SLÁN 2007

Survey of Lifestyle, Attitudes and Nutrition in Ireland

Mental Health and Social Well-being Report

DEPARTMENT OF HEALTH AND CHILDREN, 2009

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Reports based on the SLÁN 2007 survey

Morgan, K., McGee, H., Watson, D., Perry, I., Barry, M., Shelley, E., Harrington, J., Molcho, M., Layte, R., Tully, N., Van Lente, E., Ward, M., Lutomski, J., Conroy, R. and Brugha, R. (2008) *SLÁN 2007: Survey of Lifestyle, Attitudes and Nutrition in Ireland. Main Report*, Department of Health and Children. Dublin: The Stationery Office.

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on behalf of the SLÁN 2007 Consortium

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

INTRODUCTION AND METHODS

This report presents the main findings on the mental health and social well-being of Irish adults from the 2007 Survey of Lifestyle, Attitudes and Nutrition (SLÁN 2007). The SLÁN 2007 survey, commissioned by the Department of Health and Children, involved face-to-face interviews at home addresses with 10,364 respondents (62% response rate), aged 18 years and over; full details are given in the SLÁN 2007 Main Report (Morgan *et al*, 2008). This sample was representative of the general population in Ireland and was further weighted, for the purpose of analysis, to match the Census 2006 figures. SLÁN 2007 is, therefore, the largest national survey to date on the extent of both positive and negative mental health and social well-being in the Irish adult population.

The present study aims:

- to determine the levels of mental health in the Irish adult population, including positive mental health, psychological distress, major depressive disorder, generalised anxiety disorder, reported self-harm and perceived stigma;
- to consider the influence of socio-demographic variables on reported levels of mental health;
- to determine the levels of social well-being in the Irish adult population, including levels of quality of life, social support, loneliness, community involvement and neighbourhood perceptions;
- to consider the influence of socio-demographic variables on reported levels of social well-being;
- to explore the relationships between mental health, social well-being, physical health and selected health behaviours;
- to consider the policy and practice implications of the study's findings.

Employing the recommended mental health indicators for Europe developed by the STAKES Mindful project (Lavikainen *et al*, 2006), respondents were asked a series of questions on different aspects of mental health, including:

- positive mental health and well-being – including a sense of positive experience of energy and vitality in the past 4 weeks;
- non-specific psychological distress – relating to common mental health problems, including feeling down, nervous, tense and unhappy in the last 4 weeks;
- symptoms of major depressive disorder and generalised anxiety disorder (i.e. diagnosable clinical conditions) experienced in the last 12 months.

A number of questions were also included on deliberate self-harm and perceived stigma of experiencing mental health problems.

In addition, respondents were asked a number of questions on social well-being, including perceived quality of life, loneliness, social support, community involvement and neighbourhood perceptions.

This report presents the findings on mental health and social well-being, and considers the influence of key socio-demographic variables, including age, gender, social class, education,

income, residential location, employment status and marital status. The relationships between mental health, social well-being, self-rated health and selected health behaviours from the main survey are also examined.

KEY FINDINGS ON MENTAL HEALTH AND WELL-BEING

- **Positive mental health**: The findings show that most Irish adults have a reasonably high level of positive mental health, which compares favourably with reports from similar studies in other European countries. In keeping with previous findings, there is evidence of a strong association between levels of positive mental health, gender and social and economic factors. Men report higher levels of positive mental health than women, as do younger respondents in comparison to their older counterparts. Respondents who have higher incomes, higher education and are in paid employment report higher levels of positive mental health. Lower levels of loneliness and higher levels of social support are also found to be associated with positive mental health.

- **Psychological distress**: The findings indicate that respondents experienced relatively low levels of psychological distress in the past 4 weeks, with some 7% of the population being scored as having 'probable mental health problems'. Levels of psychological distress are found to be higher among women. The influence of social and economic factors on levels of reported psychological distress is also very evident. Respondents in the lowest income groups and those with only primary education are up to twice as likely to have probable mental health problems compared to those in the highest income groups and those with third-level education. The higher risk of experiencing clinical levels of psychological distress is particularly noticeable for women in social classes 5 and 6 living in urban areas. Poor levels of social support and experiencing loneliness are also strongly associated with higher levels of psychological distress.

- **Depression and anxiety disorders**: With regard to levels of mental disorders, probable major depressive disorder and generalised anxiety disorder were assessed using the CIDI-SF measures, employing a 12-month timeframe. Some 6% of all respondents were classified as having major depressive disorder, which is comparable to a reported European rate of about 5%. Some 3% of respondents were classified as having generalised anxiety disorder, which is also comparable to a reported European rate of about 2%. In keeping with a large body of previous evidence, women are more likely to have probable major depressive disorder in comparison to men, particularly women in lower social class groups aged 18-29 and 45-64. Similar to the findings on psychological distress (*see above*), reported levels of depression are higher among urban residents, medical card-holders, lower income groups, divorced/separated people and among those not in paid employment. It is noticeable that respondents who are not in paid employment are more than twice as likely to be depressed, supporting previous research. A similar pattern emerges for generalised anxiety disorder, which is found to be more prevalent among women, lower social class groups, urban residents, medical card-holders, divorced/separated people and those with lower levels of education, lower incomes and not in paid employment. Respondents who have medical cards and those with only primary education are more than twice as likely to have generalised anxiety disorder.

- **Self-harm**: About 47 respondents (0.4%) reported deliberately harming themselves in the past 12 months. Respondents who self-harmed were more likely to be single and from socially disadvantaged groups. The rate of 0.4% is higher than the 2005 rate of deliberate self-harm presentations to hospital Accident and Emergency (A&E) departments. It is noticeable that in the present study some 50% of those who reported self-harm did not come to the attention of a general hospital, which is in line with other population-based studies.

- **Perceived stigma**: Just over half the respondents (52%) reported that they 'agree' or 'strongly agree' with the statement *'If I was experiencing mental health problems, I wouldn't want people knowing about it'*. It is noticeable that men, those in higher social class and income groups, higher educated, those not having a medical card, married/cohabiting and those in paid employment are more likely to agree that they would not want others to know if they were experiencing mental health problems. This suggests that mental health problems are perceived as impacting negatively on people's social and economic position, particularly by those groups who may perceive themselves as having more to lose in this respect. These perceptions may impinge negatively on self-reported levels of mental health problems and people's willingness to disclose and seek help for mental health difficulties.

KEY FINDINGS ON SOCIAL WELL-BEING

- **Quality of life**: Irish adults reported very high levels of 'quality of life' – an overall measure of subjective well-being – with 90% of respondents stating that their quality of life was either 'good' or 'very good'. Respondents who were younger, in higher social classes, higher income groups, higher education levels, rural residents, non-medical card-holders and those in paid employment – all reported higher levels of quality of life. It is noticeable that lower levels of quality of life are reported by those in the 45-64 age group, in the lowest income group and among those not in paid employment. Mental health problems, however, do appear to have a significant influence on reported quality of life, with higher levels of psychological distress, depression and anxiety all predicting a poorer quality of life.

- **Social support**: Social support as perceived by respondents was assessed using three questions concerning whether respondents have 3 or more people close to them (78%), whether people take a friendly interest in what they do (81%) and whether it is easy to get practical help from neighbours if needed (74%). When compared with respondents in the highest income group, those in the lowest income group are over 33% less likely to report having 3 or more friends and 25% less likely to report that others take a friendly interest in them. However, higher levels of practical help from neighbours are reported by those in lower social class groups, those with lower levels of education, medical card-holders and those not in paid employment. Respondents aged 65 years and over are more than twice as likely to report ease of getting practical help than 18-29 year-olds. To examine the overall effect of social support, a composite measure was created, classifying responses into strong, medium and poor levels of social support. The findings suggest that people reporting poor social support are 1.7 times more likely to report high levels of psychological distress and almost 3 times less likely to report a 'very good' quality of life. These findings are in line with previous international studies.

- **Loneliness**: 14% of respondents reported being often lonely in the last 4 weeks, with women, older people and respondents in lower social class groups reporting high levels of loneliness. In this study, marital status (being widowed) and employment status (not being in paid employment) are the strongest overall predictors of loneliness. Respondents who are widowed are about 5 times more likely to feel lonely than those who are married or cohabiting. 17% of respondents aged 65 and over report being often lonely. The importance of loneliness to mental health and social well-being is also indicated since reported loneliness is found to be a predictor of quality of life, energy and vitality, and psychological distress.

- **Community involvement**: Some 55% of respondents stated that they regularly participate in community activities. Those from higher social class groups, in paid employment, with higher levels of education and high income report higher levels of community involvement. Those holding medical cards and those residing in urban settings report lower levels of community involvement. This study found that those not involved in community activities were slightly less likely to report 'very good' quality of life and more than twice as likely to experience psychological distress compared to those who are regularly involved in community activities. These findings are in keeping with previous studies.

- **Neighbourhood perceptions**: Respondents were given a list of potential problems that can occur in neighbourhoods and were asked to state how problematic they were in their own locality. Poor public transportation is the most commonly perceived problem, with 45% of respondents reporting it as a problem in their area. The next most commonly perceived problems are rubbish or litter lying about (41%), house break-ins (28%), vandalism (27%), graffiti on walls or buildings (24%), people being drunk in public (24%), lack of open public places (21%), and the lack of easily accessible food shops/ supermarkets (21%). Racist insults and attacks are reported less frequently (9%). Income is found to be associated with some neighbourhood problems, but not with others. House break-ins, graffiti on walls and poor transportation are more frequently reported by those in higher income groups, whereas lack of food shops and insults/attacks are more frequently reported by those in lower income groups. For almost all items on the list, younger respondents are more likely to perceive them to be a problem in their neighbourhood. Differences also emerge with regard to rural and urban neighbourhoods. Respondents in rural areas are more likely to report that poor public transport and lack of food shops are a problem in their neighbourhood, whereas respondents in urban areas are more likely to report that rubbish lying around, vandalism, house break-ins, people drunk in public, graffiti and insults are a problem. Associations are also found between perceived neighbourhood problems and higher levels of psychological distress and lower levels of energy and vitality.

KEY FINDINGS ON MENTAL HEALTH AND HEALTH BEHAVIOURS

- Clear associations emerge between reported levels of mental health, physical health and selected health behaviours. Respondents who rate themselves as having 'excellent' or 'very good' physical health are less likely to report psychological distress, depression or generalised anxiety disorder, and they are more than twice as likely to report high levels of energy and vitality. The findings also indicate that levels of reported major depressive disorder, generalised anxiety disorder and higher levels of psychological distress are

associated with lower levels of physical activity, poorer self-rated health and smoking. No clear association was found in relation to reported alcohol consumption levels. The data on positive mental health also confirm that those with higher levels of mental health who may be regarded as 'flourishing' are more likely to report better self-rated health, to be physically active and less likely to smoke. The findings are in keeping with a number of previous studies that report a strong association between mental disorder and risk factors for chronic diseases such as smoking, reduced activity, poor diet, obesity and hypertension.

CONCLUSIONS AND POLICY IMPLICATIONS

- For the first time, the SLÁN 2007 survey provides comprehensive information from a large and representative sample of the population on the mental health status of Irish adults and the factors that influence it, together with social well-being. The results have a number of implications for national health policy.

- The findings on positive mental health indicate that having access to a job, income and good education are all critical to positive mental health, as is having close supportive relationships. Recognition of the importance of the social and economic determinants of mental health, as well as the more individual-level determinants, points to the need for integrated strategies and intersectoral policy initiatives that will address the key drivers of mental health and well-being which are outside the 'health' sector. These findings call for a greater emphasis on models of mental health promotion that will intervene at the level of strengthening individuals, strengthening communities and removing the structural barriers to mental health through initiatives to reduce poverty and social inequalities. Protecting and enhancing the population's mental health and well-being, as outlined in *A Vision for Change: Report of the Expert Group on Mental Health Policy* (Department of Health and Children, 2006), requires the implementation of evidence-based mental health promotion and prevention programmes to be incorporated into all levels of mental health and health services.

- The findings on psychological distress highlight the importance of accessible community-based services, especially for those in more socially disadvantaged and low income positions. In particular, there is a need to address the support needs of women and to redress the negative effects of social and material disadvantage. These findings underscore the importance of addressing the social and economic determinants of mental health and ensuring access to a comprehensive range of interventions in primary care, as recommended in *A Vision for Change*.

- There is a clear social gradient in evidence for levels of probable major depressive disorder and generalised anxiety disorder, with respondents from lower social classes and lower income groups being more likely to have these mental disorders. The variance within gender is noticeable in that women under 65 years from lower social class groups living in urban areas show almost twice the rates of depression and anxiety disorders as their counterparts in higher social class groups. These findings highlight the need for effective and accessible services for people with depression and anxiety disorders, especially for women and those with higher levels of social disadvantage. The provision of gender-appropriate effective treatment and comprehensive services that are tailored to the

social circumstances and living conditions of service users is underscored. The findings endorse the recommendations in *A Vision for Change* on the provision of accessible community-based mental health services, offering a comprehensive range of medical, psychological and social therapies relevant to the needs of service users and their families. A multidisciplinary approach to evidence-based treatment is required, with links to local community resources relevant to the service user's needs.

- The reported levels of self-harm from this community-based study underscore the need for implementation of the strategies recommended in *Reach Out: National Strategy for Action on Suicide Prevention, 2005-2014* (HSE and Department of Health and Children, 2005), including risk management, assessment and treatment of deliberate self-harm. The *Reach Out* strategy endorses a broad-based public health approach combined with targeting high-risk and vulnerable groups.

- With over half the respondents in SLÁN 2007 agreeing that they would not wish others to know if they had a mental health problem, it is clear that stigma in relation to mental health problems still persists in Irish society. These findings support the need for evidence-based strategies aimed at tackling stigma and raising greater public awareness of mental health.

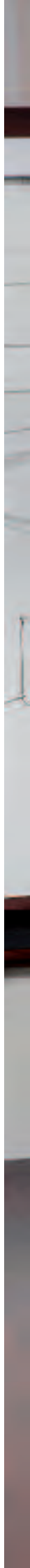
- The social well-being findings highlight the importance of loneliness and social support to mental health. Irish adults report an overall high level of quality of life and social well-being, with over three-quarters of respondents reporting that they have support from neighbours and friends, and over half regularly participating in community activities. Some 25% report that they perceive their neighbourhoods to be free of problems. Whereas the overall picture is positive, further analysis reveals that such positive well-being is not enjoyed by all, especially not by those who are economically disadvantaged. The findings suggest that inequalities are also present in relation to social well-being. The associations between neighbourhood problems, community involvement and mental health provide some insight into how broader social and economic factors may impact on people's well-being at community level. Community-based interventions, including community development approaches and strategies to promote community involvement and social participation, are indicated as a way of addressing such social and health inequities at the local level.

- The clear relationship between mental health, social well-being, quality of life, self-rated health and health behaviours in the present study indicates that mental health needs to be integrated into all elements of health and social policy, health system planning and healthcare delivery. The clear influence of the social and economic determinants of mental health, combined with a sound international knowledge base on feasible and effective promotion, prevention and treatment interventions, supports the call for mental health to be placed more centrally in the policy framework for population health improvement and the reduction of health inequalities.

