main issues include:

- the need to explore the potential of less costly and openly accessible interventions to address psychological distress at the population level. These include community-based psycho-educational programmes and self-help initiatives that provide individuals with information on awareness of psychological distress and coping strategies to deal effectively with distress. There is a need to develop a more dimensional approach to mental health problems rather than the current categorical approach. Mental health problems should be viewed as on a continuum. Different levels of support may be required depending on the severity

of the problem at a given point in time and the coping mechanisms of the individual. The stepped care model, which is evidence-based, takes a dimensional view of mental health problems and needs to be developed within the health services in Ireland

- the need for a national morbidity study in Ireland, such as that carried out in other European areas, with the emphasises placed on the dimensionality of mental health and illness and factors that promote and inhibit help seeking for mental health problems
- the need to evaluate current services provided to those with mental health problems in primary care and the range of services and professionals available within primary care
- the need to evaluate the interface between primary care and mental health services, especially the care pathways and the possibility for the development of stepped care models and, where appropriate, shared-care models
- the need to assess psychological distress in consulting populations at primary care level, the factors that impact on disclosure of distress to the general practitioner and the factors that impact on the identification of distress by the general practitioner.

1 Introduction

What is the level of psychological distress in the Irish population and what are the likely demands on service use for psychological problems? We know from international literature that an estimated 450 million people currently experience mental health problems, with depression and anxiety being the most common problems worldwide. We also know that approximately 10% of the adult population will experience a mental or behavioural problem at any given time (World Health Organisation – WHO, 2001). The estimated burden of disease from mental illness will increase from 12% to 15% by the year 2020 (WHO, 2001). Within Europe, it is estimated that one in five people will experience depression during their lifetime (WHO, 2003).

1.1 Mental health defined

Mental health is defined as a state of wellbeing in which every individual realises his or her own potential, can cope with the normal stresses of life and is able to make a contribution to his or her community (WHO, 2001). Therefore mental health refers to more than just 'the absence of disease', but includes 'a state of complete physical, mental and social well being' (WHO, 2001). The medical model assumes that a neurological defect underlies mental health problems and as such requires medical treatment and care. One of the most commonly employed diagnostic instruments used to measure mental disorders in the population is the Composite International Diagnostic Interview (CIDI), which is used in the World Mental Health Surveys (Demyttenaere *et al*. 2004). This instrument primarily follows the medical model in that it uses the diagnostic classifications of the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM–IV), to define the presence of disorders. However, it is important to point out that while some people may indeed require medical treatment and care for mental health problems, the majority of people who may experience distress from time to time in their lives will not require medical interventions.

Mental health is 'more than the absence of disease' and, as such, mental health problems refer to a variety of mental health difficulties, ranging from psychological distress to more severe mental health difficulties such as those measured by the CIDI. There is a need for a population approach to mental health and wellbeing within the Irish context which includes not only those who require or are receiving medical treatment, but also those with less severe mental health difficulties such as psychological distress (National Economic and Social Forum, 2006). Psychological distress is viewed as an emotional condition that involves negative views of the self, others and the environment and is characterised by unpleasant subjective states such

as feeling tense, worried, worthless and irritable (Barlow and Durand, 2005). These subjective states can reduce the emotional resilience of individuals and impact on their ability to enjoy life and to cope with pain, disappointment and sadness. Psychological distress can be viewed as a continuum in which people can move from experiencing wellbeing to distress and back at various times throughout their lives (Horwitz and Scheid, 1999; Mechanic, 1999). One of the most common instruments used to measure psychological distress is the General Health Questionnaire (GHQ). This instrument measures the subjective states associated with psychological distress such as those mentioned above (for more information on the GHQ see Section 2.1). Just as mental illness can impact on areas of the individual's life, psychological distress can also have direct and indirect effects on the individual's psychological, social and occupational functioning, affecting many areas of their life, including relationships, work and health.

One of the problems about making comparisons between population surveys of mental health and wellbeing is that many different measures are used to assess mental health and the assessment timeframes may also differ (Dolan *et al*. 2006). As mentioned above, one of the most frequent measures used to assess mental health morbidity is the CIDI which is based on psychiatric diagnostic classifications. On the other hand, the GHQ is often used in general health surveys assessing psychological distress (e.g. Health Survey for England, 2003; NISRA's (Northern Ireland Statistics and Research Agency) Health and Social Wellbeing Survey, 2002; Living in Ireland Survey, 2001).[1] Moreover, a distinction may be made between point prevalence (which refers to the prevalence of a disorder at a given point in time), and one-year period prevalence (which refers to the number of people who experience a disorder during the course of one year). Most surveys of illness in random samples of general populations report point prevalence, whereas surveys of consulting populations at general practice level commonly report one-year period prevalence (Goldberg and Huxley, 1980).

1.2 Mental health in the Irish population and existing information

The main aim of this report was to review existing information in relation to mental illness and health service use in the Irish population and to add to our knowledge of the mental health of the Irish population by assessing the extent of psychological distress in the general population and the use of health services by those experiencing distress.

Within Ireland there is over forty years of information pertaining to the use of inpatient psychiatric services (National Psychiatric Inpatient Reporting System – NPIRS), and the Health Research Board (HRB) produces reports detailing the activity in these services

1 http://www.ucd.ie/issda/dataset-info/lii-details.htm

annually (see, for example, Daly *et al*. 2006; Daly *et al*. 2007). In addition, census information on inpatients has been collected by the HRB decennially until recently and is now being reported on more regularly. For some years, the HRB also gathered information regarding contact with outpatient services in the mental health area (e.g. case registers) and also reported on annual returns for the DofHC. The WISDOM system, developed by the HRB, is currently in the 'proof of concept' phase. This system is to be evaluated for its suitability as a national mental health information system. This web-based system will collect individualised information regarding the use of both inpatient and community mental health services[2] and will incorporate the NPIRS system. Thus, the HRB databases provide a unique record of the use of inpatient mental health services and, to date, a less comprehensive, albeit informative, picture of outpatient use of mental health services. One further piece of the national psychological distress jigsaw was provided by recently completed MHRU research (Walsh, 2007, *in preparation*); this captured data on patients with a primary psychiatric diagnosis who were discharged from the general hospital services.[3] Thus, we have an indication of mental health problems in inpatient services, in outpatient services and in general hospitals. However, this data only refers to information on those who have sought help from secondary health or mental health services and are more likely to be experiencing more severe problems. However there are many people who experience distress and who never seek help or who seek help from their general practitioner only (Wang *et al*. 2007). It is estimated that 16% of all adults in the UK have clinical depression or anxiety, yet only 25% of these are receiving treatment (cited in Layard *et al*. 2007).

Information about psychological distress in the general population is important for the planning of services; its absence was noted in the most recent policy document – *A Vision for Change* (DofHC, 2006). Furthermore, as noted earlier, there are many people who may experience distress from time to time in their lives, but who will not need the help of formal health services. Taking this dimensional approach to mental health will ensure that not only are those with the most severe problems receiving help, but those with mild to moderate distress also receive support. The latter group require effective coping strategies and informal community supports to deal with this distress. This is exemplified in the stepped care model, which provides support at five levels ranging from watchful waiting for subclinical patients to specialists services for those with chronic and recurrent mental health problems (National Institute of Mental Health in England, 2006). Information on the extent of distress will help plan effective measures to provide people with coping strategies and to plan a range of alternative community supports that can be used in the event of distress. So what do we know of the extent

2 More information on the WISDOM system can be accessed at http://www.hrb.ie/display_content.php?page_id=36

3 It does not include psychiatric units in general hospitals as this information is provided by the National Psychiatric Inpatient Reporting System (NPIRS).

of psychological distress in the Irish general population? The HRB NPWDS is a major innovation aimed at addressing, inter alia, the extent of psychological distress and mental health problems in the general population in Ireland. It is anticipated that the survey will be completed at regular intervals to monitor changes in mental health and wellbeing in the Irish population and to explore its determinants and correlates. The first report, which provided a descriptive account of all data collected in the baseline survey, was published in 2007 (Tedstone Doherty *et al*. 2007). The report showed that 12% of the sample was currently experiencing symptoms of psychological distress, as measured by the GHQ12, while 14% of the sample had reported experiencing mental health problems in the last year. In addition, approximately 10% of the sample reported attending the general practitioner for mental health problems and a total of 6% had used some form of mental health services. We know that this is likely to be an underestimation of the extent of distress as the most vulnerable groups, such as the homeless, refugees and non-nationals, may not have access to landlines and were therefore not included in this survey.

Few previous studies have investigated psychological distress in Irish population-based surveys (Callan *et al*. 1989; Whelan, 1992; Mental Health Association of Ireland, 2001; Balanda and Wilde, 2003) and a number of studies have investigated psychological distress in subgroups of the population such as the elderly, the homeless and various occupational groups (e.g. McGee *et al*. 2005; Irish Times/TNS mrbi, 2006; Lawless and Corr, 2005; Wynne *et al*. 1991). A paper by Whelan *et al*. (1991), using data collected from the general population in 1987, reported that 19% of females and 15% of males were showing signs of significant psychological distress on the GHQ12 (17% of total sample; cut-off score of 2 and above). Using the Hospital and Depression Anxiety Scales (HADS), the Mental Health Association of Ireland (2001) reported that the prevalence of moderate to severe depression in the Irish population was 4%, while the prevalence of moderate to severe anxiety was 13%. In relation to the prevalence of depression in those aged 65 years and over, McGee *at al.* (2005) reported that 9% of the population could be categorised as borderline and 2% categorised as clinically depressed. It has been shown that those with mental health problems will use the health services more and are often referred to acute services for conditions that are not "medically explicable" (cited in Layard *et al*. 2007). In US it has been estimated that half of all referrals to the acute sector are due to these inexplicable medical conditions (Nimnuan *et al*. 2001). This not only has serious resource implications for the health services, but also raises the issue of appropriate care (Layard *et al*. 2007). Lawless and Corr (2005) investigated psychiatric health in a sample of the homeless population. Almost half the respondents (48%) reported having concerns about their psychiatric health. Of the sample, 42% had had a psychiatric assessment, 30% had been admitted to a psychiatric hospital, and 30% had been diagnosed with a psychiatric illness. Other studies in Ireland estimate that 37%–50% of the homeless population have mental

health problems (Holohan, 1997; Smith *et al*. 2001), and for Northern Ireland, estimates stand at around 37% (McGilloway and Donnelly, 1996).

1.3 Help-seeking and pathways to specialised mental health care

Goldberg and Huxley (1980) put forward a filter model which is designed to identify the various pathways to psychiatric care. Briefly, the model consists of five levels of access to psychiatric care; in order to pass from one level to another the individual has to pass through four filters. The five levels identified in the model were:

1 Level One represents psychological distress at the community level. Information about psychological distress at this level may be derived from surveys of entire populations or from random samples of a particular population.

2 Level Two represents psychological distress at the primary care level. Information at this level is derived from surveys of primary care populations – the respondents in these surveys may or may not have been identified by their general practitioner as patients who are experiencing psychological distress.

3 Level Three also represents psychological distress at the primary care level, but refers only to those who have been identified as psychologically distressed by a general practitioner.

4 Level Four represents patients attending outpatient clinics or private psychiatrists. Information at this level is derived from community care data.

5 Level Five represents the most seriously ill, i.e. those admitted to inpatient facilities. (This group is characterised in most national statistics of psychiatric illness.)