- Markers of social disadvantage (low education, low income, holding a medical card, being unemployed) are all associated with poorer mental health and social well-being in this study. This is consistent with the international literature, where poor mental health and social well-being have been found to be associated with unemployment, less education, low income or material standard of living, in addition to poor physical health

and adverse life events. While it is difficult to determine the direction of causation of effect in these findings, it is now being recognised that mental health is both a cause *and* a consequence of social and economic inequalities. Tackling mental health and social well-being inequalities in Ireland requires multi-sectoral policy coordination through bottom-up and top-down approaches, including interventions addressing issues of poverty, marginalisation, discrimination, social inclusion, education, employment and living standards.

- Mental health is an integral and increasingly important aspect of health and well-being. It is both a cause and contributor to health inequalities. The findings from SLÁN 2007 highlight the urgency of implementing the recommendations of the policy document *A Vision for Change*. The protection and promotion of the future health and well-being of the Irish population requires the implementation of effective cross-sectoral policies that will help create and maintain a mentally healthy society, with consequent health, economic and social benefits for all.



1. INTRODUCTION

1. INTRODUCTION

This report presents the main findings on the mental health and social well-being of Irish adults from the 2007 Survey of Lifestyle, Attitudes and Nutrition (SLÁN 2007) in Ireland, commissioned by the Department of Health and Children. The report is part of a series based on the main 2007 survey (Morgan *et al*, 2008), which for the first time included questions on the mental health and social well-being status of the Irish adult population. Respondents were asked a series of questions on different aspects of mental health, including positive mental health and well-being, common mental health problems and clinical symptoms of depression and generalised anxiety disorder. A number of questions were also included on perceived stigma, quality of life, deliberate self-harm, loneliness, social support and social well-being.

The SLÁN 2007 survey involved 10,364 respondents (62% response rate), aged 18 and over, with sub-studies on body size and a detailed physical examination. The sample is representative of the general population in Ireland when compared with Census 2006 figures and was further weighted to match the Census for analysis. SLÁN 2007 is, therefore, the largest national survey to date on the extent of both positive and negative mental health in the Irish adult population. This report presents the findings on mental health and social well-being and considers the influence of key socio-demographic variables, including age, gender, social class, education, income, residential location, employment status and marital status. The relationships between mental health, social well-being and self-rated health are also examined.

STUDY RATIONALE

There is limited information available in Ireland on the extent and prevalence of mental health and well-being in the Irish population. A 2007 telephone survey by the Health Research Board found that one in 8 respondents (12%) reported that they had experienced significant psychological distress in the last month; one in 7 respondents (14%) reported that they had experienced a mental, nervous or emotional health problem in the past year; and one in 10 had spoken to a GP about a mental health problem (Tedstone Doherty *et al*, 2007). This survey highlighted that the extent of mental health problems and psychological distress needs to be acknowledged in Irish society, as well as the need for new models of support and service delivery. It is intended that this telephone survey will be repeated in order to identify trends and monitor changes over time. Accurate information on population mental health status and prevalence rates is critical in informing mental healthcare policy and service planning in the future (NESC, 2006).

To date, there is little known about positive mental health in Ireland or on the relationship between different aspects of mental health, social well-being and physical health. This paucity of research on mental health and its determinants across populations limits our capacity to monitor the full impact of policies and practices that seek to promote improved population mental health and well-being. Epidemiological data are critical to setting national priorities and in monitoring and evaluating the implementation of public mental health policy. Despite this, relatively few population health surveys include measures of mental health as part of their suite of measures. The scope of community epidemiological studies and national health surveys thus needs to be expanded to include indicators of both positive and negative mental health and social well-being, alongside physical health, so that we can achieve a greater understanding of the determinants of health and how they unfold across the lifespan for

different population groups. For this reason, the SLÁN 2007 survey included a number of dimensions of mental health, both positive and negative, and social well-being as part of the core suite of health survey measures.

DIMENSIONS OF MENTAL HEALTH

Mental health is fundamental to good health and quality of life. It is a resource for everyday life, which enables us to manage our lives successfully and contributes to the functioning of individuals, families, communities and society. The phrase '*There is no health without mental health*' clearly conveys this positive sense of mental health. In Ireland, Europe and globally, there has been increasing recognition in recent years of the need to address mental health as an integral part of improving *overall* health and well-being (Department of Health and Children, 2006; WHO, 2001, 2002, 2005a and 2005b).

The World Health Organization's *Mental Health Declaration for Europe* (WHO, 2005a) and its *Mental Health Action Plan for Europe* (WHO, 2005b) and the European Commission's (2005) Green Paper on *Towards a strategy on mental health for the European Union* all highlight that the social and economic prosperity of Europe will depend on improving mental health and well-being, and that promoting mental health will also deliver improved outcomes for people with mental health problems. As the WHO *Action Plan* states: '*Mental health and well-being are fundamental to quality of life, enabling people to experience life as meaningful and to be creative and active citizens. Mental health is an essential component of social cohesion, productivity and peace and stability in the living environment, contributing to social capital and economic development in societies.*'

Positive mental health

The WHO definition of mental health – as a '*state of well-being in which the individual realises his or her own abilities, copes with the normal stresses of life, works productively and fruitfully, and makes a contribution to his or her community*' (WHO, 2001, p. 1) – challenges the idea that mental health is simply the opposite of mental ill-health. Positive mental health is, therefore, conceptualised as being more than the absence of clinically defined mental disorder (Barry and Friedli, 2008). Both Keyes (2002 and 2005) and Huppert and Whittington (2003) present empirical support for the independence of positive and negative well-being, and report that mental health and mental disorders are not opposite ends of a single continuum but rather constitute distinct, though correlated, axes. Thus the absence of mental disorder does not equal the presence of mental health and individuals without a mental disorder may experience varying degrees of positive mental health. Keyes (2005) reports data from the MIDUS study in the USA indicating that some 50% of the general population are moderately mentally healthy, 17% are flourishing, 10% are languishing and a further 23% meet the criteria for diagnosable mental disorders such as depression. Keyes (2002) argues that when compared with those who are flourishing, moderately mentally healthy and languishing adults have significant psychosocial impairment and poorer physical health, lower productivity and limitations to daily living. In Scotland, in the third national survey of its kind on public attitudes to mental health, commissioned by the Scottish Government's Social Research Unit, findings show that some 14% of the population have 'good mental well-being' (as measured on the Warwick-Edinburgh Mental Well-being Scale, Tennant *et al*, 2007), 73% have 'average mental well-being' and 14% have 'poor mental well-being' (Braunholtz *et al*, 2007).

Psychological distress and mental disorders

From a population perspective, mental health problems have a high prevalence. It is estimated that about one in 4 adults will experience a mental health problem at some point in their lives (WHO, 2001). The WHO and World Bank report (Murray and Lopez, 1996), entitled *The global burden of disease*, has drawn attention to the rise in mental health problems, including depression and suicide, as major public health issues in the 21st century. Five of the 10 leading causes of disability worldwide are mental health conditions and it is predicted that by the year 2020 neuropsychiatric problems, including depression, will constitute the second largest cause of disease burden worldwide. The burden on individuals and families is considerable and the social and economic costs of mental ill-health are high, leading to individual suffering, disability, premature death, loss of economic productivity, poverty and family burden, and intergenerational cycles of disadvantage (Jenkins *et al*, 2001).

The aggregate cost of mental disorders is estimated to be between 2.5% and 4% of global gross national product (WHO, 2003), accounting for a greater burden on population health than other health conditions such as AIDS, tuberculosis and malaria combined. Friedli and Parsonage (2007) report that the costs in the UK amounted to over £110 billion in 2006/07, outstripping all other health conditions in the combined extent of prevalence, persistence and breadth of impact. Similar findings have also been reported from the USA by Marshall Williams *et al* (2005). Despite this, public spending on mental health is disproportionately low, accounting for 11.8% of public expenditure on health and social care in England, 11.1% in Scotland, 9.3% in Northern Ireland (Friedli and Parsonage, 2007) and 7% in the Republic of Ireland (Department of Health and Children, 2007; O'Shea and Kennelly, 2008). This disproportion needs to be addressed, especially in the light of recent evidence reported by O'Shea and Kennelly (2008) in their report *The Economics of Mental Health Care in Ireland*; this shows that the costs of poor mental health in Ireland are significant and that Irish people show a willingness to pay extra taxation for improvement in mental health services.

In addressing the burden of mental disorders and promoting population mental health, it is recognised that treatment approaches alone are not sufficient and that a more comprehensive population-level approach is required, which includes health promotion, prevention, specialist treatment and rehabilitation (WHO, 2001, 2002 and 2003). The Department of Health and Children's (2006) policy document, *A Vision for Change: Report of the Expert Group on Mental Health Policy*, outlines a comprehensive mental health policy framework that seeks to address the mental health needs of the Irish population as a whole. This policy embraces the wider health and social importance of mental health and makes recommendations for improving population mental health and well-being across the lifespan and improving the spectrum of services. Recommendations are made for fostering well-being and promoting positive mental health, preventing mental health problems and improving the functioning and social inclusion of people experiencing mental health problems.

Prince *et al* (2007), in the *Lancet* series on 'Global Mental Health', present evidence that the burden of mental disorders goes well beyond their effect on mental health since mental disorders are risk factors for, or consequences of, many other health problems. The authors report evidence from systematic reviews of population-based research that there are moderate to strong prospective associations between depression, anxiety and coronary heart disease. Mental disorders are found to be associated with risk factors for chronic diseases, such as

smoking, reduced activity, poor diet, obesity and hypertension. The growing evidence on the relationship between physical and mental health underscores the need for national health surveys to include both mental health and physical health indicators in order to obtain a more comprehensive picture of the different dimensions of population health.

Self-harm

An issue of major public concern in recent years has been the high rates of suicide, especially among young men. Suicide is the fourth leading cause of death in the world and the sixth leading cause of ill-health and disability among those aged 15-44 (Krug, 1999). Suicidal behaviour covers a broad spectrum, from suicidal ideation (or thinking about suicide) to self-injury and deliberate self-harm[1] and behaviours that intentionally lead to death. There is consistent evidence from retrospective studies that depression and anxiety constitute important risk factors for suicide and self-harm (Haw *et al*, 2001), particularly when combined with other stresses and harmful substance misuse (Hilt *et al*, 2008). Engaging in deliberate self-harm is the strongest predictor of future suicidal behaviour, both fatal and non-fatal (Zahl and Hawton, 2004) – those who deliberately self-harm have a risk of suicide some 100 times greater than that of the general population (*see* www.rethink.org). Population-based estimates of depression and self-harm are therefore useful in informing targeted suicide prevention strategies.

Stigma

Despite gains in public knowledge of mental health over the past half century, there is evidence to suggest that stigma still persists in relation to mental health difficulties (Link *et al*, 1999; Phelan, 1998). The WHO's *World Health Report 2001* highlights that the single most important barrier to overcome in the community is the stigma and discrimination associated with mental health and people who experience mental health difficulties (WHO, 2001). People with mental health problems and disorders consistently identify stigma, discrimination and exclusion as major barriers to their health and quality of life (Dunn and Crawford, 1999). A recent 'Moving People' survey in the UK confirmed that stigma and discrimination are pervasive, with close to 9 out of 10 service users (87%) reporting its negative impact on their lives (Moving People and Rethink, 2007).

Stigma has been defined as 'a combination of stereotyped beliefs, prejudiced attitudes and discriminatory behaviours towards outgroups … resulting in reduced life opportunities for those who are devalued' (Hinshaw and Stier, 2008). Mental disorders rank as among the worst of all stigmatised conditions (Albrecht *et al*, 1982; Hinshaw, 2007; Tringo, 1970), with negative impacts on social relations, employment, quality of life and self-stigmatisation, thought to outweigh even the impairments related to mental disorders themselves (Link *et al*, 1997; Wright *et al*, 2000). Negative public stereotypes and stigmatising attitudes also impact negatively on people's willingness to seek help for mental health problems and thereby impact on service

[1] Self-harm is 'a deliberate act by an individual who intends to harm themselves in some way' (*see* www.rethink.org). Among the most common ways are self-cutting, burning, causing physical harm by banging against something or hitting, scratching, poisoning (e.g. ingesting an excess of alcohol, prescribed or illicit drug, or an indigestible substance).

take-up. Fortunately, there are examples of effective strategies aimed at reducing stigma through public health campaigns and programmes (Corrigan and Gelb, 2006), such as the 'See Me' anti-discrimination campaign in Scotland, which uses extensive multimedia marketing and advertising combined with training and education (*see* www.seemescotland.org.uk), or the New Zealand 'Like Minds, Like Mine' programme (Vaughan and Hansen, 2004; *see* www.likeminds.org.nz).

The existence of stigma in Irish society has also been confirmed in a recent report by the National Office for Suicide Prevention (2007), entitled *Mental Health in Ireland: Awareness and Attitudes*. This study was conducted in support of the 'Your Mental Health' awareness campaign, which is currently being implemented with the aim of improving awareness and understanding of mental health and well-being in Ireland (*see* www.yourmentalhealth.ie). In view of this, the SLÁN 2007 survey included one item on perceived stigma that explored respondents' willingness for others to know if they were experiencing a mental health problem.

DIMENSIONS OF SOCIAL WELL-BEING

The 1948 Constitution of the World Health Organization defines health as '*a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity*' (WHO, 1948). The concept of 'social well-being', contained in this WHO definition, has been a topic of discussion and research since as early as 1897. Durkheim (1951) was among the first to note that a lack of social cohesion in society – referred to as *anomie* – has negative consequences for health and mental health.

However, since then, there has been no clear conceptual definition of social well-being and different studies have created operational definitions that include different dimensions of this phenomenon. Such studies have revealed, for example, that high levels of education are positively associated with positive social well-being. However, equivocal, but similar associations with age have not been found (Keyes, 1998). For the purpose of the present report, social well-being is examined using the following dimensions – quality of life, loneliness, social support, community involvement and neighbourhood (local area) perceptions.

Quality of life

Quality of life has been extensively researched in the context of physical and mental health and is thought to be a good indicator of both subjective physical and mental health (Power, 2003). It is associated with psychological distress and social support (Schmidt *et al*, 2006), as well as with depression and anxiety (Hansson, 2002; Olatunji *et al*, 2007). Quality of life is frequently measured in national surveys (e.g. Balanda and Wilde, 2004; NISRA, 2006) and in international surveys (e.g. François *et al*, 1998).

Loneliness

Loneliness – which reflects 'perceived' social isolation – has been defined as 'an unpleasant subjective state of sensing a discrepancy between the desired amount of companionship or emotional support and that which is available in the person's environment' (Blazer, 2002). Loneliness and its opposite – meaningful social connectedness – have come to be recognised

as playing an increasingly important role in social well-being (Cacioppo and Patrick, 2008). The 'need' for social connectedness is thought to be grounded not only in 'society', but in a more fundamental evolutionary drive for survival (Baumeister and Leary, 1995; Buss, 1990; Cacioppo *et al*, 2006a; Cacioppo and Patrick, 2008; Heinrich and Gullone, 2006).

Loneliness is considered to be one of the main consequences of being socially excluded, rejected or disconnected from others (Leary, 1990; Panak and Garber, 1992). It has been shown to be associated with depression (Anderson and Arnoult, 1985; Cacioppo *et al*, 2006b), with anxiety (Cacioppo *et al*, 2006b; Heinrich and Gullone, 2006), with distress (DeBerard and Kleinknecht, 1995; Jackson and Cochran, 1991) and with poorer health behaviours (Brooks *et al*, 2002). Social support (Kara and Mirici, 2004; Riggio *et al*, 1993) may buffer against it, as may perceived neighbourhood quality (Wen *et al*, 2006). Mental ill-health might be expected to lead to loneliness through the social exclusion connected with stigmatisation (Markowitz, 1998). Loneliness is also thought to have a strong detrimental effect on physical health (Hawkley *et al*, 2003).

Social support

Social support has been widely researched in the context of health. Recent studies have reiterated previous findings, suggesting that weak social support is associated with smoking, sedentary lifestyle and poor mental health (Brummett *et al*, 2005). More specifically, Bertera (2005) found that poor social support is associated with a larger number of episodes of anxiety and a higher prevalence of mood disorders among those with mental health difficulties. Social support can be measured through two dimensions – quantity of one's social network and quality of relationships within that network (Brummett *et al*, 2005). Both of these dimensions are addressed in this study.

Community involvement

Community involvement or participation is seen by Putnam (1995) as a structural indicator of social well-being (social capital). Although this is just one dimension of social well-being, it is frequently used as its primary measure. Community involvement can enhance one's sense of belonging and the sense that one is a vital member in society (Keyes, 1998). Indeed, some studies have reported that a high level of social well-being (measured through community involvement, among other measures) is inversely associated with mental health disorders, suggesting that social well-being can act as a resilient factor for mental ill-health (De Silva *et al*, 2005). In some studies, low levels of social well-being have been found to be associated with poor health (Lindstrom *et al*, 2004; Nummela *et al*, 2008; Veenstra, 2005), although others have not found these associations (Ziersch *et al*, 2005).

Previously, it has been suggested that in modern individualistic society, community involvement will decrease. However, Dekker and van den Broek (1998) claim that whereas the motives for community involvement may be different today than they were in a more traditional society, community involvement is still evident.

Neighbourhood perceptions

The final dimension of social well-being covered in this report is that of neighbourhood perceptions. Since the mid-1990s, a body of literature has developed exploring the relationship of health and place, focusing on neighbourhood characteristics and physical health and using an ecological approach (see, for example, Hart *et al*, 1997). Such studies mainly looked at neighbourhood-level data and mortality and morbidity data. More recently, studies have shifted to individual-level data on neighbourhood perceptions, with or without exploring neighbourhood-level data (Macintyre *et al*, 2002).

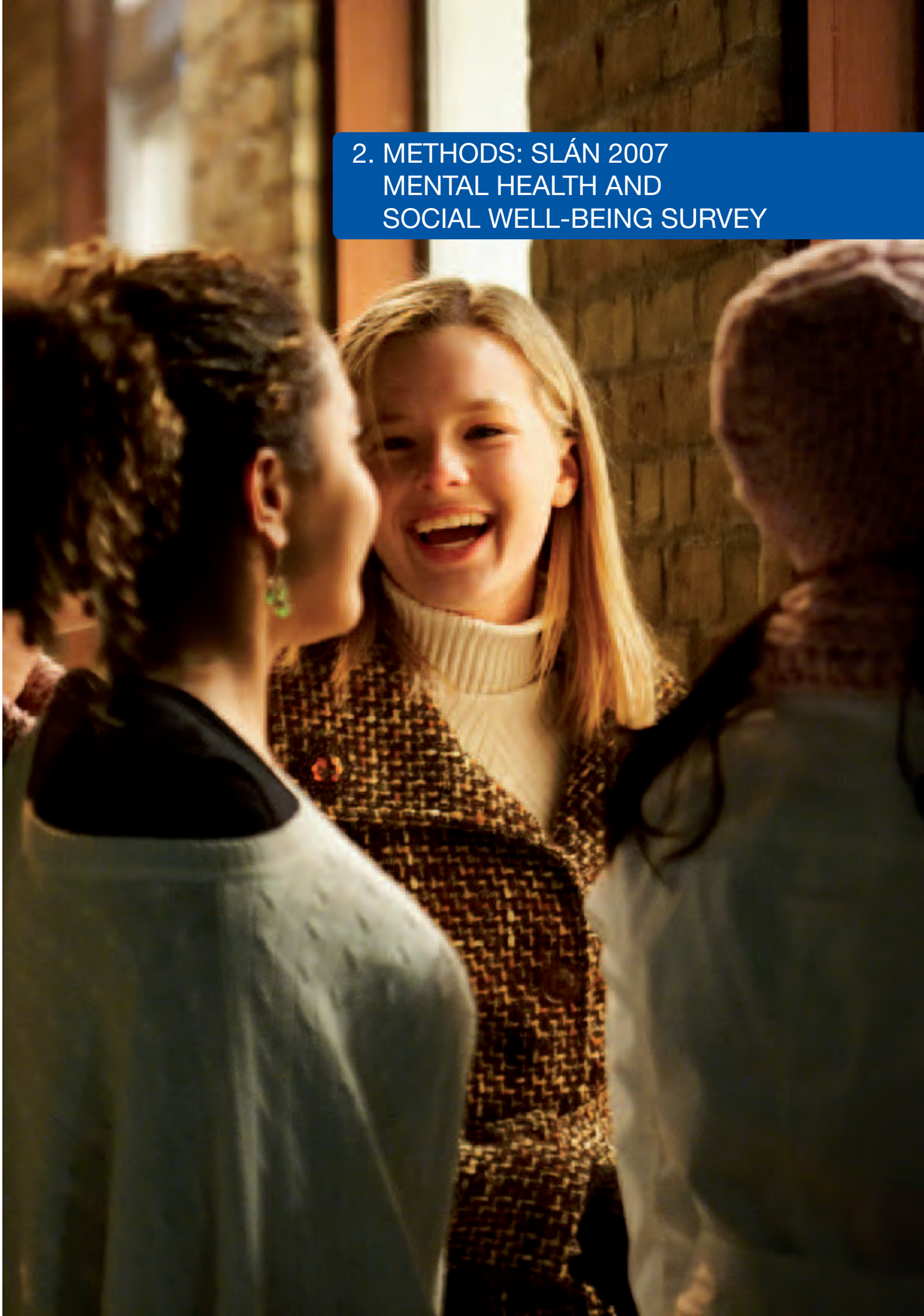
One of the aspects of social well-being that is frequently studied is the perception of problems in the community or neighbourhood. Studies to date suggest that the perception of problems in the neighbourhood is associated with greater anxiety, stress and depression (Ellaway *et al*, 2001; Gary *et al*, 2007). Problems are more likely to be reported by those with lower socio-economic status (Ellaway *et al*, 2001), those who are employed and by younger people (Poortinga *et al*, 2008). Problems in the neighbourhood are also associated with low self-rated health above and beyond socio-economic status (Bowling *et al*, 2006; Poortinga *et al*, 2008). One aspect that has not been properly addressed to date is the difference in reported problems between urban and rural settings (Pampalon *et al*, 2007).

AIMS OF STUDY

The present study aims to determine the current status of population mental health and well-being in Ireland and to explore the determinants of mental health and social well-being among the Irish adult population. Employing the recommended mental health indicators for Europe developed by the STAKES Mindful project (Lavikainen *et al*, 2006), the study aims to provide baseline indicators against which to track change over time.

Specifically, the study has the following objectives:

- to determine the levels of mental health in the Irish adult population, including positive mental health, psychological distress, probable major depressive disorder, generalised anxiety disorder, reported self-harm and perceived stigma;
- to consider the influence of socio-demographic variables on reported levels of mental health;
- to determine the levels of social well-being in the Irish adult population, including levels of quality of life, social support, loneliness, community involvement and neighbourhood perceptions;
- to consider the influence of socio-demographic variables on the reported levels of social well-being;
- to explore the relationships between mental health, social well-being, physical health and selected health behaviours;
- to consider the policy and practice implications of the study's findings.



2. METHODS: SLÁN 2007 MENTAL HEALTH AND SOCIAL WELL-BEING SURVEY

2. METHODS: SLÁN 2007 MENTAL HEALTH AND SOCIAL WELL-BEING SURVEY

The SLÁN 2007 survey had three distinct components:

1. face-to-face interviews[2] with 10,364 adults;
2. measurement of Body Mass Index (BMI), which is used as a measure of obesity, and waist circumference of a sub-sample of 967 adults aged 18-44 years;
3. physical examination of a sub-sample of 1,207 adults aged 45 years and over.

POPULATION AND SAMPLING

The sampling frame used for the previous SLÁN surveys in 1998 and 2002 was the Electoral Register. Since this is no longer an option due to data protection legislation, the GeoDirectory was used instead. This is a list of all addresses in the Republic of Ireland, compiled by An Post, which distinguishes between residential and commercial establishments. Unlike the Electoral Register, the GeoDirectory does not include names of individuals; rather, it is a list of addresses. The residential list was used for this survey. Further details on the sampling and weighting of the data are provided in the SLÁN 2007 Main Report (Morgan *et al*, 2008), which is available on www.slan07.ie.

RESPONSE RATE

The overall response rate for SLÁN 2007 was 62%. One of the features of the GeoDirectory is that non-eligible addresses (vacant, derelict, institution addresses) cannot be fully excluded. For example, the GeoDirectory identifies 2.7% of residential addresses as vacant, compared to 15% in Census 2006. This means that there will be a certain percentage of addresses in a sample based on the GeoDirectory that are not eligible. Interviewers were able to identify some of the non-contacts as vacant, but a much smaller percentage than the Census figures have indicated.[3] In calculating the response rate for the main survey, an adjustment was made to the non-contacts for the percentage of dwellings that are vacant in each HSE region, according to Census 2006 figures.

Table 1 presents the major socio-demographic characteristics of SLÁN 2007 respondents, including their gender, age group, marital and employment status, level of education, socio-economic group, annual household income, residential location, and medical card or private medical insurance coverage.

[2] Standard training and centralised supervision were provided to the interviewers. The self-harm question, which is particularly sensitive, was asked after about 30 minutes – more than three-quarters of the way through the 40-minute interview.

[3] An interviewer's ability to identify an address as vacant depends on information available locally (neighbours, etc.), which people are increasingly reluctant to share with someone whom they do not know. Interviewers were instructed to code an address as 'vacant' only if this could be substantiated locally, otherwise to code it as 'non-contact'.

Table 1: Weighted percentages of socio-demographic characteristics of SLÁN 2007 respondents

Socio-demographic characteristic	%
Gender	
Male	49.5
Female	50.5
Social class	
SC 1-2 (Upper)	31.4
SC 3-4 (Middle)	37.6
SC 5-6 (Lower)	16.1
Unclassified	14.9
Residential location	
In open country (rural)	30.6
In a village (rural)	10.0
In a town (1,500+) (urban)	23.5
In a city (other than Dublin) (urban)	11.2
In Dublin City or County (urban)	24.7
Household income	
Under €10,000	3.9
€10,000 – €19,000	15.4
€20,000 – €29,999	17.3
€30,000 – €39,999	16.7
€40,000 – €49,999	16.8
€50,000 or more	30.0
Marital status	
Single	35.8
Cohabiting	5.6
Married	47.9
Separated	2.6
Divorced	1.6
Widowed	6.6

Socio-demographic characteristic	%
Age group (years)	
18-29	25.2
30-44	31.1
45-64	29.1
65+	14.6
Education	
Primary	19.6
Post-primary	44.0
Third-level	36.3
Medical card and insurance	
Has a medical card	32.5
Has private insurance	50.5
Medical card and insurance	8.3
No medical card and no insurance	25.5
Working situation	
Employee, including apprenticeship or community employment	49.0
Self-employed	8.5
Farmer	3.0
Student full-time	5.7
On State training scheme	0.7
Not in paid employment, actively looking for a job	3.6
Long-term sickness or disability	2.8
Home duties, looking after the home	16.5
Retired	9.1
Other	0.8

MEASURES

Most of the mental health and social well-being measures used in this report are based on recommendations of the European Commission STAKES Mindful project (Lavikainen *et al*, 2006). Mindful promotes the use of validated internationally used mental health measures. Background information on these measures, and how they were constructed specifically for this report, is provided on the following pages. The survey questionnaire is available on www.slan07.ie.

MENTAL HEALTH AND WELL-BEING MEASURES

Respondents in SLÁN 2007 were asked a series of questions on distinct components of mental health and well-being. As recommended by the European Commission-funded project *Establishment of a Set of Mental Health Indicators for the European Union (1999-2001)*[4], a suite of measures assessing the following aspects of mental health were employed: positive aspects of mental health and well-being; non-specific psychological distress; and diagnoses of probable major depressive disorder and generalised anxiety disorder. These recommended measures are described below. Respondents were also asked questions relating to self-harm, perceived stigma of mental health problems and self-rated health.

Positive mental health

Positive aspects of mental health and well-being have not typically been studied in population health surveys. The different dimensions of positive mental health include subjective well-being and affective balance, and the development of abilities to manage life, maximise one's potential, participate and contribute to society. The term 'positive mental health' refers to the emotional (feeling/affect) and cognitive (thinking) aspects of well-being and their influence on social functioning (relating).

- **Energy and Vitality:** The Energy and Vitality Index (EVI) from the RAND SF-36 questionnaire (Ware *et al*, 1993) is included here as a measure of positive mental health (Kovess and Beaudet, 2001; Lavikainen *et al*, 2006). The EVI measures the occurrence and extent of energy and vitality during the past month (Lavikainen *et al*, 2006). Respondents were asked to respond to 4 questions about affective aspects of their well-being in the past 4 weeks on a 6-category scale, going from 'All of the time' to 'None of the time'. Their responses are presented as a sum score ranging from 0 to 100 (Bijl and Ravelli, 2000; McDowell and Newell, 1996). In the current survey, the Cronbach's alpha reliability for the EVI is 0.78.

Non-specific psychological distress

Non-specific measures of mental health indicate that something is wrong, but do not yield diagnostic assessment.

- **Psychological Distress:** Psychological distress is measured with the 5-item Mental Health Index-5 (MHI-5) from the RAND SF-36 questionnaire (Ware *et al*, 1993). This non-specfic measure of mental health measures the occurrence and extent of psychological distress (usually of anxiety and depression related distress states) during the past month (Lavikainen *et al*, 2006). Responses are presented as a sum score ranging from 0 to 100 (Bijl and Ravelli, 2000; McDowell and Newell, 1996), with low scores indicating greater distress. A respondent is considered to have a 'probable mental health problem'[5] if they report a score equal to or below 52, a cut-off point recommended by Lavikainen *et al* (2006).[6] This cut-off point has been used in previous studies, for example, by Holmes (1998) in identifying major depression and also by the European Opinion Research Group (2003) in its report on mental health in Europe. In the current survey, the Cronbach's alpha reliability for the MHI-5 is 0.78.

[4] Now superseded by the STAKES Mindful report, *Improving Mental Health Information in Europe* (Lavikainen *et al*, 2006).
[5] Although Lavikainen *et al* (2006) use the term 'psychological distress case', the term 'probable mental health problem' (sometimes also used with the GHQ-12 psychological distress measure, e.g. Fryers *et al*, 2004) has been adopted here.
[6] Alternative cut-off points are discussed in Kelly *et al*, 2008.