Individuals are the gatekeeper of the first filter – they make the decision to pass from Level One to Level Two. Whether or not an individual seeks help at primary care level may be determined by a number of factors, including socio-economic and psychological factors. For instance, these may include the individual's awareness of mental health issues and where to access help, financial considerations, accessibility of services, illness representations, and attitudes and beliefs about help-seeking.[4] The second filter (i.e. where patients pass from Level Two to Level Three) is determined by a general practitioner's ability to recognise the illness and by the individual's

4 Future reports from the HRB NPWDS will attempt to identify the important factors that differentiate those who seek help from a general practitioner from those who do not. The first report from the HRB NPWDS showed that respondents reported cost and time most frequently as barriers that prevented them from attending a general practitioner in the previous year (Tedstone Doherty *et al*. 2007).

personality characteristics and his or her willingness to disclose relevant information. The gatekeepers of the third filter (i.e. where patients pass from Level Three to Level Four of outpatient care) are predominantly general practitioners; this is because in Ireland the majority of individuals are referred to mental health services by a primary care practitioner. Psychiatrists are generally the gatekeepers of the fourth filter because they have responsibility for inpatient beds; they are limited in their control over Level Three category patients however, as admission to an inpatient facility will be determined by the availability of beds. In some cases, mainly where a patient is suffering from severe acute psychotic episodes, the individual may pass directly from either Level One or Level Two to Level Five. However, people who pass directly from Level One to Level Five represent a minority of those who experience mental health problems (Stericker and Shaw, 2007).

It is widely agreed that many people who suffer significant psychological distress do not come into contact with specialised mental health services. While many of these people may seek help from general practitioners, counsellors and support groups, significant numbers do not access any type of formal help in the face of psychological distress. The World Health Organisation (WHO) (Fact sheet EURO/03/03, 2003) reported that approximately 47% of people with major depression remain untreated; similarly, 35–45% of people with schizophrenia remain untreated. The WHO world mental health surveys have investigated help-seeking in a number of countries worldwide (see, for example, Wang *et al*. 2007). These surveys, as mentioned earlier, used the CIDI to assess the extent of mental disorders and service use for mental disorders. The question used to assess service use asked respondents if they had consulted any type of professional for problems with 'emotions, nerves, mental health, or use of alcohol or drugs in the last 12 months'. A range of professionals are listed which include, inter alia, psychiatrists, psychologists, religious counsellors and traditional herbalists. A paper investigating service use for mental health problems in 17 countries categorised professionals into the following services: mental health services (e.g. psychiatrist, psychologist or other mental health professional in mental health services), general medical services (e.g. primary care doctor, nurse, other health professional), human services (e.g. religious or spiritual advisors, social worker or counsellor not in mental health services) or complementary or alternative medicine. The main findings showed that the majority of people who were diagnosed with mental health problems sought help from the general medical services and that half of those with severe problems received no services. This highlights the unmet need and the underuse of services for mental health problems (Wang *et al*, 2007).

For those who do seek help for psychological problems, the majority do so from general practitioners (European Commission, 2006; Wang *et al*. 2007). While Ireland has not yet participated in the WHO world mental health surveys, there is some available

information on the use of general practice for mental health problems. In a recent Irish study it was estimated by general practitioners that 25% of patients exhibit mental health problems (Copty and Whitford, 2005); this figure is in line with the European estimate that 30% of consultations with general practitioners are for mental health problems (WHO, 2003). In addition, there are many others who attend consultation for problems that do not have a physical basis and who are not recognised as experiencing mental health problems by the general practitioner (cited in Layard *et al*. 2007). The findings for Ireland in a special Eurobarometer report on mental wellbeing showed that 14% of the Irish sample had sought help for psychological or emotional health problems in the previous year and that of the people that had sought help, 91% had sought help from a general practitioner (European Commission, 2006). As previously mentioned, the HRB NPWDS found that 9% of respondents had reported speaking to a general practitioner about mental health problems in the last year (Tedstone Doherty *et al*. 2007).

The lack of published information on help-seeking for psychological distress and mental health problems within the Irish context has been highlighted on numerous occasions (Mental Health Commission (MHC), 2005; DofHC, 2006; MHRU, 2006). Statistics on the prevalence of psychological distress and mental ill health at each of the aforementioned levels in the Goldberg and Huxley (1980) model is absent in most cases, with the exception of Level Five; indeed, the only level for which information is complete is Level Five – inpatient care. As stated above, estimates have been made of psychological distress at Level Three – cases identified by general practitioners (Copty and Whitford, 2005). However, this information was based on estimates by general practitioners, and may therefore not reflect the actual situation. For example, a previous study found no correlation between the level of distress based on reports by general practitioners and the objective level of distress based on findings from screening questionnaires in the consulting population (Goldberg and Huxley, 1980). It was argued that physicians may be somewhat biased in their perception of what constitutes psychological distress (i.e. the threshold which physicians use for case identification purposes may differ between physicians).

Help-seeking for psychological distress and mental health does not just include seeking help from formal health services. Many people may not necessarily require the use of formal health services such as general practice or mental health services. It is suggested that informal services such as family and friends and others such as the clergy have a role in the provision of support for mental health problems (Health Service Executive, 2007). While only small numbers of people are likely to need the support of specialised mental health services, many people may require the support of family, friends or others when experiencing transient psychological distress. A survey by the National Office of Suicide Prevention found that most people perceived

that talking to family and friends was helpful in looking after mental health and that supportive family and friend networks had a positive effect on mental health and wellbeing (Health Service Executive, 2007). The Eurobarometer survey showed that 53% of respondents would seek help from a family member first, 50% would seek help from a health professional first, and 22% would seek help from a friend first. The Irish results showed that 42% of the Irish respondents would seek help from a family member first, with 64% reporting that they would seek help from a health professional first, and 21% reporting that they would seek help from a friend first. These results suggest that within the Irish context, family and friends are perceived as important supports for psychological distress, but that health professionals, most likely the general practitioner, are perceived as the most important formal support.

1.4 Aims and objectives

This report marks a first step in the process of gathering information on the level of psychological distress at a national level; it also marks a first attempt at adding a critical piece to the jigsaw characterising mental health within the Irish context. This information is crucial for the development of coping strategies at the individual level, for the development of community support services and for the planning and delivery of health services at primary care level and mental health services level.

The specific objectives of this report are to:

- Determine the point prevalence of psychological distress as measured by the GHQ12 and the socio-demographic characteristics that predict high GHQ12 scores.
- Determine the level of self-reported mental, nervous or emotional problems during the 12-month period prior to data collection and the socio-demographic characteristics that predict self-reported problems.
- Describe help-seeking behaviour for mental, nervous or emotional health problems from a general practitioner and secondary care mental health services during the 12-month timeframe.
- Discuss these findings in relation to other data on mental health in Ireland.

2 Methods

In line with the role played by the HRB in the collection of national statistics relating to mental health, the MHRU has initiated a new survey on psychological distress and service use in the general population. The report from the first survey was published in 2007 (Tedstone Doherty *et al*. 2007) and provides a descriptive analysis of all data collected in the first survey.

This report is based on data from the HRB NPWDS. The survey formed part of the Consumer Survey which is a telephone survey carried out every month by the Economic and Social Research Institute (ESRI). The study received ethical approval from the HRB Research Ethics Committee.

Prior to the HRB carrying out the survey, the proposed questionnaire was piloted by the ESRI. No changes were made to the questionnaire. The survey was administered by telephone. The target population was all persons aged 18 years and over living in private households. Telephone numbers were drawn on a random, probability basis. In order to ensure geographic coverage, an initial set of random clusters (or sampling areas) was selected from the GeoDirectory. This is a comprehensive list of private households in the Republic of Ireland; it is compiled jointly by the Ordnance Survey and An Post. The initial sample of areas was then employed to generate a random telephone sample using random digit dialling (RDD). Using this system, different phone numbers for each month are selected. The matching stem of each phone number is marked up on a file, thus ensuring that phone numbers can not be used again for at least another two years. As a result, there are no duplicates in the HRB dataset for this survey.

In line with normal survey protocol, the ESRI interviewers stressed to respondents that any information obtained during the interview would be confidential, that it would be used for research purposes only and that they could terminate the telephone interview at any time. Fieldwork for the survey was carried out over two-week intervals in December 2005, January 2006 and April 2006.

In line with best practice, the completed sample was re-weighted or statistically adjusted to ensure that it was representative of the population from which it had been selected. The re-weighting procedure involves adjusting the results to compensate for over-representation or under-representation of subgroups within the sample. The completed sample was weighted using a minimum information loss algorithm; this has been used previously in Irish surveys (e.g. McGee *et al*. 2005). The weighting scheme

was designed to adjust the sample distributions for a number of key variables. Thus, it was weighted by age (five age categories); by gender; marital status by age group; region; number of adults in the household; gender by principal economic status; level of education by two age categories. Weightings were applied according to the corresponding population distributions. The population distribution was derived from the Quarterly National Household Survey carried out by the Central Statistics Office; it was based on a sample of approximately 30,000. This re-weighing procedure resulted in a nationally representative sample of persons aged 18 years and over living in private households in the Republic of Ireland.

2.1 Measures

Socio-demographic variables

The socio-demographic variables used in the present analysis included gender, age, employment status, marital status, educational level, household income, size of location in which the resident lived and medical cover (GMS or private cover).

General Health Questionnaire

The short version of the GHQ (GHQ12) was used as a measure of psychological distress. This questionnaire has been widely used as a screening measure to assess psychological distress in community samples (e.g. Marino *et al*. 1990; Verhaak, 1995; Shaw *et al*. 1999). Previous research has shown the validity of the questionnaire to be high (Goldberg *et al*. 1997).

Two methods are used for scoring the GHQ12. The bimodal method, commonly referred to as the GHQ scoring method, scores items on a scale of 0-0-1-1 with a score range of 0–12, while the Likert scoring system scores items on a scale of 0-1-2-3 with a score range of 0–36. It has been argued that if the GHQ12 is to be used as a case detector (i.e. to identify individuals who have a probable mental health problem), then the shorter version scored in the simplest manner (i.e. GHQ12 using GHQ scoring) should be used (Goldberg and Huxley, 1980). For the purposes of this report, the GHQ12 scores were classified using the bimodal method for the calculation of point prevalence. The majority of population studies in the UK have used a threshold score of four or above to identify cases (Scottish Health Survey, 2003; Health Survey for England, 2003; NISRA, 2002). In line with the UK, this research used a score of four and above as the cut-off. Using the bimodal method of scoring, scores of 0 are indicative of the highest level of wellbeing as these individuals show no symptoms of distress (Scottish Health Survey, 2003).

Self-reported mental health problems

In addition, a subjective measure of mental health problems in the previous year was included in the questionnaire. Respondents were asked if they had experienced a mental, nervous or emotional problem in the previous year such as depression or anxiety. Respondents answered yes or no.

Help-seeking

In order to measure the level of help sought, respondents were asked if and how many times they had spoken to a general practitioner in the previous year specifically about mental, nervous or emotional problems. The use of four components of mental health services was assessed: outpatient clinics, day hospitals, day centres and inpatient psychiatric hospitals/units. Respondents were asked if they were in contact with any of these components in the previous 12 months.

2.2 Respondents

Respondents from the three data collection periods detailed above were merged to create a final sample of 2,711 participants. Of all those who were contacted successfully and were eligible to participate (n = 5,678), 2,905 people (51%; 2,905/5,678) agreed to participate and 2,711 people (48%; 2,711/5,678) completed the survey. The refusal rate for the current study was 49% (2,773/5,678). The response rate for the current study is similar to the response rate for the Consumer Survey, with over 90% of those completing the Consumer Survey also completing the module on psychological distress. The survey was conducted in a very tight timeframe (i.e. between the first and the fifteenth of the month). Therefore, the non-contact rate is higher than would be the case for a survey with a longer fieldwork period.

Of the 2,711 participants, 50.8% (1,377/2,711) were female. A total of 29.3% (794/2,711) were between 18 and 29 years, 37.0% (1,003/2,711) were between 30 to 49 years and 19.3% (523/2,711) were between 50 and 64 years. Two-thirds of the respondents were under the age of 50 (66.3%; 1,797/2,711), and 14.4% (391/2,711) were over the age of 65. For more information on the sample see Tedstone Doherty *et al*. 2007.

2.3 Data analysis

Some of the sample did not complete all questions. Thus, only valid percentages are presented in the results (i.e. the percentages are calculated from the number of respondents who completed the questionnaire).

Relationships between the mental health variables and the socio-demographic variables were examined using chi-square tests. As age and gender were examined in detail in the first report (Tedstone Doherty *et al*. 2007), they will only be briefly described for the purposes of their inclusion in the regression analysis. Socio-demographic predictors of mental health were examined using logistic regression analysis. In contrast to chi-square analysis, logistic regression allows for the assessment of the effects of an individual variable after the effects of all other variables have been taken into account.

Two logistic regression models were developed for each of the mental health variables – GHQ12 scores and self-reported mental health problems in the previous year. Only variables that were statistically significant in the chi-square analysis were included in the regression analysis. Only those variables that added significantly to the model were included in the final model (i.e. p-value ≤ 0.25).[5]

5 Hosmer and Lemeshow (2000) recommend that any variable that has a p-value ≤ 0.25 and is known to be relevant should be included in the model.

3 Results

3.1 Level of psychological distress as measured by the GHQ12

Univariate analysis

Analysis included only those who had complete scores for the GHQ12 (96.2%; 2,607/2,711). A score of zero indicates the absence of psychological distress which may also be considered as an indicator of a high level of wellbeing (see, for example, Scottish Health Survey, 2003). A score of four or above indicates a 'case' (i.e. the presence of significant psychological distress). A total of 66.2% (1,726/2,607) of the sample had a score of zero. Using a threshold score of four or above as the cut-off resulted in 12.3% (320/2,607) of the respondents being categorised as 'cases'. Thus, the point prevalence of psychological distress in the Irish population is 12%.

In order to explore socio-economic inequalities and the relationship to psychological distress, the association of GHQ12 scores (score of 0–3 versus score of 4+) to social and economic factors including age, gender, marital status, level of education, employment status, household income, size of location of residence and medical cover was examined.[6] Table 3.1 shows the proportion of respondents defined as 'cases' on the GHQ12 and the chi-square analysis for each of these variables.

Table 3.1 Weighted percentages (n) of respondents scoring high on the GHQ12 by social and economic factors and results of chi-square analysis[7]

	n	% categorised as 'cases'	$\chi 2$	P value
Gender			11.54	0.001
Female	190	14.4		
Male	130	10.1		
% of total sample	320	12.3		
Age			31.84	0.000
18–29 years	58	7.5		
30–39 years	76	14.7		
40–49 years	66	14.7		
50–64 years	83	16.6		
65+ years	37	10.3		
% of total sample	320	12.3		

6 The first report from the NPWDS (Tedstone Doherty *et al.* 2007) shows the profile of those with a GHQ12 score of 0, GHQ12 score of 1–3 and a GHQ12 score of 4 and above. Thus, the current analysis was performed on those with a score of four and above versus all other scores.

7 Chi-square analysis compared those with GHQ12 scores of less than four (n = 2,287) with those having GHQ12 scores equal to four and above (n = 320). N = 2,607. N may differ slightly due to missing data. The valid response for each question has been used.

Table 3.1 Weighted percentages (n) of respondents scoring high on the GHQ12 by social and economic factors and results of chi-square analysis *(continued)*

	n	% categorised as 'cases'	$\chi 2$	P value
Marital status			4.68	0.096
Married/cohabitating	170	12.4		
Separated/divorced/widowed	43	16.0		
Never married	107	11.1		
% of total sample	320	12.3		
Level of education			10.3	0.006
Primary	74	14.4		
Secondary	204	12.9		
Higher	42	8.3		
% of total sample	320	12.3		
Employment status			205.8	0.000
Employees	96	8.2		
Unemployed	53	31.5		
Long-term sickness/benefits	52	43.3		
Self-employed	23	9.3		
Retired	20	7.4		
Full-time education	18	7.2		
Domestic duties	58	15.1		
% of total sample	320	12.3		
Household income (€ per week)			51.6	0.000
Under 300	57	19.7		
300–399	52	18.8		
400–499	42	15.2		
500–749	63	14.2		
750–899	17	6.4		
900–1,249	24	9.7		
Over 1,249	25	6.2		
% of total sample	280	12.7		
Size of location			19.1	0.001
Open countryside	89	10.9		
Village/small town (200–4,999)	26	7.8		
Large town (5,000–10,000)	89	16.4		
City (Waterford, Limerick, Galway, Cork, Dublin)	73	11.2		
Dublin county (outside Dublin city)	34	15.7		
% of total sample	311	12.1		
Medical cover			92.9	0.000
GMS card	134	22.8		
Private insurance	88	7.3		
No GMS card or private insurance	65	10.6		
Both	33	16.3		
% of total sample	320	12.3		

Gender and age

A greater proportion of females had a high GHQ12 than males ($\chi 2$ (1) = 11.54, p = 0.001). In terms of age, the lowest proportions scoring high GHQ12 scores were in the youngest and oldest age groups ($\chi 2$ (4) = 31.84, p = 0.000).

Marital status

Marital status was not significantly associated with high GHQ12 scores (see Table 3.1). However, there were slightly greater proportions of those in the separated/divorced/widowed category than in the married/cohabiting and single categories (see Figure 3.1). Perusal of the data showed different patterns of GHQ12 'cases' within gender and marital status (see Figure 3.1) and this was confirmed by chi-square tests. For males, the greatest proportion of 'cases' occurred in the married/cohabiting category ($\chi 2$ (2) = 8.02, p = 0.01), while for the females the greatest proportion of 'cases' occurred in the separated/divorced/widowed category ($\chi 2$ (2) = 6.14, p = 0.04).

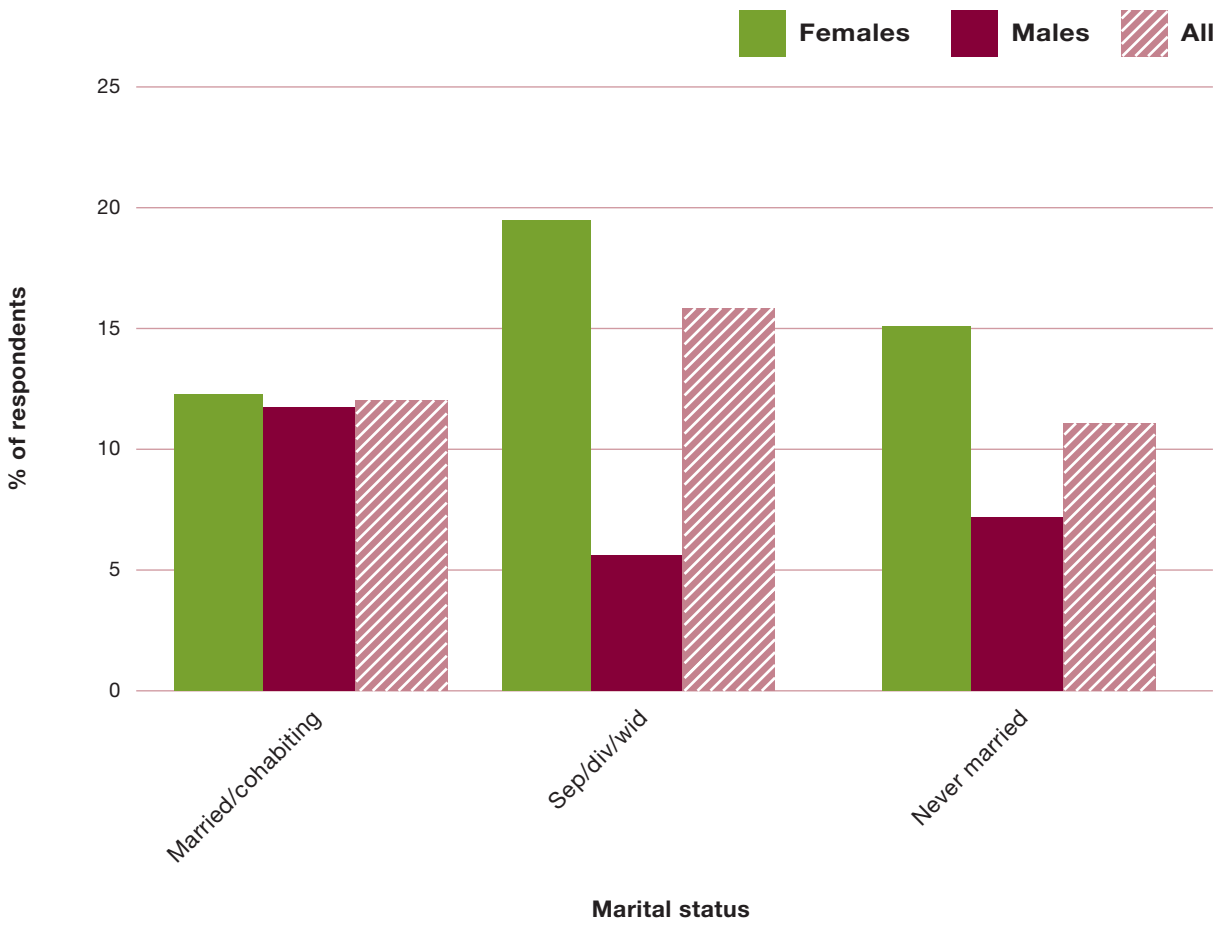

Figure 3.1 Prevalence of cases as defined by the GHQ12 by marital status and gender in HRB NPWDS

Level of education

Respondents' level of education was a factor in their vulnerability to psychological distress. A higher level of education resulted in a lower proportion of high GHQ12 scores, thus suggesting that higher education either directly or indirectly influences levels of distress (see Table 3.1). The prevalence of high GHQ12 scores in those with a primary level of education was 14.4% (74/515); for a secondary level education the prevalence was 12.9% (204/1,585), reducing to 8.3% (42/508) in those with a third-level education.

Employment status

There was a highly significant association between employment status and the proportion of high GHQ12 scorers (see Table 3.1). Approximately 43% of those on long-term sickness/disability benefits had high GHQ12 scores (52/120). They were followed by the unemployed group, nearly one-third of which were categorised as 'cases' (32%; 53/168). For those employed in domestic duties, 15% (58/383) were categorised as 'cases'. This compared with only 7% (20/272) of retired people, 7% (18/250) of those in full-time education or training, and 9% (23/248) of those in self-employment being defined as 'cases'.

Household income

The level of household income was also significantly related to high GHQ12 scores, with the percentage of high GHQ12 scores greatest in the lowest household income group (see Table 3.1). Almost 20% (19.7%; 57/290) of those earning under €300 per week exhibited high GHQ12 scores, while only 6% (25/404) of those earning over €1,249 per week showed high scores.

Location of residence

Those living in large towns (16.4%; 89/543) or in Dublin County (15.7%; 34/217) showed the highest prevalence of psychological distress (see Table 3.1). Prevalence was similar for those in living in cities (Waterford, Limerick, Galway, Cork and Dublin: 11.2%; 73/649) and those living in 'open countryside' locations (10.9%; 89/815). The lowest prevalence was for those in small villages or towns of between 200–4,999 inhabitants (7.8%; 26/332).