Diagnoses of probable major depressive disorder and generalised anxiety disorder

- **Major Depressive Disorder:** The CIDI-SF V1.1 health interview survey (which is a short form (SF) of the World Health Organization's Composite International Diagnostic Interview (WHO-CIDI), *see* WHO, 1990) provides probable diagnoses[7] of major depressive disorder (Kessler *et al*, 1998). This is a serious condition, which is persistent and can significantly interfere with an individual's thoughts, behaviour, mood, activity and physical health. A diagnosis means that the respondent fulfils the criteria of probable major depressive disorder for an episode of depression for at least 2 weeks during the past 12 months (American Psychiatric Association, 1994). Two additional questions ask whether or not respondents had depression in the last 12 months and if 'Yes', whether this condition was diagnosed by a doctor.

- **Generalised Anxiety Disorder:** The CIDI-SF V1.1 health interview survey (which is a short form of the WHO-CIDI, *see above*) provides a complete diagnosis of generalised anxiety disorder (GAD) (Kessler *et al*, 1998; Walters *et al*, 2002). This condition is characterised by excessive anxiety and worry (occurring more days than not for at least 6 months) about a number of events or activities that the person finds difficult to control. GAD is associated with features such as restlessness, fatigue, difficulty in concentrating, irritability, muscle tension and sleep disturbance (American Psychiatric Association, 1994). A diagnosis means that the respondent fulfils the criteria for GAD for at least 6 months during the past 12 months. Two additional questions ask whether or not respondents had anxiety in the last 12 months and if 'Yes', whether this condition was diagnosed by a doctor.

Other mental health and well-being measures

- **Self-harm**: A single question was used for measuring self-harm in the past 12 months.[8] Valid responses were 'Yes, once', 'Yes, more than once' and 'No'. This is a modified version of a question used in the Lifestyle and Coping Questionnaire of the CASE study (Child and Adolescent Self-harm in Europe, 2000), which asked whether respondents ever engaged in self-harm. Unless otherwise stated, all analyses combine both 'Yes' responses into a single category.

  Two follow-on questions asked whether or not the respondent went to hospital on account of their self-harm attempt and from whom they received help before and after the episode.

[7] Strictly speaking, CIDI-SF yields a *likelihood* of having major depression (Walters *et al*, 2002) rather than a full diagnosis, hence the term '*probable* Major Depressive Disorder' is used throughout this report.
[8] This question appears about three-quarters of the way through the 40-minute interview. Standard training and centralised supervision were provided to the interviewers.

- **Perceived stigma**: A single question was asked relating to the perceived stigma of mental health problems. Respondents were asked to what extent they agreed with the statement *'If I was experiencing mental health problems, I wouldn't want people knowing about it'*. Five response categories were available, ranging from 'Agree strongly' to 'Disagree strongly'. For the purpose of the analyses, the question is dichotomised as 'Agreement' *versus* the rest of the categories. This question originated in the Public Attitudes to Mental Illness Survey, conducted by the Mental Health Association of Ireland (MHAI, 1973).

- **Self-rated health**: A single overall question was included on self-rated health. Respondents were asked to answer the question '*In general, would you say that your health is …*', choosing from a 5-point scale ranging from 'Excellent' to 'Poor'. This item[9] is usually used as one of a set of 4 questions known as 'The Healthy Days Measures' or HRQOL-4 (Hennessy *et al*, 1994). The CDC HRQOL-4 measures have acceptable test–retest reliability and strong internal validity (Andresen *et al*, 2003). Unless otherwise stated, this item is dichotomised in this report into 'Excellent/Very good' *versus* the rest of the categories.

SOCIAL WELL-BEING MEASURES

- **Social support**: Three questions comprising the 14-point Oslo Social Support Scale (Brevik and Dalgard, 1996) were included, as follows: (i) a question on the number of close friends that a respondent has (dichotomised as '3 or more close friends' *versus* '2 or less'); (ii) a question on other people showing a friendly interest in the respondent (dichotomised as 'some' or 'a lot' *versus* all other categories); and (iii) a question on ease of getting practical help from neighbours (dichotomised as 'easy' and 'very easy' *versus* all other categories). The scale can be split into 3 categories – poor social support (3-8), moderate social support (9-11) and strong social support (12-14). Using the current data, the Cronbach's alpha reliability for the social support scale is 0.53.

- **Loneliness**: To capture the experience of loneliness in the Irish population, a single question was included, asking respondents to answer 'Yes' or 'No' to the question '*Have you often felt lonely in the last 4 weeks?*' This question follows a similar wording to the measures of loneliness used in population mental health research in Finland (Savikko *et al*, 2005), Sweden (Holmén and Furukawa, 2002) and the UK (Victor *et al*, 2006).

- **Community involvement**: Respondents were asked a series of questions about their social well-being or involvement in community activities, such as joining in the activities of sports clubs or evening classes. These questions are modified versions of questions originally used in the Health Survey for England 2000 (Prior and Primatesta, 2002) and later used (in modified forms) in the fourth sweep of the West of Scotland Twenty-07 Study (Macintyre *et al*, 1989) and the Lifeways Study (*see* www.ucd.ie/phps/research/lifeways.htm). In this report, community involvement is used as a dichotomous scale ('involved in one or more community activities' *versus* 'involved in none') and also as an interval/ordinal scale ('involved in 0 to 6 activities' or involved in '0 to 5 activities excluding sport') in correlation and linear regression analyses. The Cronbach's alpha reliability of these scales using the current data is 0.45.

[9] Sometimes with a slightly different phrasing, e.g. the Centers for Disease Control (CDC) use *'Would you say that in general …'*

- **Neighbourhood problems**: A number of questions about neighbourhood problems were also included in SLÁN 2007. Respondents were given a list of potential problems and asked how much each of them was a problem in their locality. The origin of these questions is the Millennium Cohort Study (Dex *et al*, 2004). Similar items were used in the Lifeways Study (*see* www.ucd.ie/phps/research/lifeways.htm) and in the British Crime Surveys (Simmons *et al*, 2003). For the purpose of analysis in this report, all questions are dichotomised as 'a big problem' and 'a bit of a problem' *versus* 'not a problem'. Neighbourhood problems are used as a dichotomous scale ('one or more neighbourhood problems' *versus* 'no problems') and also as an interval/ordinal scale ('0 to 6 neighbourhood problems'[10]) in correlation and regression analyses. The Cronbach's alpha reliability for this scale is 0.78.

- **Quality of life**: A single question on quality of life, from the World Health Organization's Quality of Life Survey (WHO-QOL Group, 1998), was used as an indicator of overall subjective well-being. This question is recommended when using only a single question to assess quality of life (Power, 2003). Depending on the analysis, this 5-category question is dichotomised in two ways in this survey: (i) 'Very good/Good' *versus* all other categories or (ii) 'Very good' *versus* all other categories.

SOCIO-DEMOGRAPHIC VARIABLES

SLÁN 2007 respondents were measured on 9 socio-demographic variables, including gender.

- **Age groups**: Respondents were asked their age in years. For the purpose of analysis, all responses were split into 4 age groups: 18-29; 30-44; 45-64; and 65+.

- **Social class**: Household social class was constructed (by the Economic and Social Research Institute) for each respondent. There are 4 social classes (SC) based on occupational categories: SC 1-2 (professional and managerial); SC 3-4 (non-manual and skilled manual); SC 5-6 (semi-skilled and unskilled); and 'unclassified'[11].

  According to the Central Statistics Office (2007): 'The occupations included in each of these groups have been selected in such a way as to bring together, as far as possible, people with similar levels of occupational skill. In determining social class, no account is taken of the differences between individuals on the basis of other characteristics, such as education. Accordingly, social class ranks occupations by the level of skill required on a social class scale ranging from 1 (highest) to 7 (lowest). This scale combines occupations into six groups by occupation and employment status following procedures similar to those outlined above for the allocation of socio-economic group. A residual category "All others gainfully occupied and unknown" is used where no precise allocation is possible.'

[10] Problems included in this scale are rubbish or litter lying about; vandalism and deliberate damage to property; insults or attacks to do with someone's race or colour; house break-ins; graffiti on walls or buildings; and people being drunk in public.

[11] Those not classified are mainly those who never worked (and no other member of the household is at work) and those where information on occupation was not provided.

- **Education**: Respondents were asked about their highest level of educational attainment. For the purpose of analysis, responses were split into 3 groups: (i) Primary ('Some primary (not complete)' and 'Primary or equivalent'; (ii) Post-primary ('Intermediate/Junior/Group Certificate or equivalent' and 'Leaving Certificate or equivalent'); and (iii) Third-level ('Primary degree' and 'Postgraduate/Higher degree').

- **Residential location**: Respondents were asked where their household was situated. For the purpose of analysis, responses are dichotomised into 2 groups: (i) Rural ('In open country' and 'In a village') and (ii) Urban ('In a town (1,500+)', 'In a city (other than Dublin)' and 'In Dublin').

- **Medical card status**: A General Medical Services (GMS) medical card issued by the Health Service Executive (HSE) enables a bearer to receive a range of free health services. All recipients of the card must either undergo a means-test or already be receiving a means-tested payment, such as social welfare or a Government pension. A full medical card entitles the bearer to free GP services, prescribed drugs and medicines (with some exceptions); in-patient public hospital services; out-patient services; dental, optical and aural services; medical appliances; and maternity and infant care services. A GP-only medical ('visit') card only allows free GP visits. In SLÁN 2007, respondents were asked whether or not they had a medical card. For the purpose of analysis, responses are dichotomised into 2 groups: (i) Has medical card: 'Yes – Full medical card' and 'Yes – GP-only medical card'; and (ii) No medical card: 'No'.

- **Income (equivalised household)**: Respondents were asked to provide information about their approximate net household income, as well as the number and age group of individuals (children and adults) living in their household. The equivalised household (HH) income is calculated based on the above figures using the national equivalence scale (Callan *et al*, 1996). The equivalised HH income (units: weekly net household incomes) adjusts for household size such that the needs of the composition of households are taken into account. The national equivalence scale used here attributes a weight of 1 to the first adult, 0.66 to each subsequent adult and 0.33 to each child.[12] For analysis purposes, the equivalised income is split into quintiles, from the highest income quintile to the lowest income quintile.

- **Marital status**: Respondents were asked their current marital status. Following convention, the 6 survey response options were collapsed into 4 for the purpose of analysis: (i) Single (never married); (ii) Married or cohabiting; (iii) Separated or divorced; and (iv) Widowed.[13]

- **Employment status**: Respondents were asked to tick one of 10 boxes that best described their usual situation with regard to work. For the purpose of analysis, 9 of the descriptions were grouped into 2 categories, as follows: (i) in paid employment (including apprenticeships): employee, self-employed outside farming, farmer; and (ii) not in paid employment: student full-time, on State training scheme (e.g. FÁS), not in paid employment [but] actively looking for a job, long-term sickness or disability, home duties/ looking after the home of family, retired. (The 10th description – 'Other' – was not used.)

[12] For equivalence purposes, children are those under the age of 14.
[13] 'Widowed' or 'widower' refers to both men and women whose spouses have died.

HEALTH BEHAVIOUR VARIABLES

In order to explore the relationship between mental health and physical health, respondents were also measured on a number of health behaviour variables.

- **Smoking**: Respondents were asked (a) if they have smoked at least 100 cigarettes in their entire life and (b) if they smoke every day, some days or not at all. Three categories were created based on these two questions: (i) Current smoker; (ii) Former smoker; and (iii) Never smoked.

- **Alcohol dependence**: Respondents were assessed with the AUDIT-C alcohol screen, which can help identify hazardous drinking or drinkers at risk of dependence (Bradley *et al*, 2003; Bush *et al*, 1998). Respondents were asked how often they had a drink containing alcohol in the past year (responses ranging from 'Never' to '4 or more times a week'); how many drinks they had on a typical day when they were drinking in the past year (ranging from '1 or 2' to '10 or more'); and how often they engaged in binge-drinking in the past year (ranging from 'Never' to 'Daily or almost daily').[14] Each question had 5 response options, giving a total score range of 0-12. A score of 4 or more for men and a score of 3 or more for women is taken as an indication that the respondent is at increased risk for hazardous drinking or active alcohol abuse or dependence (Achtmeyer, 2003). Lower scores are considered to indicate a lower level of risk.

- **Physical activity**: Respondents were measured on the International Physical Activity Questionnaire (IPAQ) Short Form (Craig *et al*, 2003; Hagströmer *et al*, 2007; Hallal and Victora, 2004), using the November 2005 scoring protocol (IPAQ, 2005). The aim of the IPAQ is 'to provide a set of well-developed instruments that can be used internationally to obtain comparable estimates of physical activity … across various life domains (*see* www.ipaq.ki.se/ipaq.htm). Domains include leisure time, domestic/gardening, work-related and transport-related physical activities. IPAQ scoring provides continuous and categorical scores. In this report, respondents are assigned a categorical score as follows: Low (little or no physical activity); Moderate (5 or more days of moderate-intensity activity and/or walking of at least 30 minutes per day, or specified equivalent); High (vigorous-intensity activity on at least 3 days and accumulating at least 1,500 MET-minutes/week, or specified equivalent).

[14] SLÁN 2007 used more categories than the AUDIT-C for this question and some response category names differed. The SLÁN 2007 categories were collapsed as follows: the SLÁN 2007 response categories 'Every day', '5-6 times a week' and '2-4 times a week' were all considered equivalent to 'Daily or almost daily'; 'Weekly' was considered equivalent to 'Once a Week'; '1-3 times a month' was considered equivalent to 'Monthly'; and 'Less often' was considered equivalent to 'Less than monthly'. In both cases, the term 'Never' was used for the final response category.

ANALYSIS

Three levels of analysis are employed in this report – univariate, bivariate and multivariate. (All were carried out using the software program SPSS 15.0 for Windows®, Release 15.0.1. 2006.) *Univariate* statistics (means and percentages) are calculated for each variable. *Bivariate* analyses (one-way ANOVA and chi-square) are used to highlight patterns in variable means or proportions, broken down by individual socio-demographic variables. Bivariate correlation analysis is also used to examine the relationship between different mental health and social well-being variables. *Multivariate* analyses (linear and logistic regressions) are used to determine the strongest socio-demographic predictors for each variable and also to build more complete models for particular variables. The full dataset is used in all analyses with the following exceptions: when doing bivariate analyses (one-way ANOVAs and chi-squares) that involve social class, when performing multivariate analysis (linear and logistic regressions), all of which include social class. In these cases, the respondents in the 'unclassified' social class are excluded from the analyses (*see Table 1*).

The analyses in Chapters 3 and 4 begin with an examination of individual mental health and social well-being variables, and continue with an exploration of the relationships between these variables. First, univariate descriptive statistics (mean and standard deviation or percentage) are presented for each variable measured in the SLÁN 2007 survey. Means/ percentages are then presented, broken down by individual socio-demographic variables, accompanied by the results of bivariate tests (one-way ANOVA and chi-square). These results are sometimes illustrated in more detail in Figures showing means or percentages broken down simultaneously by 3 socio-demographic measures: gender, age and another variable (e.g. social class, medical card status, etc). Bivariate analyses are also used in the 'Results in context' sections of Chapters 3 and 4 to compare SLÁN 2007 results with other survey results.