Medical cover – GMS versus private insurance

The results showed that the proportion of high GHQ12 scores was lowest in those who had private insurance (7%; 88/1,205) and highest in those with medical cards (23%; 134/587; see Table 3.1). There was a significant association between free medical cover and income, with those in the lower income groups receiving free medical cover and those earning the most having private medical insurance ($\chi 2$ (18) = 8.08, p = 0.000). Those who reported having neither GMS cards nor private insurance were most likely to be in the middle income categories and are therefore just over the threshold for free medical care. Analyses on medical cover and income showed that almost half (41%) of the individuals in this category (i.e. having neither GMS cards or private insurance) were earning between €400 and €750 per week while an equal proportion was earning between €750 and €1,249 per week. It explains why the percentage of high GHQ12 scores in this group (11%; 65/612) is more in line with the percentage of low scores in the private insurance group (7%) than in the medical card group (23%). The percentage of 'cases' was also quite high in those with both private insurance and GMS cards (16%; 33/203). Almost half (48%) of these individuals were in the lower earning group and were reporting weekly earnings of under €400, while 29% were earning €400–€750 per week. As the majority of those that have both private and GMS cards were in the lower earning groups, this may explain why there is a high percentage of 'cases' in this group.

Multivariate analysis

Multiple logistic regression analysis was performed in order to predict the presence of psychological distress in the Irish population reaching a threshold of four on the GHQ12. Only socio-demographic variables displaying statistical significance at the level of 0.05 in cross-tabulations were considered for the inclusion in the analysis (Table 3.1). These variables included gender, age, level of education, employment status, household income, size of location of household and medical cover.

In order to achieve the most parsimonious solution and to reduce the amount of standard error, categories of the selected variables were re-examined and collapsed where appropriate. Visual binning and cross-tabulations were used to determine the suitability of recoding each variable for the predictive purposes of logistic regression (Norusis, 2006). On the basis of theoretical considerations and the outcomes of visual binning and cross-tabulations, the following transformations of variables were performed.

Medical cover variable was recoded into two categories, including those covered by medical cards (n = 824) and those not covered by medical cards (n = 1,853).

Household income variable was recoded into two categories: persons reporting household income up to 749 euro per week (n = 1,353), and those reporting household income of 750 and above euro per week (n = 924).

The variable of the size of location of household was recoded into four categories: country/village/small town (n = 1,178), large town (n = 559), city (n = 676), and Dublin county without Dublin city (n = 228).

The variable of employment status was recoded into four categories, including those employed (n = 1,467), unemployed (n = 173), those with sickness or disability (n = 109), and other (n = 952). The category of 'other' included those in training or study, retired, and those in domestic duties.

The variables of age and education were not recoded further for the regression.

Each variable was entered separately in the logistic regression for the analysis of deviance and significance level of the prediction of psychological distress (Norusis, 2006; Hosmer and Lemeshow, 2000). Table 3.2 presents the final model. All seven variables stayed in the final model: gender, age, employment status, household income, size of location of household, level of education and medical card coverage.

The Nagelkerke R^2 value of 0.179 (Cox and Snell R2 = 0.095) indicated that 17.9% of the variance in the psychological distress variable was explained by the combination of the effects of the socio-demographic variables. The Hosmer-Lemeshow test result of 0.306 confirmed that the final model fitted the data well. The model predicted 99.1% of non-cases and 12.9% of cases. Overall, 88.3% of 2,188 cases included in logistic regression were predicted correctly.

Table 3.2 Logistic regression model predicting psychological distress (cases four and above)

Socio-demographic predictors	ß	S.E.	Odds Ratio	95% CI	Sig.
Gender (Reference: Males)					
Females	0.54	0.15	1.71	1.27, 2.30	0.000*
Age group (Reference: 18–29)					0.032*
30–39	0.54	0.24	1.72	1.07, 2.77	0.025*
40–49	0.52	0.25	1.68	1.03, 2.75	0.038*
50–64	0.66	0.25	1.93	1.19, 3.15	0.008*
65+	0.09	0.31	1.10	0.60, 2.01	0.765
Employment status (Reference: Employed)					0.000*
Unemployed	1.40	0.23	4.06	2.58, 6.40	0.000*
Sickness/disability	1.26	0.27	3.54	2.10, 5.96	0.000*
Other (retired, full-time education, household duties)	-0.26	0.21	0.77	0.51, 1.17	0.219
Weekly household income (Reference: 750+ euro)					
749 euro or less	0.46	0.18	1.58	1.11, 2.25	0.011*
Medical card status (Reference: No medical card)					
Medical card holders	0.91	0.18	2.49	1.76, 3.51	0.000*
Size of location (Reference: Open country/village/small town)					0.112**
Larger town (5,000-10,000)	0.40	0.18	1.49	1.04, 2.12	0.029*
City	0.20	0.18	1.22	0.85, 1.74	0.287
County Dublin outside city	0.41	0.25	1.51	0.93, 2.45	0.096**
Level of education (Reference: Third-level of education)					0.135**
Primary	-0.12	0.28	0.88	0.51, 1.52	0.657
Secondary	0.23	0.23	1.26	0.80, 1.97	0.318

* $p < 0.05$
** $p < 0.15$

As can be seen from Table 3.2, females were 1.7 times more likely than males to be 'cases' of psychological distress with GHQ scores of four and above.

All age groups with the exception of persons aged 65 years and older were significantly more likely to be 'cases' of psychological distress, compared to those aged 18–29. Persons aged between 30 and 39 and between 40 and 49 were around 1.7 times more likely, and those aged 50–64 were nearly twice as likely to exhibit higher levels of distress compared with the 18–29 age group (Table 3.2).

Those unemployed and with sickness/disability were significantly more likely to exhibit signs of psychological distress compared with those in employment (Table 3.2). The unemployed were more than four times more likely, and those with sickness or disability 3.5 times more likely, to exhibit psychological distress those employed. Persons in the 'other' employment category, including those retired, in full-time training or study, or in domestic duties were not significantly different from those employed in their likelihood of being distressed.

Persons with a household income of less than 750 euro per week were nearly 1.6 times as likely to report high levels of psychological distress as those with a weekly household income of 750 euro or higher (Table 3.2).

Those covered by medical cards were about 2.5 times more likely to be 'cases' of psychological distress compared to those not covered by medical cards (Table 3.2).

Compared to those living in the country, a village or small town, those living in a larger town with a population of 5,000–10,000 persons were about 1.5 times more likely to report higher levels of psychological distress. Similarly, persons living in county Dublin (outside Dublin city) were about 1.5 times more likely to be 'cases' of four and above than those living in the country, in villages or small towns. Interestingly, the odds of having higher levels of psychological distress for those living in the country, a village or small town, and in a city seemed to be similar (Table 3.2).

Though the overall level of education was significant at the 0.15 level in predicting psychological distress (Table 3.2), there were no significant differences observed between those with primary, secondary or third levels of education in terms of predicting distress.

As can be seen from Table 3.2, the most important variable predicting psychological distress for the whole Irish population was employment status, namely: being unemployed (OR = 4.06, 95% CI = 2.58, 6.40, p = 0.000), or sick or disabled (OR = 3.54, 95% CI = 2.10, 5.96, p = 0.000). The second and third most important predictors were having a medical card (OR = 2.49, 95% CI = 1.76, 3.51, p = 0.000), and being female (OR = 1.71, 95% CI = 1.27, 2.30, p = 0.000).

3.2 Self-reported mental, nervous or emotional problems in the previous year

Respondents were asked if they had experienced any mental, nervous or emotional problems (e.g. anxiety or depression) in the previous 12 months; a total of 14.3% (382/2,678) of respondents reported that they had. Gender comparisons ($\chi 2$ (1) = 12.5, p = 0.000) showed that a greater proportion of females (16.6%; 227/1,367) than males (11.8%; 155/1,311) reported experiencing mental health problems in the previous year. There were also significant age differences, with the youngest and oldest reporting the lowest proportion of problems ($\chi 2$ (4) = 55.8, p = 0.000).

Univariate analysis

Table 3.3 shows the proportion of respondents reporting mental, nervous or emotional problems in the last 12 months and the results of the univariate analysis. Findings are comparable with the analyses of the data from the GHQ12.

Gender and age

A greater proportion of females (16.6%; 227 / 1,367) reported mental health problems in the previous year than males (11.8%; 155 / 1,311). In terms of age, the lowest proportions of those reporting mental health problems were in the youngest (7.5%; 59 / 785) and oldest age groups (11.2%; 43 / 385).

Marital status

Marital status was significantly associated with self-reported mental health problems (see Table 3.3). The greatest proportion of those reporting mental health problems was in the separated / divorced / widowed category (25.0%; 71 / 284), followed by married / cohabiting (14.1%; 201 / 1,421) and never married (11.4%; 111 / 973).

Level of education

A higher level of education resulted in a lower proportion of self-reported mental health problems (third level 9.8%; 51 / 521) thus suggesting that higher education either directly or indirectly influences mental health (see Table 3.3). The prevalence of self-reported mental health problems in those with a primary level of education was 16.5% (90/544); for a secondary level education the prevalence was 14.9% (241/1,613).

Employment status

There was a highly significant association between employment status and self-reported mental health problems (see Table 3.3). Approximately 58% of those on long-term sickness/disability benefits reported mental health problems (58/120). They were followed by the unemployed group with 30.4% (52/171) reporting mental heath problems.

Household income

The level of household income was also significantly related to self-reported mental health problems, with the percentage of those reporting problems greatest in the lowest household income group (see Table 3.3). A total of 27.7% (82/296) with a household income of under €300 per week reported problems compared to just 7.9% (32/407) with a household income over €1,249 per week.

Location of residence

Those living in large towns (18.2%; 102/560) or in Dublin County (21.1%; 48/228) showed the highest proportion of respondents reporting mental health problems (see Table 3.3). The lowest proportion of respondents reporting problems was lived in the open countryside (10.1%; 83/821).

Medical cover – GMS versus private insurance

In line with findings from the GHQ12, the proportion of those reporting mental health problems was lowest in those who had private insurance (9.0%; 112/1,240) and highest in those with medical cards (26.0%; 158/608; see Table 3.3).

Table 3.3 Weighted percentages of respondents (n) of the total sample reporting mental health problems by social and economic factors and results of chi-square analysis[8]

	n	% reporting problems	X^2	P value
Gender			12.5	0.000
Female	227	16.6		
Male	155	11.8		
% of total sample	382	14.3		
Age			55.84	0.000
18–29 years	59	7.5		
30–39 years	96	18.3		
40–49 years	82	17.7		
50–64 years	102	19.9		
65+ years	43	11.2		
% of total sample	382	14.3		
Marital status			33.2	0.000
Married/cohabitating	201	14.1		
Separated/divorced/widowed	71	25.0		
Never married	111	11.4		
% of total sample	382	14.3		
Level of education			11.4	0.003
Primary	90	16.5		
Secondary	241	14.9		
Higher	51	9.8		
% of total sample	382	14.3		
Employment status			210.0	0.000
Employees	134	11.2		
Unemployed	52	30.4		
Long-term sickness/benefits	58	53.3		
Self-employed	18	7.2		
Retired	31	10.5		

8 Chi-square analysis compared those reporting mental health problems (n = 382) with those who did not report problems (n= 2,296). N = 2,678. N may differ slightly due to missing data. The valid response for each question has been used.

Table 3.3 Weighted percentages of respondents (n) of the total sample reporting mental health problems by social and economic factors and results of chi-square analysis *(continued)*

	n	% reporting problems	X^2	P value
Full-time education	16	6.3		
Domestic duties	67	17.2		
% of total sample	382	14.3		
Household income (€ per week)			80.5	0.000
Under 300	82	27.7		
300–399	64	22.1		
400–499	52	17.7		
500–749	72	15.7		
750–899	23	8.5		
900–1,249	23	9.3		
Over 1,249	32	7.9		
% of total sample	348	15.4		
Size of location			28.6	0.000
Open countryside	83	10.1		
Village/small town (200–4,999)	42	12.2		
Large town (5,000–10,000)	102	18.2		
City (Waterford, Limerick, Galway, Cork, Dublin)	97	14.7		
Dublin county (outside Dublin city)	48	21.1		
% of total sample	372	14.2		
Medical cover			98.9	0.000
GMS card	158	26.0		
Private insurance	112	9.0		
No GMS card or private insurance	77	12.4		
Both	35	16.8		
% of total sample	382	14.3		

Multivariate analysis

Multiple logistic regression analysis was performed in order to examine the significant predictors of self-reported mental health problems in the Irish population. All socio-demographic variables were included in the analysis as all reached statistical significance at the level of 0.05 in cross-tabulations (Table 3.3). These variables included gender, age, marital status, level of education, employment status, household income, size of location of household and medical cover.

As in the previous regression on the GHQ12 scores, variables were recoded to achieve the most parsimonious solution and to reduce the amount of standard error. The variables recoded included medical cover, household income, size of location of household and employment (see section 3.1).

Table 3.4 shows a summary of the final model. All variables except educational level remained in the final model: gender, age, marital status, employment status, household income, size of location of household, and medical card coverage. Results from the logistic regression on self-reported mental health problems in the past year were mostly comparable to those from the GHQ12. However, marital status was a significant predictor of self-reported mental health problems, but not for psychological distress. On the other hand, educational level was a weak, but nevertheless significant predictor of psychological distress but not for self-reported mental heath problems.

The Nagelkerke R^2 value of 0.189 (Cox and Snell R^2 = 0.095) indicated that 18.9% of the variance in the self-reported mental health variable was explained by the combination of the effects of the socio-demographic variables. The Hosmer-Lemeshow test result of 0.167 confirmed that the final model fitted the data well. The model predicted 98.4% of non-cases and 15.3% of cases. Overall, 85.9% of 2,089 cases included in logistic regression were predicted correctly.

Table 3.4 Logistic regression model predicting self-reported mental heath problems in the last year

Socio-demographic predictors	ß	S.E.	Odds Ratio	95% CI	Sig.
Gender (Reference: Males)					
Females	0.29	0.14	1.34	1.02, 1.78	0.035*
Age group (Reference: 18–29)					0.000*
30–39	0.71	0.23	2.03	1.28, 3.25	0.003*
40–49	0.38	0.25	1.47	0.89, 2.45	0.133**
50–64	0.44	0.25	1.56	0.95, 2.59	0.079*
65+	-0.62	0.30	0.53	0.30, 0.98	0.042*
Employment status (Reference: Employed)					0.000*
Unemployed	1.08	0.22	2.96	1,90, 4.62	0.000*
Sickness/disability	1.51	0.26	4.56	2.73, 7.64	0.000*
Other (retired, full-time education, household duties)	0.03	0.18	1.03	0.72, 1.50	0.847
Weekly household income (Reference: 750+ euro)					
749 euro or less	0.58	0.16	1.78	1.30, 2.46	0.000*
Medical card status (Reference: No medical card)					
Medical card holders	0.78	0.16	2.18	1.58, 3.01	0.000*
Size of location (Reference: Open country/village/small town)					0.001*
Larger town (5,000–10,000)	0.48	0.17	1.61	1.16, 2.26	0.005*
City	0.40	0.16	1.49	1.08, 2.09	0.016*
County Dublin outside city	0.72	0.21	2.07	1.36, 3.17	0.001*
Marital status (Reference: Married/cohabiting)					0.009*
Separated/Divorced/Widowed	0.46	0.20	1.58	1.07, 2.34	0.022*
Never married	-0.30	0.18	0.74	0.52, 1.05	0.093*

* $p < 0.05$
** $p < 0.15$

Females were 1.3 times more likely than males to have reported mental health problems with GHQ scores of four and above.

In terms of marital status, those who were separated, widowed or divorced were 1.58 times more likely than married or cohabiting people to have experienced mental health problems in the last year, while those who were single were less likely to have reported problems.

All age groups with the exception of persons aged 65 years and older were significantly more likely to have experienced mental health problems, compared to those aged 18–29. In contrast, those aged over 65 years were less likely to have reported experiencing mental health problems in the last year than the younger age group 18–29.

Compared to those in employment, people who reported being unemployed or unable to work due to sickness/disability were significantly more likely to report mental health problems (Table 3.4). The unemployed were almost three times more likely, and those with sickness or disability four and a half times more likely. In line with the results from the GHQ12, those in the 'other' employment category, including those retired, in full-time training or study, or in domestic duties, were not significantly different from those employed in their likelihood to report mental health problems.

Those with a household income of less than 750 euro per week were 1.8 times more likely to report mental health problems than those with a weekly household income of 750 euro or higher.

Those covered by medical cards were about 2.2 times more likely to report mental health problems than those not covered by medical cards.

Compared to those living in the country, in a village or small town, those living in a larger town with a population of 5,000–10,000 persons were 1.6 times more likely to report mental health problems in the past year. Similarly, persons living in cities were 1.5 times more likely to report mental health problems than those in less populated areas. The likelihood of those reporting mental health problems increased to 2.1 for those living in county Dublin, showing that those living in this area were twice as likely to experience mental health problems in the last year compared to those in the countryside or smaller areas.

Similar to the model of psychological distress in the last two weeks, the most important variable predicting self-reported mental health problems in the last year was employment status (see Table 3.4). However, distribution of vulnerable employment groups was slightly different. In the model predicting self-reported mental health problems, those who were sick or disabled were about 4.56 time more likely to report having mental health problems in the last year (95% CI = 2.73, 7.64, p = 0.000) compared to those employed, followed by those unemployed (OR = 2.96, 95% CI = 1.90, 4.62, p = 0.000). In the model of psychological distress (see Table 3. 2) those unemployed had a slightly higher risk of being distressed (OR = 4.06) than those with sickness or disability (OR = 3.54), as compared with those employed. Similar to the model of psychological distress, the second most important predictor of reporting mental health problems in the last year was having a medical card (OR = 2.18, 95% CI = 1.58, 3.01, p = 0.000). However, the third most important variable predicting self-reported mental health problems in the last year was living in county Dublin (OR = 2.07, 95% CI = 1.36, 3.17, p = 0.001), as opposed to the variable being female as was the case in the model predicting psychological distress (see Table 3.2). These results show good concurrent validity for the GHQ12 and self-reported mental health measures, thus strengthening our confidence in the findings that approximately 12% to 14% of the Irish population are experiencing or have experienced psychological distress.

3.3 Relationship of self-reported mental health problems in the previous year with current psychological distress

There was a significant association between high GHQ12 scores and self-reported mental health problems ($\chi 2$ (1) = 596.1, p = 0.000). Figure 3.2 shows the proportion of those with a high GHQ12 who reported mental health problems in the last year. As can be seen from the graph, very few of those who reported no mental health problems in the previous year had high GHQ12 scores. However, there was little difference between those who had reported mental health problems in the last year and the GHQ12 score, with 49.1% having a low GHQ12 score and 50.9% having a high GHQ12 score. These findings show that almost half the respondents who reported mental health problems in the previous year were not experiencing current symptoms of psychological distress, while half were currently experiencing distress.

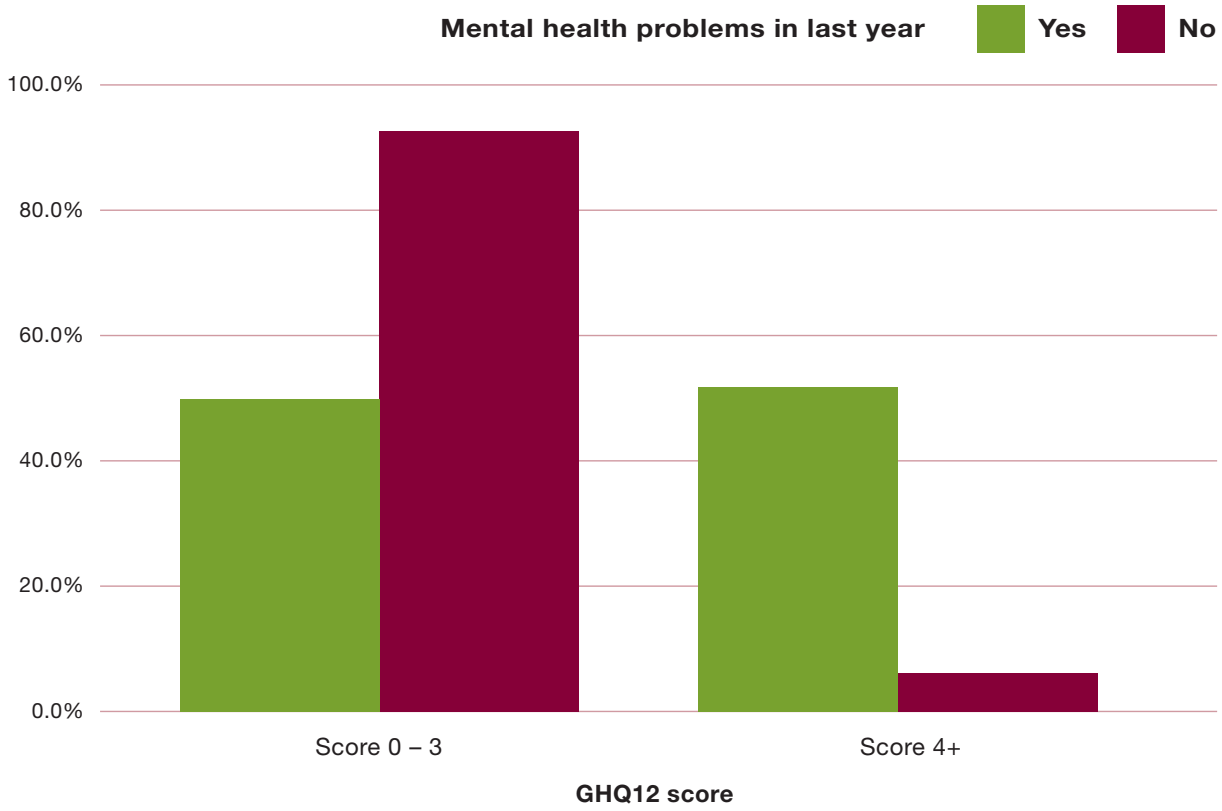

Figure 3.2 High and low GHQ12 scores by self-reported mental health problems in the last year

3.4 Service use for mental health problems in the previous year

Respondents were asked if they had spoken to a general practitioner in the previous 12 months about being anxious or depressed, or about mental, nervous or emotional problems. In addition, respondents were asked if they had been in contact with an outpatient clinic, day centre, day hospital or inpatient psychiatric hospital or unit in the previous year. Table 3.5 shows the frequencies for self-reported mental health problems in the previous year and the use of general practice and secondary mental health services in the past year. The following sections summarise these findings.