Regression models are then employed to reveal how well each independent socio-demographic variable is related to the dependent variable, while considering the effects of other independent socio-demographic variables, and how well all independent socio-demographic variables explain variation in the dependent variable. The specific aim of these models is to determine the strongest socio-demographic predictors for each dependent variable.

In the case of ordinary linear regression, the standardised coefficients (betas) corresponding to each independent variable indicate the degree to which that variable predicts the variable of interest, all other things being equal. Where possible, independent variables are treated as scales (and not as dummy variables).

In the case of logistic regression models, the dependent variable has only two outcomes (e.g. lonely, not lonely) and all independent variables are dummy variables. The odds ratios correspond to the change in likelihood of being in one dependent variable category (e.g. being lonely), when in one independent variable category (e.g. female) *versus* the default category[15] (i.e. male in this case), all other things being equal. For example, in a model predicting loneliness, an odds ratio of 1.8 (OR 1.8) for 'female' means that female respondents are 80% more likely to be lonely than males.

[15] Default categories in logistic regressions presented in this report are based on the concept of a 'default respondent', i.e. one who is thought least likely to report mental ill-health. The 'default' respondent then is an upper social class (SC 1-2) 18-29 year-old male with third-level education, dwelling in rural surroundings, without a medical card, with the highest level of income, married/co-habiting, in paid employment, with strong social support, no loneliness, high involvement (sports club and/or community) and no problems in the neighbourhood.

Relationships between mental well-being and social well-being variables are also explored. Spearman and Kendall's tau-b correlations are presented, followed by a series of hierarchical regression models for particular variables. These regression models (a linear regression with Energy and Vitality and logistic regressions for very good quality of life and psychological distress) essentially build on the simpler (demographics-only) regression models described above.

The first group of variables added to the hierarchical model are the 9 socio-demographic variables, followed by one or more of the following groups (excluding the independent variable):

- **Social well-being**: Social support, loneliness, community involvement, problems in neighbourhood.
- **Mental health and well-being**: Quality of life, psychological distress, probable major depressive disorder, generalised anxiety disorder, perceived stigma, self-rated health (used in quality of life model only).

After each group is added, variables with p values exceeding 0.05 ($p>0.05$) are excluded from the regression analysis before adding variables from the next block.

GENERAL NOTES ON INTERPRETING RESULTS

To ensure results are representative of the population, this sample has been re-weighted as described at the beginning of Chapter 1, 'Introduction'. Weighted means or percentages are reported in all tables, figures and text, with the exception of self-harm which had a small number of respondents (n = 40). The dataset includes data from respondents born in Ireland (83%), the UK and Northern Ireland (7%) and other countries (10%). Included in the full data (n = 10,364) are data from a number of foreign-language shortened questionnaires used with non-Irish nationals (n = 110), this group being asked only a subset[16] of the questions in the full English-language questionnaire. Many of the most vulnerable (e.g. people who are homeless[17]) have not been included in this study. Results are rounded to the nearest whole number/ percentage, or one decimal place in the case of confidence intervals. In each case, the valid response for each question is used (i.e. only those who answered the question are included). All tests of differences between means and proportions are at the 5% level unless reported otherwise. In the case of correlations and regression analyses, respondents in the 'unclassified' social class are excluded. Except for regression analyses, p values are reported as $p>0.01$, $p>0.05$ and $p>0.001$, depending on the magnitude of the p value. Because the number of respondents is large (n = 10,364), even small differences between groups (e.g. 1%-2%) are likely to be statistically significant. However, these differences may not always be meaningful.

It should be remembered that all results are estimations, which, all else being equal, depend on sample size and the observed percentage. With samples of about 10,000 interviews, the real percentages vary within the following 95% confidence limits (*see Table 2*):

[16] For example, this group was not asked the CIDI-SF questions on Major Depressive Disorder or Generalised Anxiety Disorder.

[17] Also excluded are other marginalised groups, such as those in psychiatric or other long-stay health-related settings, illegal immigrants, asylum-seekers and prisoners.

Table 2: Percentages and confidence levels

Observed percentages:	5% or 95%	10% or 90%	20% or 80%	30% or 70%	40% or 60%	50%
Confidence limits:	± 0.4	± 0.6	± 0.8	± 0.9	± 1	± 1

A NOTE ON MAKING NATIONAL AND INTERNATIONAL COMPARISONS

The SLÁN 2007 data have not been adjusted for age, gender or other variables to any international reference population.

Chapters 3 and 4 include 'Results in context' sections for each mental health indicator, which place SLÁN 2007 results in the context of findings from related national and international studies. Although in some cases the measures/instruments used in these studies are exactly the same as those used in SLÁN 2007, caution is advised in making inferences about any differences. Apart from the inherent uncertainty associated with estimates (*see Table 2*), studies may differ in many other aspects, all of which reduce the feasibility of inter-country comparison (Dolan *et al*, 2006; Lavikainen *et al*, 2006, p. 52; Paykel *et al*, 2005).

Some of these aspects include the classification system (e.g. DSMIII *versus* DSMIV); version or wording of the measurement instrument (e.g. for a comparison of various CIDI versions, *see* Kessler, 2007); reliability and validity of the instrument (e.g. for a discussion of CIDI validity, *see* Kurdyak and Gnam, 2005); cut-off points used (e.g. for a discussion of MHI-5 cut-off points, *see* Kelly *et al*, 2008); source of sampling, the sampling design, mode of administration (e.g. Bowling, 2005; Bowling *et al*, 1999; Kessler, 2007); participation (response) rate; weighting system; scoring protocol; and the fact that instruments may have been translated into other languages. For all these reasons, it can be difficult to ensure comparability of final results between international surveys (Lavikainen *et al*, 2006; Paykel *et al*, 2005). Nevertheless, a movement towards greater standardisation (Bryson *et al*, 2004; Brugha, 2007; Demyttenaere *et al*, 2004; Kessler, 2007; Lavikainen *et al*, 2006) is resulting in increasingly directly comparable estimates of many aspects of mental health, allowing the existence of the 'Results in context' sections in the current report.

Where comparison surveys are referred to in the text, they are usually accompanied by the following important survey information: the mode of administration, the number of respondents and the response rate.

Caution should also be applied when comparing items or measures that use different response categories and/or different reference periods. Between-study and between-country comparisons between associations (such as gender effects) are much more likely to be meaningful than direct comparisons between estimations (such as population prevalences).

3. RESULTS: MENTAL HEALTH AND WELL-BEING

3. RESULTS: MENTAL HEALTH AND WELL-BEING

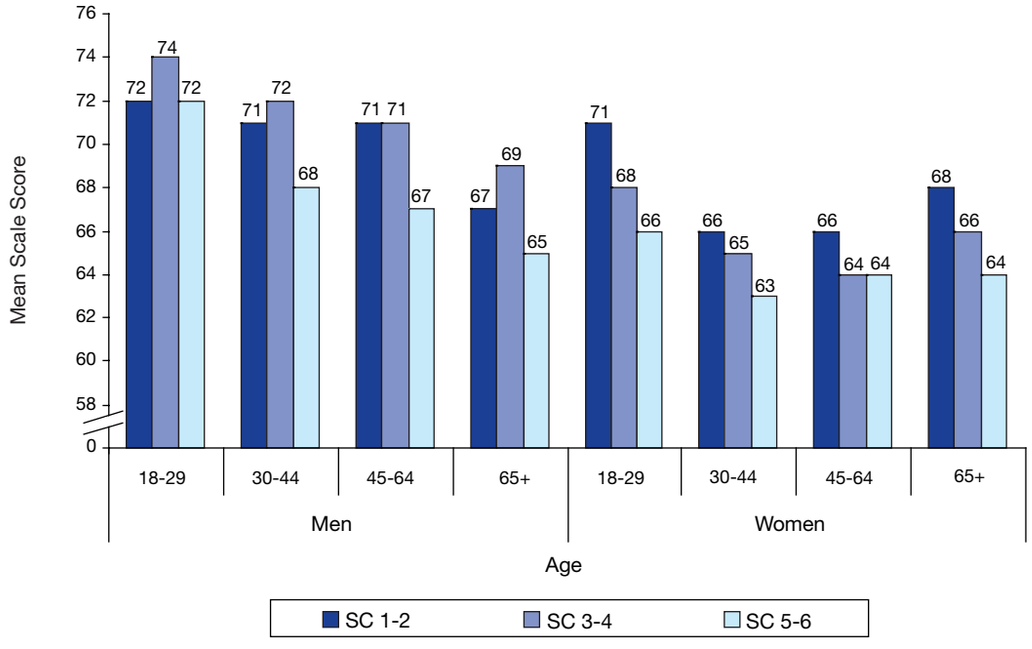
POSITIVE MENTAL HEALTH: ENERGY AND VITALITY INDEX

Positive aspects of mental health and well-being have not typically been studied in population surveys. The SLÁN 2007 survey, however, included the Energy and Vitality Index (EVI), which explores, for example, whether respondents 'felt full of life' or 'had lots of energy' in the previous 4 weeks. Higher scores, on a range of 0-100, indicate greater levels of positive mental health and well-being. (The EVI comes from a widely used health status measure, the RAND SF-36 questionnaire.)

The overall mean score for SLÁN 2007 respondents is 68 (SD = 19), which suggests relatively high levels of energy and vitality among the Irish adult population as a whole. Men have higher average scores than women (70 compared to 66; $p<0.001$), as do respondents in the youngest age group (18-29) compared to their older counterparts (age 18-29: 71; 30-44: 68; 45-64: 67; 65+: 66). Average scores were lower among respondents in lower social classes (SC 5-6) than in other social classes (SC 1-2: 69; SC 3-4: 69; SC 5-6: 66) (*see Figure 1*).

Differences in energy and vitality are also seen across education levels (primary: 64; post-primary: 68; third-level: 70; $p<0.001$), among those living in urban (67) compared to rural (69) settings, and among those with (64) and without (70) a medical card ($p<0.001$).

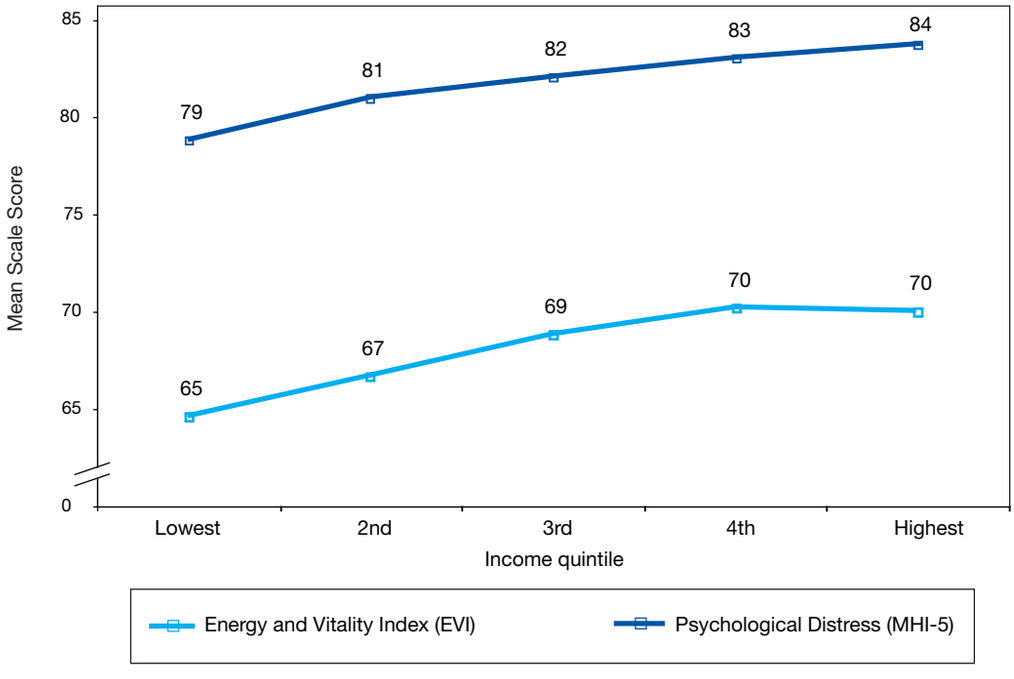
Figure 1: Mean score on SF-36 Energy and Vitality Index, by gender, age and social class
(*higher scores indicate more energy and vitality*)



Average energy and vitality scores are also found to increase with income – from the lowest to the 4th and highest income groups (lowest income: 65; 2nd: 67; 3rd: 69; 4th: 70; highest income: 70; p<0.001). As Figure 2 shows, respondents in the lowest and 2nd lowest equivalised income groups have lower mean energy and vitality scores than those in the upper groups. Income levels can also be associated with psychological distress – the lower the income, the higher the level of psychological distress (*for further details, see section on 'Psychological distress' below*).

Figure 2: Mean score on SF-36 Energy and Vitality Index and psychological distress (MHI-5), by equivalised income quintiles

(*higher scores indicate more energy and vitality and less psychological distress*)



Energy and vitality scores are found to be higher among those who are single compared to those who are married/cohabiting (single: 69; married/cohabiting: 68; divorced/separated: 65; widowed: 65; p<0.001). Also, respondents who are not in paid employment have lower average scores than those who are in paid employment (65 compared to 70).

Of all the socio-demographic indicators, gender, employment status and medical card status are the strongest predictors of EVI (all with p<0.001). Being male and being in paid employment are associated with increases in EVI scores of 3.9 and 4.5 EVI units (0.09 and 0.1 standardised units) respectively. Having a medical card is associated with a decrease in EVI scores by a similar amount (about 3.2 EVI units or 0.08 standardised units).