Table 3.5 Number and percentage of respondents reporting mental health problems and using primary and secondary care services in HRB NPWDS

	Reported mental health problems in previous year					
	Yes		No		Total	
	Number	%	Number	%	Number	%
General practitioner						
Yes	225	59.5	30	1.3	255	9.5
No	153	40.5	2,266	98.7	2,419	90.5
Total	378	100.0	2,296	100.0	2,674	100.0
Outpatient clinic						
Yes	60	15.7	75	3.3	135	5.1
No	322	84.3	2,215	96.7	2,537	94.9
Total	382	100.0	2,290	100	2,672	100.0
Day centre						
Yes	24	6.3	8	0.3	32	1.2
No	358	93.7	2,278	99.7	2,636	98.8
Total	382	100.0	2,286	100.0	2,668	100.0
Day hospital						
Yes	23	6.0	20	0.9	43	1.6
No	358	94.0	2,263	99.1	2,621	98.4
Total	381	100.0	2,283	100.0	2,664	100.0
Inpatient psychiatric unit/hospital						
Yes	16	4.2	1	0.0	17	0.6
No	366	95.8	2,284	100.0	2,650	99.4
Total	**382**	**100.0**	**2,285**	**100.0**	**2,667**	**100.0**

General practice use

Table 3.5 shows the proportion of those who reported mental health problems by the proportion of those who visited a general practitioner for mental health problems. A total of 9.5% (255/2,674) of the sample reported speaking at least once to a general practitioner about mental health problems in the previous year while 40.5% (153/378) of those with mental health problems did not contact the general practitioner. There were a total of 1,132 visits to the general practitioner, resulting in an average of approximately 4.4 visits per person specifically for mental health problems within the year. Self-reported attendance at the general practitioner for physical health problems showed that 72% of respondents reported attendance resulting in a total of 7,544 visits with an average of 3.9 visits per person. As expected, there was a much higher proportion attending for physical problems than for mental health problems, yet the average number of attendances per person was greater for those with mental health problems. Furthermore those with mental health problems (mean 5.26; SD 5.5) reported attending the general practitioner more frequently for physical health problems than those who did not report mental health problems (mean 2.41; SD 3.89) in the previous year (t (438.3) = 9.58, p = 0.000).

For those who had reported mental health problems in the previous year, over half (59.5%; 225/378) had contacted a general practitioner specifically for mental health problems (see Table 3.5). Only a small proportion of those who did not report mental health problems in the previous year reported speaking to a general practitioner about mental health problems (1.3%; 30/2,296).

Mental health services – outpatient clinic, day hospital, day centre and inpatient services

Respondents were asked if they had been in contact with any of the following mental health services in the previous 12 months – outpatient clinic, day centre, day hospital, or inpatient psychiatric hospital/unit. A total of 5.8% of respondents had contact with one or more of the mental health services (157/2,707). A total of 5.1% had contact with an outpatient clinic (135/2,672); 1% had contact with a day centre (32/2,668); 1.6% (43/2,664) had contact with a day hospital and 0.6% (17/2,667) had contact with an inpatient service (see Table 3.5). As expected, a much lower proportion of individuals had contacted secondary mental health services than had contacted a general practitioner.

In relation to those who reported mental health problems in the previous year, 16% (60/382) had contacted outpatient clinics; 6% (24/382) had contacted day centres; 6% (23/381) had contacted day hospitals, and 4% (16/382) had contact with inpatient services (see Table 3.5). Unexpectedly, of those who had contact with outpatient clinics or day hospitals (n = 178), over half (n = 95) reported that they had not experienced mental health problems in the previous year. Given that these are specialised mental health services, one would expect the individuals contacting them to have reported experiencing a mental health problem in the last year. One possible explanation for this anomaly is that these individuals have ongoing mental health problems and are attending outpatient clinics or day hospitals for continuing treatment and care. Perceptions of mental health problems in the previous year may relate to experiencing an acute episode, as opposed to experiencing ongoing problems that may have stabilised.

Outpatient clinics provide assessment, diagnosis and ongoing treatment. However, while individuals may be attending outpatient clinics, this does not necessarily mean that they perceive that they experienced mental health problems in the previous year. In contrast, the role of day hospitals is to provide intensive treatment for acutely ill individuals. Therefore, one would expect that those who contacted day hospitals in the previous year would also have reported experiencing mental health problems during that particular timeframe. However, a report in 2003 by Hickey *et al*. found that day hospitals were not functioning as expected and that, in many cases, the day hospital was used as an alternative to a day centre in situations where appropriate placement was not available.

General practice use and mental heath service use

Table 3.6 shows attendance at general practice for mental health problems by attendance at mental health services. As expected, a large number of people had not spoken to a general practitioner or used mental health services in the last year (86.7%; 2,347/2,707). Of those who had spoken to a general practitioner about mental health problems (n = 255), 20.4% (n = 52) had also used mental health services, while 79.6% (n = 203) had not used secondary mental health services. Of those who had not spoken to a general practitioner in the last year about a nervous, mental or emotional problem (n = 2,452), 95.7% (n = 2,347) had not used mental health services, while 4.3% (n = 105) had used some form of mental health services. Of the 105 respondents who had not attended a general practitioner but had attended mental health services, a large proportion had attended an outpatient clinic (86.7%; 91/105). A total of 12.4% (n = 13) had attended a day centre, 25.7% (n = 27) had attended a day hospital and 4.8% (n = 5) had attended inpatient services. These findings suggest that while people may be attending mental health services they are not necessarily in touch with a general practitioner. This raises questions around the links between primary and secondary mental health care.

Table 3.6 Number and percentage of respondents speaking to a general practitioner about mental health problems by use of mental health services

Use of mental health services	Use of general practice		Total
	Yes	No	
Yes	52 (20.4)	105 (4.3)	**157 (5.8)**
No	203 (79.6)	2,347 (95.7)	**2,550 (94.2)**
Total	255 (100)	2,452 (100)	**2,707 (100)**

4 Discussion and conclusions

4.1 Factors associated with current psychological distress and self-reported mental health problems in the previous year

Nearly two-thirds of the sample had GHQ12 scores of zero, suggesting that a large proportion of the population was psychologically well at any given time in Ireland. This finding is in line with results from a European survey where 'the majority of EU citizens have experienced positive and balanced feelings rather than negative emotions such as feeling depressed' (European Commission, 2006). A total of 12% of the sample exhibited scores on the GHQ12 which were indicative of current psychological distress, while 14% of the sample reported experiencing mental, nervous or emotional problems during the previous year. A point prevalence of 12% is similar to international estimates of 10% of the adult population experiencing a mental or behavioural problem at any given time (WHO, 2001). A significant proportion of the population will be experiencing symptoms of psychological distress and this has implications in terms of health promotion and awareness of mental health issues in the general population. This issue was discussed in greater detail in the first report from the HRB NPWDS (Tedstone Doherty *et al*. 2007). Just over 50% of those who reported mental health problems in the previous year reported that they were currently experiencing a significant number of symptoms of distress. This highlights the relatively prolonged and recurrent course of mental health problems for some people.

In terms of socio-demographic factors that were associated with mental health problems, the pattern of association was similar for current psychological distress and mental health problems in the previous year. Therefore the following sections will not discuss these separately, but will refer to mental health problems and will include current psychological distress and mental health problems in the previous year.

The higher prevalence of mental health problems in females than in males in the Irish sample is comparable to findings from Scotland, England and Northern Ireland (Scottish Health Survey, 2003; Health Survey for England, 2003; NISRA, 2002). In terms of the extent of psychological distress in the four areas, the proportions of males and females categorised as 'cases' were highest in Northern Ireland, followed by Scotland, England and Ireland. The difference in self-rated health between the Republic of Ireland and Northern Ireland has been noted previously (McGee *et al*. 2005; Balanda and Wilde, 2003), with those in the Republic of Ireland rating their general health as better than those in Northern Ireland. The next NPWDS will collect data on psychological distress and health service use in both the Republic of Ireland and Northern Ireland, which will allow us to explore population level differences in these areas as well as present all-Ireland estimates of psychological distress.

Psychological distress and mental health problems were less evident in the youngest and oldest age groups, with the highest prevalence evident in the middle age group, i.e. 50-64 years. The gender pattern of a higher point prevalence of psychological distress in females remained constant across the age groups, with the only deviation occurring in the middle age grouping (50-64 years); within this age grouping, the point prevalence of psychological distress was more evident in men than in women. This is supported by the findings from the Northern Ireland survey (Northern Ireland Health and Social Wellbeing Survey, 2002) and it raises interesting research questions about the susceptibility of men in the 50-64 years age grouping to psychological distress and the reasons behind this phenomenon.

In line with previous research findings, those who were separated, widowed or divorced exhibited the greatest point prevalence of psychological distress and mental health problems in the previous year (Balanda and Wilde, 2003). However, there is a need to qualify this finding because marital status appears to have a different impact across gender. For females, being widowed, separated or divorced resulted in a greater proportion of high GHQ12 scores; for males, being married or cohabiting resulted in a higher proportion of 'cases'. Closer perusal of the GHQ12 data within the divorced and separated categories showed that for females a high proportion of those who were divorced (57.5%) and separated (28.5%) were classified as 'cases'; the comparable figures for males were: divorced, 5.6%; separated, 7.8%. The small number of respondents within these categories (n = 24 divorced; n = 67 separated) – especially the small number of male respondents – may cast doubt on the validity of these results. However, the finding does raise further research questions, such as whether being separated or divorced may have a greater negative impact on the psychological wellbeing of females than males, and why.

In relation to socio-economic factors, those who had a higher level of education, a higher weekly income and who were employed were least likely to be distressed or to have reported mental health problems in the previous year. This suggests that inequalities in education, employment and poverty may have an impact on mental health and wellbeing. International research has consistently found that mental ill health tends to be more prevalent in the lower socio-economic groups (Mackenbach, 2006). It should be noted that the greatest proportion of 'cases' of psychological distress and mental health problems was evident in those who were receiving long-term disability benefit as well as those who were unemployed; thus, these groups are the most vulnerable. Previous research has suggested that issues relating to unemployment impact on mental wellbeing, and policies aimed at improving these factors may impact on the mental health status of society (Verhaak, 1995).

In terms of the geographic location of the respondents, those who were living in villages or small towns of 200–4,999 exhibited the lowest prevalence of psychological distress. There was little difference in point prevalence for those living in locations classified as 'open countryside' or living in cities; here the highest proportion of 'cases' was among those who were living in large towns or outside Dublin city (Dublin county).

It would seem that the factors that predict current distress also predict mental health problems in the previous year. However, multivariate analysis showed that respondents who were unemployed were over four times more likely to be experiencing current psychological distress, but it was those who had long-term disabilities or sickness who were over four times more likely to report mental health problems in the last year.

4.2 Service use for mental health problems in the previous year

Almost 10% (n = 255) of the sample reported speaking to a general practitioner in the previous year specifically about a mental, nervous or emotional problem. These findings are similar to a European study which showed that 13% of an Irish sample had sought help from a general practitioner in the previous 12 months for psychological or emotional problems (European Commission, 2006). The 255 respondents in this survey who reported having spoken to a general practitioner about mental health problems together accounted for a total of 1,132 visits to a general practitioner, i.e. an average of 4.4 visits per individual. There are no previous figures specifically relating to mental health problems and attendance at general practice with which to compare these results with. However our figures relating to attendance at general practice for physical health problems are similar to previous findings. For example, the Living in Ireland Survey in 2001 showed that 72% of respondents had seen the general practitioner at least once in the previous year with an average of three visits per person, a finding comparable to our own results (Layte, 2004). A survey carried out in Ireland among those aged 65 years and over found that the sample surveyed had had an average of 5.3 visits to a general practitioner during the previous year (McGee *et al*. 2005). Given that the finding relates specifically to the discussion of mental health problems with a general practitioner, and is based on a younger age population sample, then an average of 4.4 visits per individual in the previous year found by the current survey is relatively high. Such a pattern of use would indeed add a considerable burden to the workloads of the general practitioners concerned. To add to this is the fact that those who reported mental health problems attended the general practitioner almost twice as often, on average, as those who did not report mental health problems.