Results in context: Energy and Vitality Index

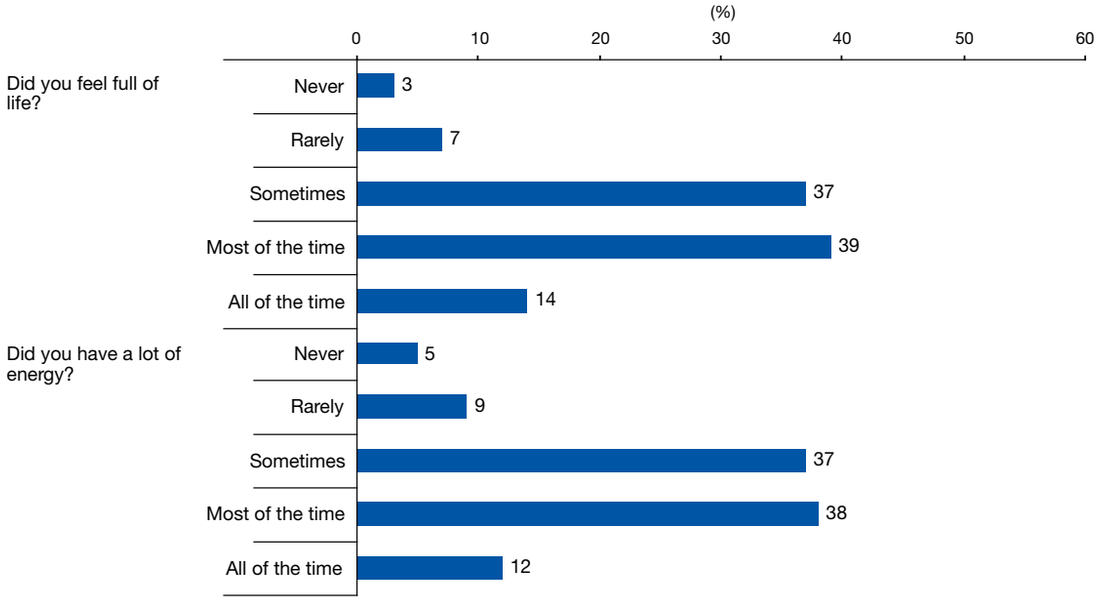
SLÁN 2007 respondents report relatively high levels of energy and vitality in the past 4 weeks, with an overall mean score of 68. This is somewhat greater than that reported in an earlier Irish postal survey by Blake *et al* (2000), where the mean score was 65 among a sample of 295 people, with a 37% response rate. This mean of 65 compares favourably to a mean of 61

reported for 15 European countries (and Northern Ireland) based on the Eurobarometer 58.2 survey, conducted by the European Opinion Research Group (2003) and involving face-to-face home interviews with a sample of 16,230 people, with response rates ranging from 23% to 84%.[18] The mean score for Ireland in that Eurobarometer survey was 62 (response rate of 33%), ranking Ireland 2nd only to Finland (mean score of 71.5) among the countries surveyed. However, the SLÁN 2007 mean of 68 exceeds the Irish/Eurobarometer mean.

The SLÁN 2007 mean score also exceeds the largest mean (65 for Spain) of all 11 countries reported in a study of positive mental health by Lehtinen *et al* (2005), based on a sub-sample of the Eurobarometer 58.2 survey data (n = 10,878; countries with response rate of less than 45% excluded). Ireland's young population (relative to other European countries) may also account for some of these differences. Similar to the present study's findings, the study by Lehtinen *et al* (2005) reported that positive mental health was higher for men than for women, with scores decreasing with age, lower levels of family income, living on a pension, being widowed or separated, and residing in large cities. Those in the lowest income quartile were found to have the poorest mental health status in all countries/regions surveyed.

Limited comparisons can also be made with the later, 2005-06 study on 'Mental Well-being' in the Special Eurobarometer 248/Wave 64.4 survey, abbreviated here to EB 248 (European Commission, 2006). This survey of 25 European countries (including Ireland) involved face-to-face home interviews with a sample of 29,248 people and employed items with comparable wording to the SLÁN 2007 EVI items. Figures 3-6 compare the 3 surveys – SLÁN 2007, Ireland in EB 248 and the EU average in EB 248 – in their percentage responses per category to 'positive' questions and 'negative' questions about energy and vitality levels. It is noticeable that when compared to the EU average responses in EB 248, respondents in SLÁN 2007 endorse less of the 'very positive' categories (e.g. feeling full of life 'all of the time') and less of the 'very negative' ones (e.g. feeling tired 'most of the time').

Figure 3: SLÁN 2007 – Energy and Vitality (EVI) positively worded items, by % of respondents in each response category

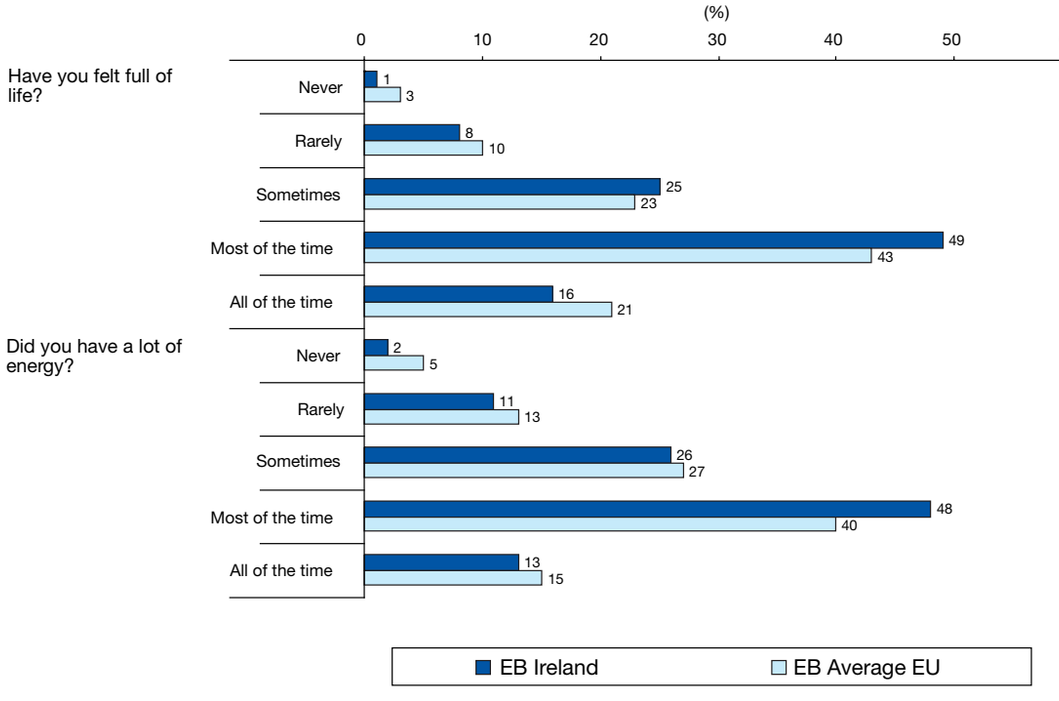


[18] Caution should be applied since there are some differences in the wording of the Energy and Vitality Index questions and response options used in SLÁN 2007 and in the Eurobarometer 58.2 survey, which also used different sampling methods to SLÁN 2007.

Note to Figure 3

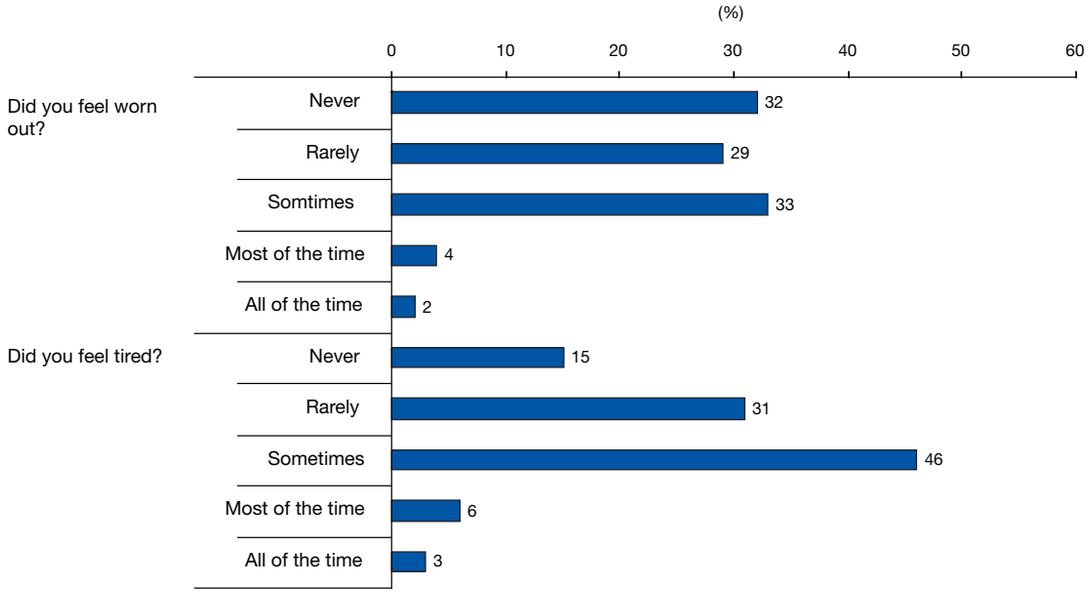
It should be noted that although the Eurobarometer 248 (EB 248) survey uses similar items (based on the SF-36) to SLÁN 2007, the number and names of the response categories differ, as do the item names in some cases. The EB 248 categories are 'all the time', 'most of the time', 'sometimes', 'rarely' and 'never'. To allow comparison, the SLÁN 2007 categories 'a good bit of the time' and 'some of the time' have been collapsed into one category to correspond to the 'sometimes' category in EB 248; 'none of the time' has been matched with 'never', 'a little of the time' has been matched with 'rarely', and 'all of the time' has been matched with 'all the time'. It is assumed that there are zero 'don't knows' for each item in EB 248. Caution should always be applied when comparing items that use different item names, response categories and/or different reference periods.

Figure 4: Eurobarometer (EB) 248 – Energy and Vitality (EVI) positively worded items, by % of respondents in each response category*



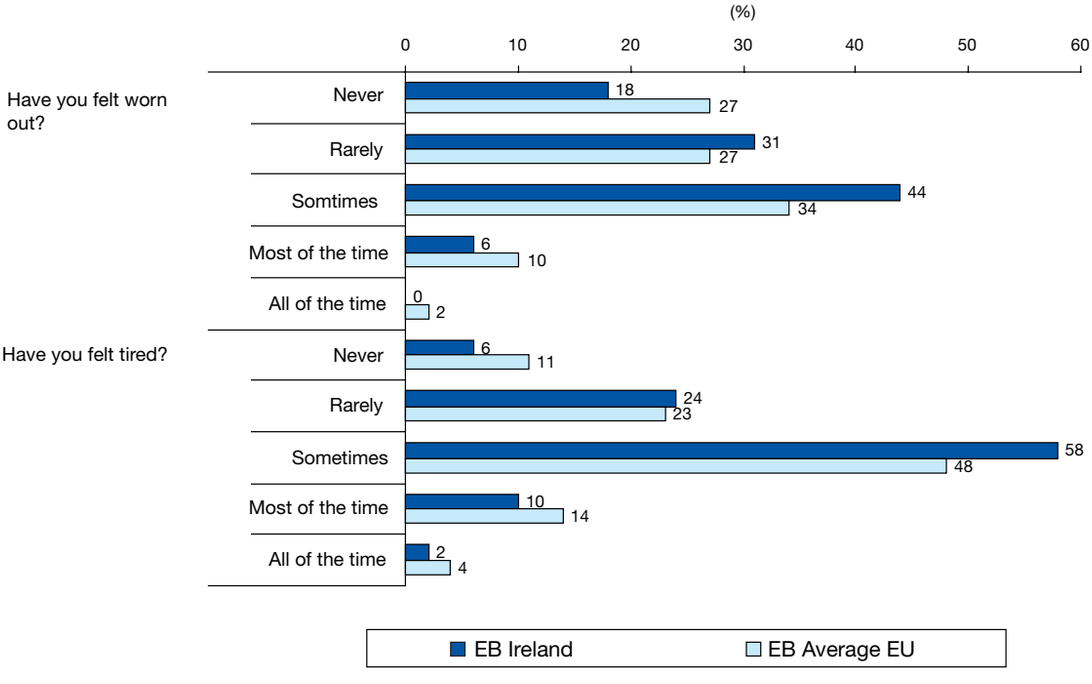
* Please see 'Note to Figure 3' above.

Figure 5: SLÁN 2007 – Energy and Vitality (EVI) negatively worded items, by % of respondents in each response category*



* Please see 'Note to Figure 3' (p. 33)

Figure 6: Eurobarometer (EB) 248 – Energy and Vitality (EVI) negatively worded items, by % of respondents in each response category*



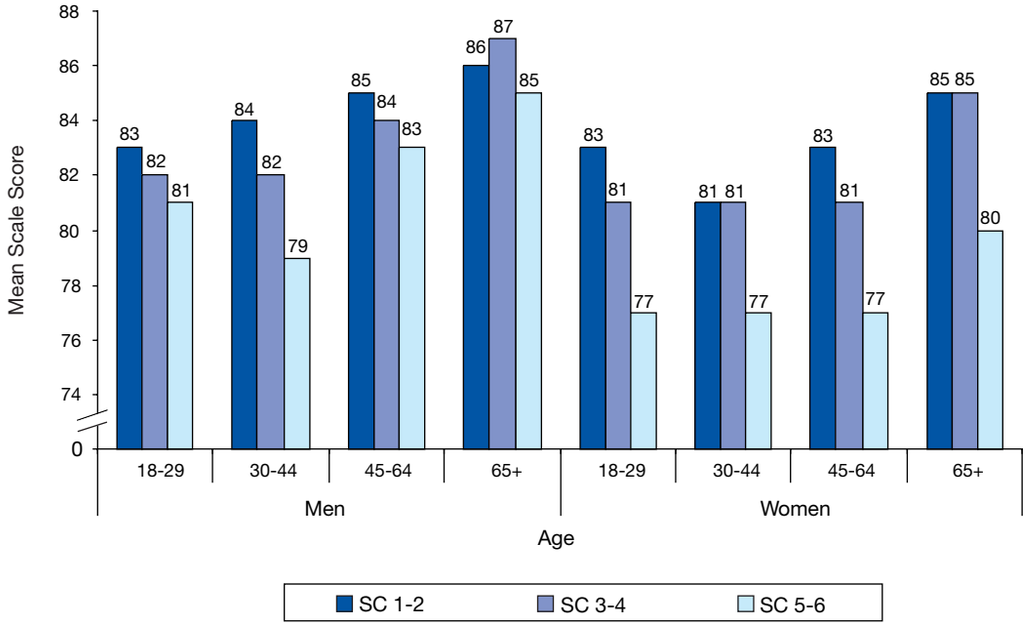
* Please see 'Note to Figure 3' (p. 33)

PSYCHOLOGICAL DISTRESS

SLÁN 2007 included a measure of psychological distress called the Mental Health Index-5 (MHI-5), from the RAND SF-36 questionnaire. The MHI-5 asks respondents questions such as whether they felt 'particularly nervous' or whether they felt 'downhearted and miserable' in the past 4 weeks. Higher scores, on a range of 0-100, indicate less psychological distress.