It has been suggested that nine out of ten mental health problems are treated solely within primary care (Goldberg and Huxley, 1980). Our findings revealed that almost eight in ten respondents attended primary care only. It is likely that consultations about mental health problems require more time input from the general practitioner than consultations about physical health problems; the latter may be more readily diagnosed and treated. In a study by Copty and Whitford (2005) Irish general practitioners reported that there was a lack of training in mental health awareness and treatment among general practitioners; they also recommended that a shared-care model between general practitioners and the mental health services be developed. In this context, the recent publication by the Health Service Executive (HSE) of the 'Mental Health in Primary Care' resource pack (a training resource for the delivery of mental health care at primary care level) is to be welcomed. However the lack of accessibility to other health professionals within primary care and the lack of stepped care models of treatment suggest negative consequences for the individual who is experiencing mental health problems, their families and major economic costs to society. Not only may mental health problems not be recognised in primary care, even when they are the current system of care and inaccessibility to other health professionals suggests that people may not be getting evidence-based treatments. This has associated economic costs for society and the individual such as longer periods of health use, more frequent and increased periods of absenteeism from work, inability to get employment and longer periods of time on social welfare (Layard *et al*. 2007).

The integration and collaboration between primary care and specialist services has been raised in policy documents such as *Primary Care – A New Direction* (DofHC, 2001) and *A Vision for Change* (DofHC, 2006). Both of these documents argue that there is a need for primary care services and specialist services to work together to ensure referral protocols, direct access to diagnostic facilities, discharge plans, integrated care pathways and shared care models. It is argued that having efficient integrated care pathways would result in primary care doing most of the work that is currently being done by specialist services. Another important point in relation to mental health in primary care is the lack of professionals that can provide a range of interventions better aimed at addressing mental health issues. The lack of information on the types of services and treatments, such as psychologists, counsellors and other health professionals, offered to people within the primary care setting was highlighted in *A Vision for Change* (DofHC, 2006). The report recommended that a range of interventions should be provided to effectively plan primary care services. A small study in Northern Ireland evaluated a programme of direct access for general practitioners to refer patients directly to psychological therapies (Gallagher and Kenny, 2007). The study showed that both the patients and the general practitioners had high levels of satisfaction with the direct access programme and positive outcomes for the patients were also observed in reduced consultations with the general practitioner and

reduced medication during therapy. This was a small evaluation study that requires replication using larger samples in a controlled study. Nevertheless it did highlight the perceived benefits of a direct access psychological intervention for patients and general practitioners.

We found that one in five of those who attended the general practitioner for mental health problems had also attended some form of specialist mental health care. It is not possible to know from our survey if those who were attending mental health services actually needed such services, or if those who were not attending mental health services actually would have benefited from more specialist care. Previous surveys of the World Mental Health Surveys (WHO) have shown that there are quite a number of unmet needs in the community for those with mental health disorders (Alonso *et al*. 2004; Wang *et al*. 2007). There is a need to examine the level of need in community samples within the Irish context using more detailed diagnostic instruments. In addition, there is a need to examine the treatment and care pathways between primary care and mental health care to ensure that needs are being met, especially in terms of referral pathways, discharge planning and the possibility of implementing shared care models. Furthermore, for those who do not require the intervention of formal healthcare services, there is a need to develop alternative models of community support which can provide information and coping strategies to those with transient psychological distress. A good example of such a programme is the 'Stress control' model developed as part of the STEPS programme in Scotland.[9] This model is a community-based psycho-educational programme that delivers information on psychological distress and coping strategies to deal with distress.

Not surprisingly, those who reported having experienced mental health problems in the previous year were more likely to have contacted a general practitioner to discuss mental, nervous or emotional problems than those who had not experienced mental health problems during that timeframe. Of those experiencing mental health problems, 60% reported that they had spoken to a general practitioner about their mental health problems, while 40% did not discuss the problems with a general practitioner. This is compatible with international research which suggests that approximately 47% of people with depression remain untreated (WHO, 2003) and again raises the issue of unmet needs for services. Further research is required to investigate the level of distress at primary care level and the extent to which distress is disclosed to, or identified by, the general practitioner.

9 http://www.glasgowsteps.com/

Furthermore, of the respondents who had reported mental health problems in the previous year, 89% had visited a general practitioner at least once for a physical health problem; this compared with just 68% of respondents who had not experienced mental health problems in the previous year. Whether the increased use of a general practitioner for physical health problems by those experiencing mental health problems is a cause or an effect of the mental health problems remains uncertain. It has been previously highlighted that those with mental health problems have poorer physical health than those without mental health problems (DofHC, 2006). Our findings revealed that 93% of those who were attending mental health services had visited the general practitioner at least once in the past year for physical health problems, compared to 70% of those who were not using mental health services. This again highlights the demands that those with mental health problems place on general practitioners. It may be that these individuals are experiencing psychosomatic symptoms which are caused or aggravated by psychological factors such as stress.

A study carried out in New Zealand found that almost 30% of attendees in general practice did not disclose psychological problems to a general practitioner (Bushnell *et al*. 2005). The main reasons given in this study for not disclosing the information was the belief that the general practitioner was not the proper person to talk to and the belief that psychological problems should not be discussed at all. This highlights the stigma that still surrounds mental health problems, but also highlights the enormous potential for community-based psycho-educational programmes, such as the Stress Control programme, and the importance of self-help initiatives. Those most likely not to disclose were younger, had had a greater number of consultations, and had greater psychiatric disability. The reason why individuals experiencing mental health problems did not discuss such problems with a general practitioner was not investigated in the current survey although the willingness to disclose distressing information to others was. A previous paper (Ward *et al*. 2007) based on the HRB NPWDS investigated the willingness of individuals to disclose distressing information to others and found that those least likely to disclose were male and older respondents. The willingness to disclose distressing information to others may have some impact on the frequently found gender differences in the prevalence of distress in that the higher prevalence of distress in woman may be due to the fact that they are more willing to disclose the distress than men.

As expected, and in line with European data (European Commission, 2006), a lower proportion of respondents had contacted mental health services than had contacted a general practitioner, with only 5% (n = 135) reporting that they had contacted outpatient clinics, 1% (n = 32) day centres, 1.6% (n = 43) day hospitals and less than 1% (n = 17) inpatient services. It is likely that those receiving secondary care have more severe and enduring problems than those attending general practice.

In relation to secondary level mental health services use, among those who reported having experienced mental heath problems during the previous year, only 16% (n = 60) attended outpatient services, 6% (n = 24) day centres, 6% (n = 23) day hospitals and, as expected, the smallest proportion, 4% (n = 16) inpatient care services. General practitioners are the gateway to secondary mental health services, with the primary care service being the one chosen most frequently by people seeking help for psychological problems (European Commission, 2006). This trend is confirmed in the NPWDS findings, i.e. when we compare the 59% of respondents reporting mental health problems who had spoken to their general practitioner about mental health problems with the much lower number who had contacted the secondary mental health services. It provides further evidence that in Ireland general practitioners play a very important role in the treatment and care of those experiencing psychological or emotional problems. This issue has been highlighted and discussed in a previous report (Tedstone Doherty *et al*. 2007).

4.3 Extrapolation of findings to the general population

The data collected for this survey helped to provide a national picture of the mental health of the adult population in Ireland and the level of use of services at primary and secondary care level. However, this information requires development and extension in order to ensure that more comprehensive information is available for service planning and development as well as policy development purposes. Most importantly, this information is required in order to identify those who may be experiencing mental health problems and those who are most vulnerable to psychological distress. In addition, there is a need to be able to track individuals through the secondary care services, so that service use at both community and inpatient levels can be assessed. The MHRU has developed a database designed to collect information at the community care level and at the inpatient level. This information system, WISDOM, is currently in the 'proof of concept' stage and will be evaluated to assess its suitability as a national information system. If successful the database will be able to deliver the requisite information at community care and inpatient care level. Table 4.1 and Table 4.2 present a summary of the most up-to-date information available for mental health and illness in Ireland. Table 4.1 shows available HRB statistics for point prevalence of psychological distress and use of inpatient and community mental health facilities in Ireland, while Table 4.2 shows the data relating to activity over a one-year period.

Table 4.1 Summary of available statistics in Ireland for point prevalence of mental health problems, use of mental health facilities in Ireland, by rates per 100,000 population aged 18 years and over

Data	Source of data	Date of study	Description	Number in population	Rate per 100,000
GHQ12 cases	HRB NPWDS	Dec. 2005, Jan. and April 2006	Point prevalence – psychological distress at any point in time	384,457 (estimated from sample)	11,999
Inpatient Psychiatric Units and Hospitals Census	Inpatient Census	31 March 2006	Residents in private and public psychiatric units and hospitals on census date	3,389	106
High-support Community Residence Census	Residents in community residential accommodation	31 March 2006	Residents in 24-hour nursed community residential facilities on census date	1,412	44

Table 4.2 Summary of available statistics in Ireland for one-year prevalence of mental health problems and use of primary and inpatient care in Ireland, by rates per 100,000 population aged 18 years and over

Data	Source of data	Date of study	Description	Number in population	Rate per 100,000
Self-reported mental health problems	HRB NPWDS	Dec. 2005, January and April 2006	Self-reported mental health problems in previous year	448,533 (estimated from sample)	13,999
Reported attendance at general practitioner	HRB NPWDS	Dec. 2005, January and April 2006	Self-reported attendance at general practitioner over the previous year for mental health problems	320,381 (estimated from sample)	10,000
Reported use of inpatient services	HRB NPWDS	Dec. 2005, January and April 2006	Self-reported attendance in inpatient services over the previous year	19,222 (estimated from sample)	600
Admissions to psychiatric units and hospitals	NPIRS	Jan. to Dec. 2006	Admissions to private and public psychiatric units and hospitals	20,288	633
Discharges from general hospitals	HIPE	2002– 2003	Patients discharged with a principle psychiatric diagnosis	4,427 (approximately 2,213 per year)	69

In relation to the model of psychiatric pathways proposed by Goldberg and Huxley (1980), most of the findings discussed in this paper refer to psychological distress at Level One – the community level. If the more conservative approach of using four and above as an indicator of psychological distress is applied, the findings suggest that approximately 12% of the population will be experiencing psychological distress at any given point in time. By extrapolating this to the entire population aged 18 years and over (3,203,814; Central Statistics Office, 2003),[10] it would suggest that around 384,457 individuals are experiencing psychological distress in the community at any given point in time. In other words, 12 people in every 100 in the general population may be experiencing psychological distress at any given point in time (see Table 4.1). It is not known how many of these individuals will require, or indeed will seek, formal help, but the potential for the use of informal supports such as community-based psycho-educational programmes and self-help initiatives should not be overlooked.

In terms of self-reported mental health problems in the previous year, approximately 14% of the sample reported having experienced problems; this equates to approximately 14% (448,533/3,203,814) of people in the population aged 18 years and over experiencing mental health problems in a given year (see Table 4.2).