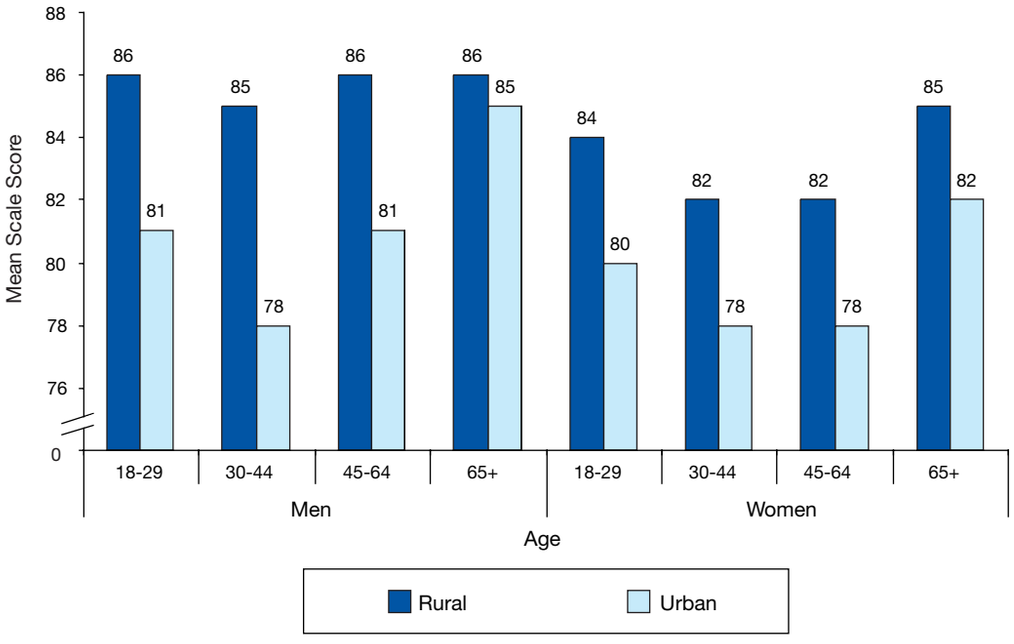
The overall mean score for SLÁN 2007 respondents is 82 (SD = 16), which suggests relatively low levels of psychological distress. Men have slightly less psychological distress than women (83 compared to 81; p<0.001) (*see Figure 7*). No clear patterns emerge across age groups, although those aged 65 and over report less psychological distress than younger respondents (age 18-29: 82; 30-44: 80; 45-64: 82; 65+: 84). Respondents in higher social classes report less psychological distress than those in lower social classes (SC 1-2: 83; SC 2-3: 82; SC 5-6: 80).

Figure 7: Mean score on psychological distress (MHI-5), by gender, age and social class
(*higher scores indicate less psychological distress*)



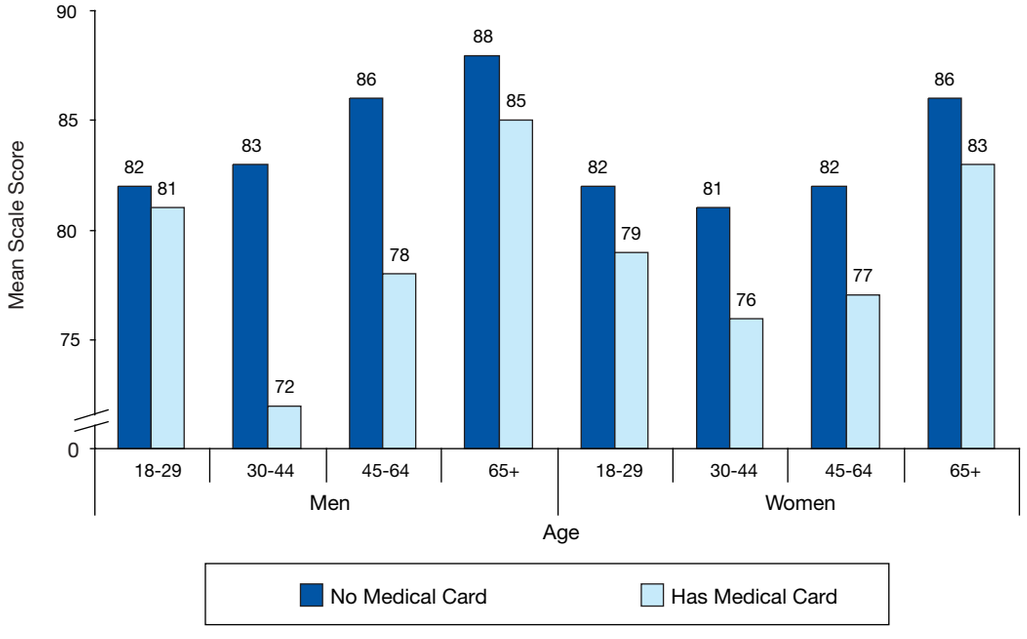
Psychological distress is lower in higher education groups (primary: 80; post-primary 81; third-level: 83; p<0.001) and also among those living in rural areas compared to urban areas (85 compared to 80) (*see Figure 8*).

Figure 8: Mean score on psychological distress (MHI-5), by gender, age and residential location
(*higher scores indicate less psychological distress*)



Psychological distress is also found to be lower for those without a medical card (83) compared to those with a medical card (80) (*see Figure 9*).

Figure 9: Mean score on psychological distress (MHI-5), by gender, age and medical card status
(*higher scores indicate less psychological distress*)



Psychological distress is found to decrease[19] as income increases (lowest income: 79; 2nd: 81; 3rd: 82; 4th: 83; highest income: 84; $p<0.001$) (*see Figure 2*). Respondents in the lowest equivalised income group have a lower mean score than the rest of the income groups. In contrast, those who are not in paid employment report higher psychological distress (80) than those in paid employment (83) ($p<0.001$), as do those who are divorced/separated (single: 80; married/cohabiting: 83; divorced/separated: 78; widowed: 82).

A score of 52 or less on the Mental Health Index is taken to indicate that a respondent has a 'probable mental health problem' (Lavikainen *et al*, 2006). Some 7% of the population (6.3% men and 7.5% women) surveyed in SLÁN 2007 were identified as having probable mental health problems.

Of all the socio-demographic indicators, age, income and education are the strongest predictors of having a probable mental health problem. Respondents aged 65 and over are less than half as likely to have a probable mental health problem compared to those in the age group 18-29 (OR 0.42, $p<0.001$). Those in the lowest income quintile are almost twice as likely to have a probable mental health problem compared to those in the highest income quintile (OR 1.8, $p<0.01$). Finally, those with primary education only are almost twice as likely to have a probable mental health problem compared to those with third-level education (OR 1.8, $p<0.001$).

Results in context: Psychological distress

SLÁN 2007 respondents report relatively low levels of psychological distress (i.e. high scores) in the past 4 weeks, with an overall mean score of 82. Female respondents in social class groups 5-6 report noticeably high levels of psychological distress.

The SLÁN 2007 findings show lower psychological distress compared to that reported in an earlier Irish postal survey by Blake *et al* (2000), where the mean score was 78 among a sample of 295 people, with a 37% response rate. In SLÁN 2007, some 7% of the population (6.3% men and 7.5% women) have a 'probable mental health problem'. This percentage compares favourably with that reported in 15 European countries, where an average of 23% have a probable mental health problem, based on the Eurobarometer 58.2 survey, conducted by the European Opinion Research Group (2003) and involving face-to-face home interviews with a sample of 16,230 people, with response rates ranging from 23% to 84%.[20] Ireland was reported as having 16% of respondents with probable mental health problems in that Eurobarometer survey. The difference in sampling methods used between SLÁN 2007 and Eurobarometer 58.2 may account for the difference in results.

The SLÁN 2007 value of 7% was also similar to (but still less than) that obtained from an examination of Wave 9 of the face-to-face British Household Panel Survey, involving a sample of 14,669 people (Kelly *et al*, 2008; Taylor *et al*, 2005), which produced a value of 10.5% (M.J. Kelly, personal communication, 19 October 2008).

Limited comparisons can also be made with the later, 2005-06 study on 'Mental Well-being' in the Special Eurobarometer 248/Wave 64.4 survey, abbreviated here to EB 248 (European

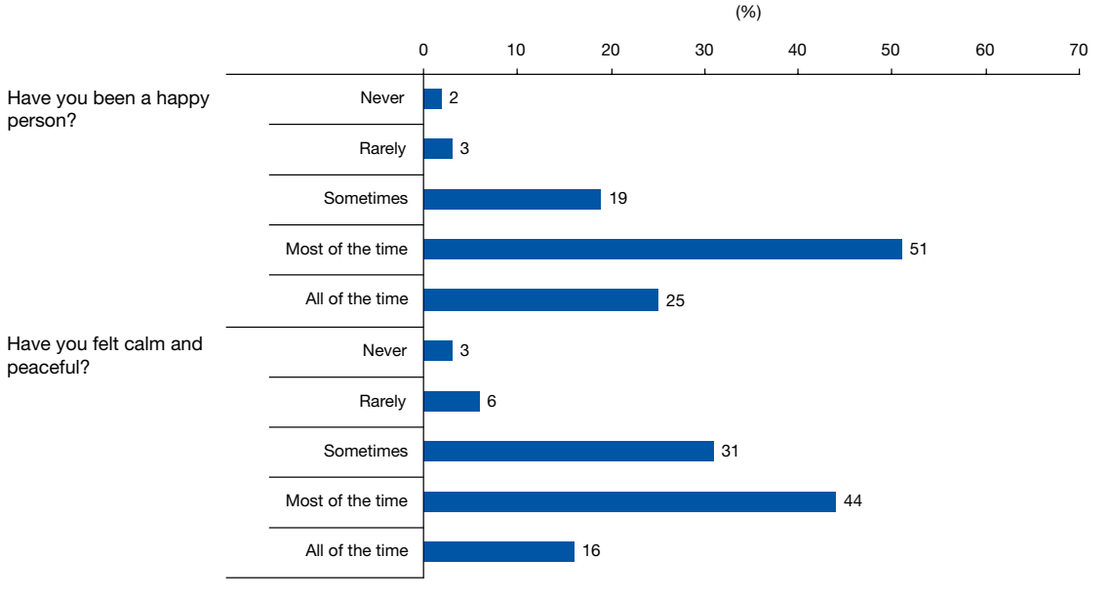
[19] The only post-hoc significant difference is between the lowest and 2nd lowest income groups.
[20] Caution should be applied since there are some differences in the wording of the Mental Health Index questions and response options used in SLÁN 2007 and in the Eurobarometer 58.2 survey, which also used different sampling methods to SLÁN 2007.

Commission, 2006). This survey of 25 European countries (including Ireland) involved face-to-face home interviews with a sample of 29,248 people and employed items with comparable wording to the SLÁN 2007 Mental Health Index items. Figures 10-13 compare the 3 surveys – SLÁN 2007, Ireland in EB 248 and the EU average in EB 248 – in their percentage responses per category to 'positive' questions and 'negative' questions about psychological distress levels. It is noticeable that when compared to the EU average responses in EB 248, respondents in SLÁN 2007 are much more likely to endorse 'never' for the negatively worded items, such as being 'a very nervous person'.

A recent telephone survey entitled the National Psychological Well-being and Distress Survey, conducted in 2007 by the Health Research Board (HRB) in Ireland, found that 12% of respondents had probable mental health problems.[21] This survey involved a sample of 2,711 people, with a response rate of about 50%, and used the GHQ-12 as a measure of psychological distress (Tedstone Doherty *et al*, 2007). This finding of 12% is also lower than the GHQ-12 value of 20% from the British Household Panel Survey data (M.J. Kelly, personal communication, 19 October 2008), mirroring the earlier comparison (*see above*) with the SLÁN 2007 data based on the MHI-5 psychological distress scale.

In keeping with findings from the present study, income was found to be one of the three most important predictors of psychological distress in a recent report by Tedstone Doherty *et al* (2008), based on the 2007 HRB telephone survey on psychological well-being and distress.

Figure 10: SLÁN 2007 – psychological distress (MHI-5) positively worded items, by % of respondents in each response category

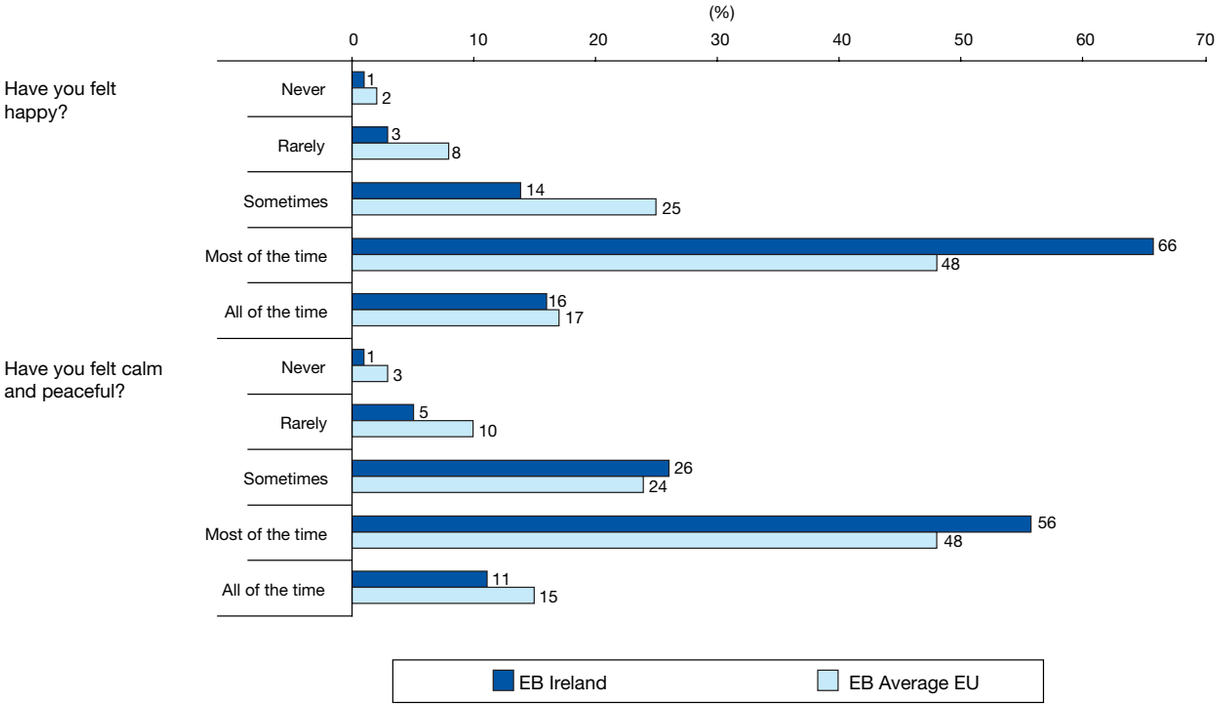


[21] In the National Psychological Well-being and Distress Survey, a respondent had a 'probable mental health problem' if they scored 4 or more on the GHQ-12 scale. Respondents were asked if they had experienced a 'mental, nervous or emotional health problem' in the past year. One in 7 respondents (14%) said they had. In addition, one in 10 had spoken to a GP about a mental health problem in the past year.