As already noted, if the Goldberg and Huxley (1980) model is applied there is limited information available on psychological distress at Levels Two and Three that is applicable in the Irish context. Studies aimed at ascertaining prevalence at these levels commonly use a version of the GHQ in primary care settings. The studies are designed to measure prevalence of psychological distress in a sample of general practice attendees; they are also designed to measure the number of attendees who are diagnosed by their general practitioners as experiencing psychological distress (Marino *et al*. 1990; Verhaak, 1995). A previous study of mental health in general practice found that over half of the general practitioners surveyed estimated that 10–30% of their patients had mental health problems; the estimated proportion of these patients with mental health problems was 25% (Copty and Whitford, 2005). However, this figure was based on general practitioners' personal estimates only and it may therefore be unreliable as it may be influenced by the general practitioners' perceptions of what constitutes psychological distress (Goldberg and Huxley, 1980).

Our figures from the NPWDS report estimate that approximately 10% of the adult population will contact a general practitioner in a given year specifically seeking help for a mental health problem. This would result in approximately 320,381 individuals contacting general practitioners, i.e. a rate of 10 people in every 100 (see Table 4.2). An average of four visits per person would result in approximately 1,281,524 visits per year to general practitioners for mental health problems. This level of attendance

10 All rates are calculated using the population figure of 3,203,814 from the 2006 Census.

is placing strain on general practice – a particularly important issue given the time constraints that general practitioners are already operating under. Dealing with patients who have psychological problems is likely to take more of a general practitioner's time than dealing with patients who have routine physical complaints; the latter may simply require standard medications and repeat prescriptions.

As referred to above, a previous study highlighted deficiencies in mental health training for general practitioners and deficiencies in protocols for the delivery of mental health care in the community (Copty and Whitford, 2005). A welcome development in this context is the 'Mental Health in Primary Care' resource pack, produced by the HSE in 2007 for the delivery of mental health care at primary care level. The current findings relating to the extent of psychological distress in the community and the level of attendance at general practitioners for psychological problems reinforce the need to develop primary care systems which provide a range of evidence-based care for those with psychological problems. The stepped care approach is becoming more widespread in the UK, and this model provides a range of supports and services depending on the individual's level of need (Stericker and Shaw, 2007). Thus rather than using a standard treatment, as is often the case with the provision of psychotropic medication, alternative supports and treatments are offered first or in conjunction with medication depending on the individual need. Findings from a cost-benefit analysis of psychological therapies suggests that providing therapy to people who are not yet in treatment would provide substantial savings to the government in terms of the fiscal impact of increased employment and savings on the NHS (Layard *et al*. 2007). This report highlighted that spending in one area could potentially lead to savings in another area. For example, financial investments in primary care mental health could potentially lead to savings in the areas of employment, social services, specialised mental health services and other general health services. This suggests that there is a need for a mulitsectoral approach to mental health and wellbeing – a need that has been highlighted in policy documents such as A Vision for Change. The development of the Office of Disability and Mental Health in the Department of Health and Children is welcomed. This Office will forge links with other departments, namely Health and Children, Education and Science, Enterprise, Trade and Employment and Justice, Equality and Law Reform. It is envisaged that it will provide greater cohesion in supporting mental health structures across public services. It must be kept in mind that many people will not seek help from formal health services. The findings here showed that 40% of those with mental health problems did not seek support from formal health services. There is a the need to exploit the potential of less costly and openly accessible initiatives to address psychological distress at the population level and not just in consulting populations. These initiatives should provide support in the form of self help, information and coping skills.

In relation to the fourth level of the Goldberg and Huxley (1980) model (i.e. the level pertaining to community care data), WISDOM, the information system that is designed to collect community care data from psychiatric services, is in the 'proof of concept' phase and will be evaluated as to its suitability as a national information system during this phase. WISDOM will be linked to the current inpatient system (NPIRS), so that patients' data is captured at all levels of service provision within the mental health services.

In relation to the fifth and final level of the Goldberg and Huxley (1980) model (i.e. the level which represents individuals in inpatient facilities), information on the number of people admitted to inpatient psychiatric facilities in Ireland is available from the NPIRS annual reports and from the Psychiatric Units and Hospital Census carried out by the HRB. The latest report from the inpatient services shows that there were 20,288 admissions in 2006; this represents a rate of 633 per 100,000 population (0.6 per 100 population) aged 18 years and over (Daly *et al*. 2007; see Table 4.2). In addition, a study which used the Hospital Inpatient Enquiry (HIPE) database to examine the level of mental ill health in public general hospitals in the period 2002–2003, shows that there were 4,427 discharges during this period (Walsh, 2007, *in preparation*). This resulted in an approximate rate of 69 discharges per 100,000 population aged 18 years and over or a rate of 0.07 per 100 (see Table 4.2). The majority of these discharges were diagnosed with alcohol disorders. It is important to note that both NPIRS and HIPE refer to admission/discharge numbers only; they do not refer to the number of individual patients. Without a unique patient identifier there is no way to decipher how many individuals contributed to the total number of admissions and discharges. If the current survey results, which indicate that 0.6% of the sample were in contact with inpatient services in the previous year, are applied, it suggests that approximately 19,222 individuals use inpatient services on a yearly basis, i.e. a rate of 0.6 per 100 population (see Table 4.2). A census carried out on 31 March 2006 showed that 3,389 patients were resident in public and private psychiatric units and hospitals on that night (Daly and Walsh, 2006); this is a rate of 106 per 100,000 (0.1 per 100; see Table 4.1). In addition, a census on community residential facilities providing 24-hour nursed care, which was carried out on the 31 March 2006, found that 1,412 people were resident in these facilities; this represents a rate of 44 per 100,000 (0.04 per 100 population; see Table 4.1) (Tedstone Doherty *et al*. 2007).

We can estimate from these figures (inpatient census, 3,389; community residence census, 1,412; and the figures for the GHQ12 'cases', 384,457, in the current survey) that a total of 389,258 people in Ireland have a possible minor or major psychiatric problem at any given time. This results in an estimate of approximately 12,149 per 100,000 population aged 18 years and over or 12 per 100 population who are experiencing mild to severe mental health problems at any given time. It must be pointed out that there is a possibility that those included in the census data may

also have been included in the survey; however, the number of those included in both surveys is unlikely to be significant. Furthermore, this is an underestimation of the extent of psychological distress because the current survey excluded those most vulnerable, such as the homeless. For example, a study investigating mental health in the homeless found that 30% had been admitted to a psychiatric facility and 30% had been diagnosed with a psychiatric illness (Lawless and Corr, 2005). In addition, the census on community residential facilities only included facilities providing 24-hour care, thus excluding individuals living in medium-support and low-support facilities.

4.4 Limitations and future research

It must be borne in mind that this was a telephone household survey. Consequently, those who may be most at risk of psychological distress may not have been included; these would include the homeless, people who live in sheltered accommodation, and refugees and non-nationals who may not yet have a home of their own, may not have access to a landline and whose first language may not be English. Thus, the estimates presented here are likely to be conservative. There is a need for future surveys to address the extent of psychological distress in these vulnerable populations. The HRB is currently in discussions with the Polish Psychological Centre in Dublin in an attempt to get some information on psychological distress in the Polish communities living in Ireland.

While it is important to take a population approach to measuring mental health in Ireland, it is also necessary to take an all-island approach that includes both Northern Ireland and the Republic of Ireland. This will give a better indication of the health of those living in the island of Ireland and possibly the impact of different services on psychological wellbeing and distress. The next survey carried out by the HRB will include both jurisdictions.

In order to fully understand the severity of psychological distress, and the need for services for those who score high on the GHQ12, it will be necessary to carry out a follow-up study on these individuals using a clinical instrument such as the WHO Composite International Diagnostic Interview (CIDI). This is a standardised instrument designed to assess mental disorders according to the definitions and criteria of the ICD-10. The instrument allows the investigator to measure the prevalence, severity and burden of mental disorders. It can also be used to assess service use and the use of medication; to identify those who are treated and those who remain untreated; and to identify the barriers to treatment. A survey employing this instrument is currently being carried out in Northern Ireland by researchers at the University of Ulster (Professor Brendan Bunting, Personal Communication); and the MHRU, in collaboration with others, plans to explore the feasibility of a collaborative morbidity study in the Republic

of Ireland.

As well as community levels of distress it is also necessary to get an indication of the level of distress at all levels within the Goldberg and Huxley model (Goldberg and Huxley, 1980). To date we have no information on the level of distress among primary care attendees. In addition, we need to investigate the extent to which distress is disclosed to general practitioners and the extent to which general practitioners can recognise the signs and symptoms of distress. Related to this is the need to investigate why people do not disclose distress to the general practitioner and what inhibits general practitioners from recognising distress in individuals. Furthermore, there is a need to examine the interface between primary care and specialised mental health services, including referral patterns, discharge planning from mental health services and the possibilities for a shared care model to be implemented. Finally, there is a need to exploit the potential for less costly and openly accessible semi-formal or informal support services to be developed.

Both these findings and findings from other studies have suggested that there are a significant number of people who are experiencing transient distress, but nevertheless will not require support from formal mental health services. There is a need to explore the potential for affordable and openly accessible community and self-help based initiatives aimed at providing information and psycho-education on how to cope with psychological distress. It is important that initiatives are developed and implemented and evaluated on a pilot basis. Initiatives such as these have the potential to provide individuals with effective coping strategies to deal with distress in their day-to-day lives so that their problems do not escalate unnecessarily.

4.5 Conclusions

The HRB NPWDS has provided important information on the extent of psychological distress in the population in Ireland and has amalgamated this with data from other sources. Approximately 12% of the population will experience psychological distress at any given time. Approximately 14% of the population will report subjective mental health problems over a one-year period. Service use for psychological distress or mental health problems is more widespread at primary care level, where approximately 10% of the population are likely to discuss psychological or emotional problems with their general practitioner. Use of services at secondary care level applies mainly to outpatient clinics, with 5% of the population having contact with these facilities. Only 1–2% of the population will have contact with day hospitals or day centres and less than 1% will have contact with inpatient services.

To summarise, the current survey has shed light on psychological distress and mental health in the general population and the use of primary and secondary care services for mental health problems. This is the first attempt to amalgamate data from a range of sources to complete the picture of mental health in Ireland. It provides important information and highlights areas for further research and information gathering required to piece together the jigsaw of mental health in Ireland.

What is clear is that a significant number of people within the population are experiencing psychological distress. Both policy documents and research findings would suggest a suboptimal range of supports and services for the treatment of mental health problems. This report suggests that a dimensional approach to mental health problems should be taken and a range of supports and services provided depending on need. Mental health problems can range from mild to severe with different levels of support and services required at various time points. Only a small minority of those with problems will require the more specialised mental health care. The stepped care approach to treating common mental health problems suggests a way forward for the development of services within primary care. This model advocates the provision of evidence based supports and treatments that are tailored to individual need. The model includes all those who present to primary care with mental health difficulties including those who are experiencing subclinical symptoms to those experiencing more severe and enduring problems. Supports and treatments include self-help, psycho-education, cognitive behavioural therapy, medication and collaborative care between primary and secondary specialist services. This model has been piloted in the UK in recent years and the findings are positive in terms of choice, access, waiting times, service user satisfaction, clinical effectiveness and access to employment, training and education. Furthermore economic savings from the widespread provision of psychological therapies has been highlighted in the UK and may be worth investigating within the Irish context. Finally it is important to remember that not all those with mental health problems will seek the support from formal health services. There is a need to develop and provide community based innovative programmes that promote wellbeing and provide information on mental health problems. These programmes should also provide people with coping strategies to increase resilience to meet with the ever demanding and changing needs of the society in which we live.

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