Note to Figure 10

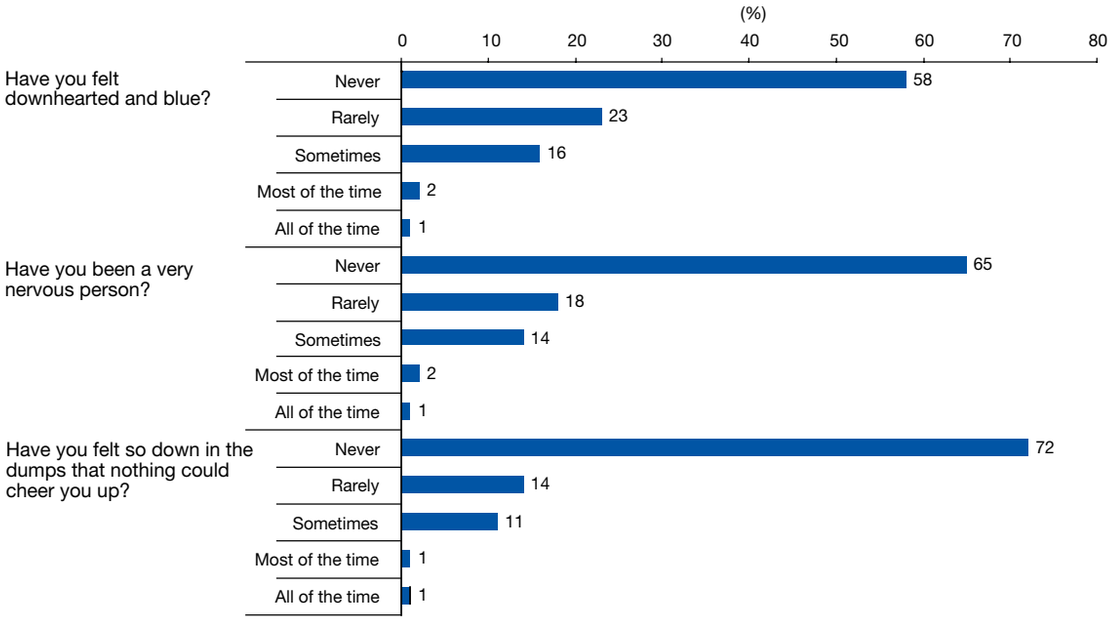
It should be noted that although the Eurobarometer 248 (EB 248) survey uses similar items (based on the SF-36) to SLÁN 2007, the number and names of the response categories differ, as do the item names in some cases. The EB 248 categories are 'all the time', 'most of the time', 'sometimes', 'rarely' and 'never'. To allow comparison, the SLÁN 2007 categories 'a good bit of the time' and 'some of the time' have been collapsed into one category to correspond to the 'sometimes' category in EB 248; 'none of the time' has been matched with 'never', 'a little of the time' has been matched with 'rarely', and 'all of the time' has been matched with 'all the time'. It is assumed that there are zero 'don't knows' for each item in EB 248. Caution should always be applied when comparing items that use different item names, response categories and/or different reference periods.

Figure 11: Eurobarometer (EB) 248 – psychological distress (MHI-5) positively worded items, by % of respondents in each response category*



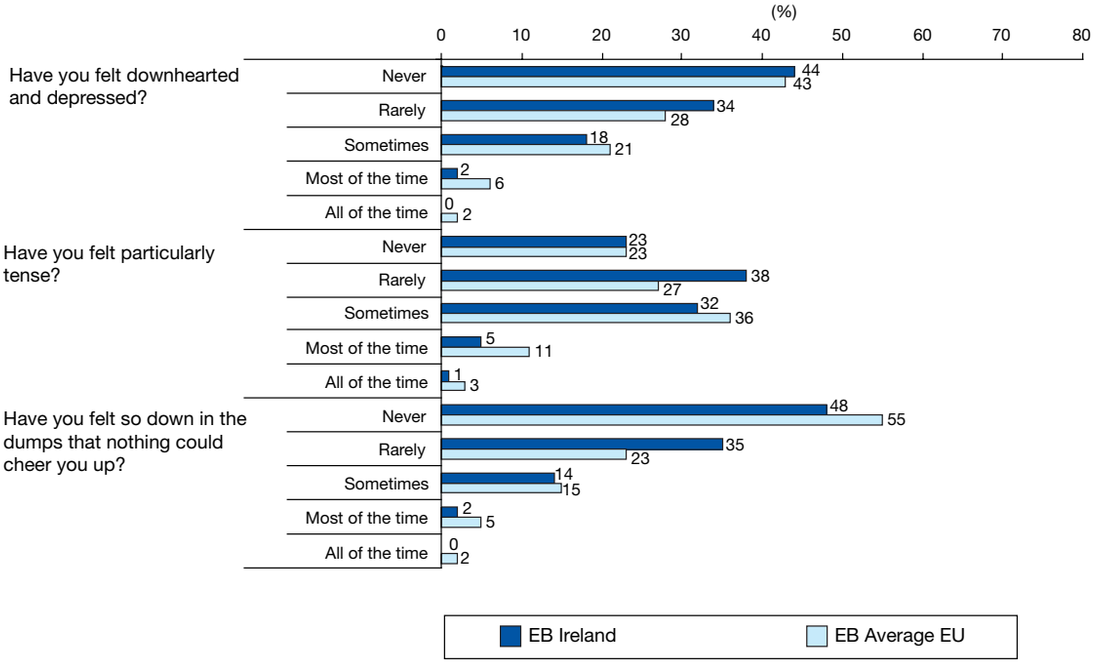
* Please see 'Note to Figure 10' above.

Figure 12: SLÁN 2007 – psychological distress (MHI-5) negatively worded items, by % of respondents in each response category*



* Please see 'Note to Figure 10' (p. 39).

Figure 13: Eurobarometer (EB) 248 – psychological distress (MHI-5) negatively worded items, by % of respondents in each response category*

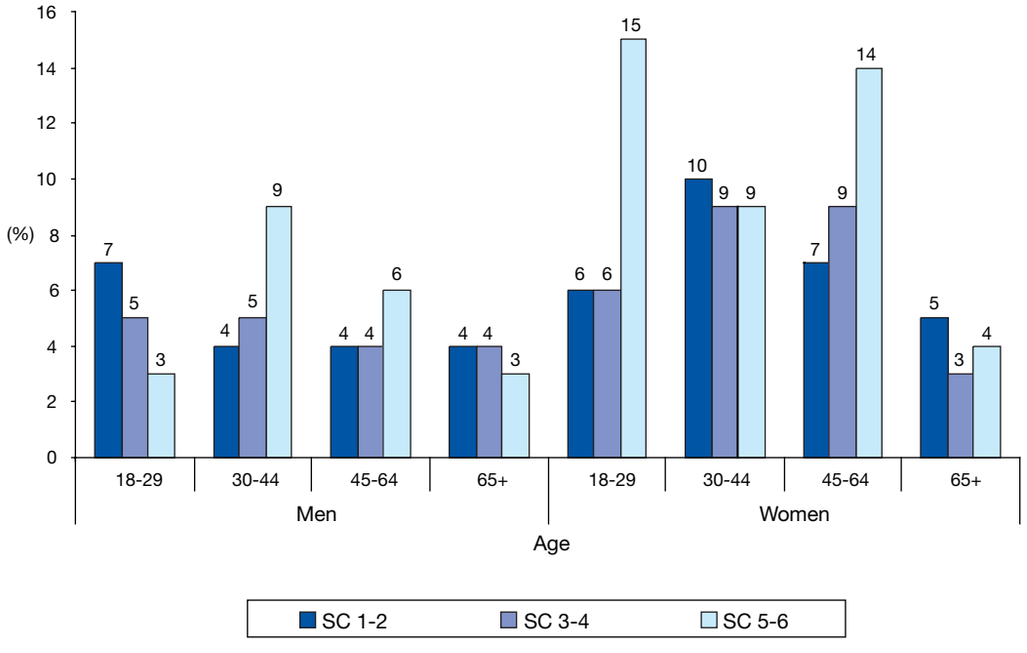


* Please see 'Note to Figure 10' (p. 39).

PROBABLE MAJOR DEPRESSIVE DISORDER

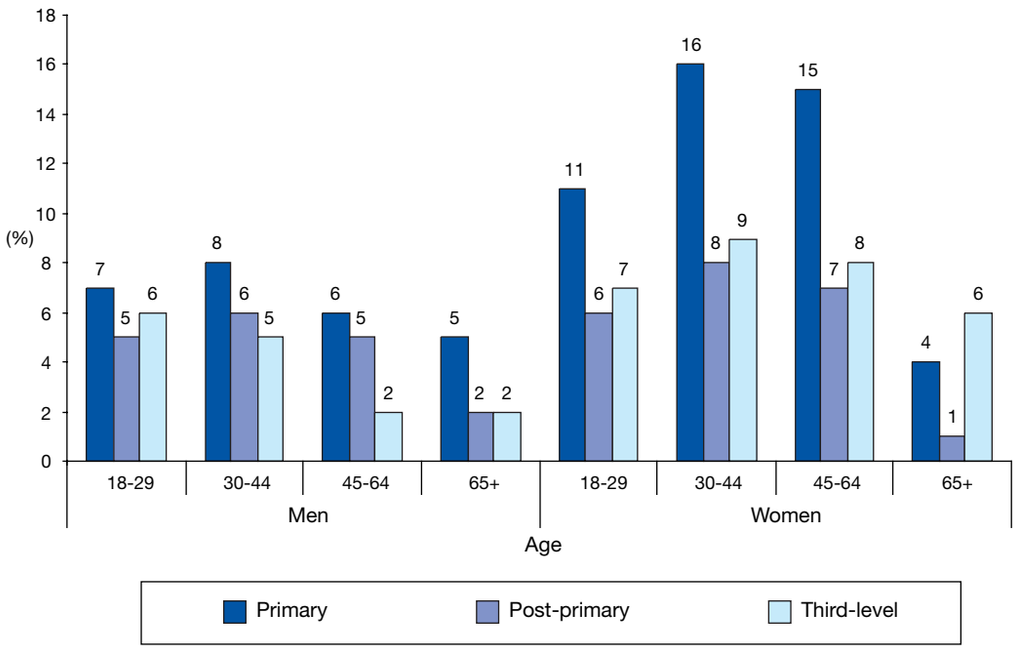
Overall, 6% of SLÁN 2007 respondents were assessed with the CIDI-SF as having probable major depressive disorder in the previous year, with women more likely (8%) to experience depression than men (5%) ($p<0.001$). Those aged 65 and over are less likely to have experienced depression than respondents in younger age groups (age 18-29: 6%; 30-44: 7%; 45-64: 7%; 65+: 3%). Overall, there are no social class differences (SC 1-2: 6%; SC 3-4: 6%; SC 5-6: 8%); however, there is clearly a higher prevalence among women in the age groups 18-29 and 45-64 in social classes SC 5-6 (*see Figure 14*).

Figure 14: Percentage of respondents reporting probable major depressive disorder (CIDI-SF) in the previous year, by gender, age and social class



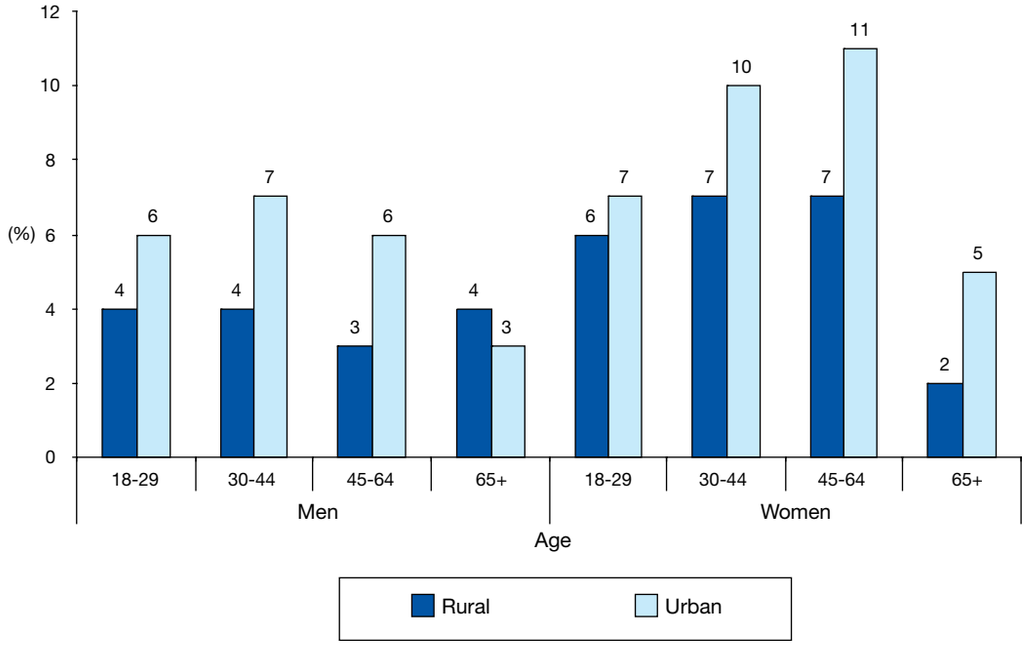
A higher percentage of those with primary education only (8%) are depressed compared to those with post-primary or third-level education (both at 6%; $p<0.01$) (*see Figure 15*).

Figure 15: Percentage of respondents reporting probable major depressive disorder (CIDI-SF) in the previous year, by gender, age and level of education



A higher percentage of those living in urban areas (7%) are depressed compared to those living in rural areas (5%) (p<0.001) (*see Figure 16*).

Figure 16: Percentage of respondents reporting probable major depressive disorder (CIDI-SF) in the previous year, by gender, age and residential location



A higher percentage of those with a medical card (9%) are depressed compared to those without a medical card (5%) ($p<0.001$).

Depression is also associated with income group: more respondents are depressed in lower income groups (lowest income: 9%; 2nd: 8%; 3rd: 6%; 4th: 6%; highest income: 4%; $p<0.001$). Depression is also higher among divorced/separated respondents (single: 7%; married/cohabiting: 6%; divorced/separated: 12%; widowed: 7%) and among those who are not in paid employment (9%) compared to those who are in paid employment (5%).

Of all the socio-demographic indicators, age, employment status and medical card status are the strongest predictors of probable major depressive disorder. Respondents aged 65 and over are four times less likely to be depressed (OR 0.24, $p<0.001$). Respondents who are not in paid employment are more than twice as likely to be depressed than those who are in paid employment (OR 2.1). Finally, those who have a medical card are more than one-and-a-half times more likely to be depressed (OR 1.7) compared to those who do not have a medical card.

Results in context: Probable Major Depressive Disorder

The SLÁN 2007 figure of 6% of respondents reporting that they experienced probable major depressive disorder in the last year is comparable to the reported European average of about 5%. This percentage was obtained by Paykel *et al* (2005) in their review of surveys (using various administrative modes) that employed the CIDI series of instruments. (For a broader overview of worldwide mood disorder rates obtained using the CIDI and DIS depression instruments, *see* Kessler, 2007.) The European findings show that more women than men are depressed, which is a consistent finding in surveys of this type (e.g. Barry *et al*, 2008; Patel *et al*, 2006; Nolen-Hoeksema, 2001; Piccinelli and Wilkinson, 2000), with the rate being particularly high among women aged 30-64 in lower social class groups living in urban areas. The prevalence of probable major depressive disorder is higher in lower social class groups (SC 5-6), which is also consistent with previous research (Johnson *et al*, 1999).

The SLÁN 2007 gender association with depression of 1.5 is low compared to the ratio of 2.0 generally found (Angst *et al*, 2002; Hyde *et al*, 2008; Kuehner, 2003) and to that found in a meta-analysis of five surveys in Europe (Fryers *et al*, 2004), which ranged from 2.2 (northern Germany) to 2.9 (all of Germany). This departure from normally seen gender differences is particularly pronounced in those aged 65 and over, where the gender difference is actually reversed (3.7% men and 3.2% women). This pattern is also evident in a forthcoming study by Golden *et al*, who conducted face-to-face home interviews with a sample of 2,136 people aged 65 and over, between 1993 and 1999, in order to assess them for depression. The prevalence of major depressive disorder was not found to vary with gender ($p = 0.62$).

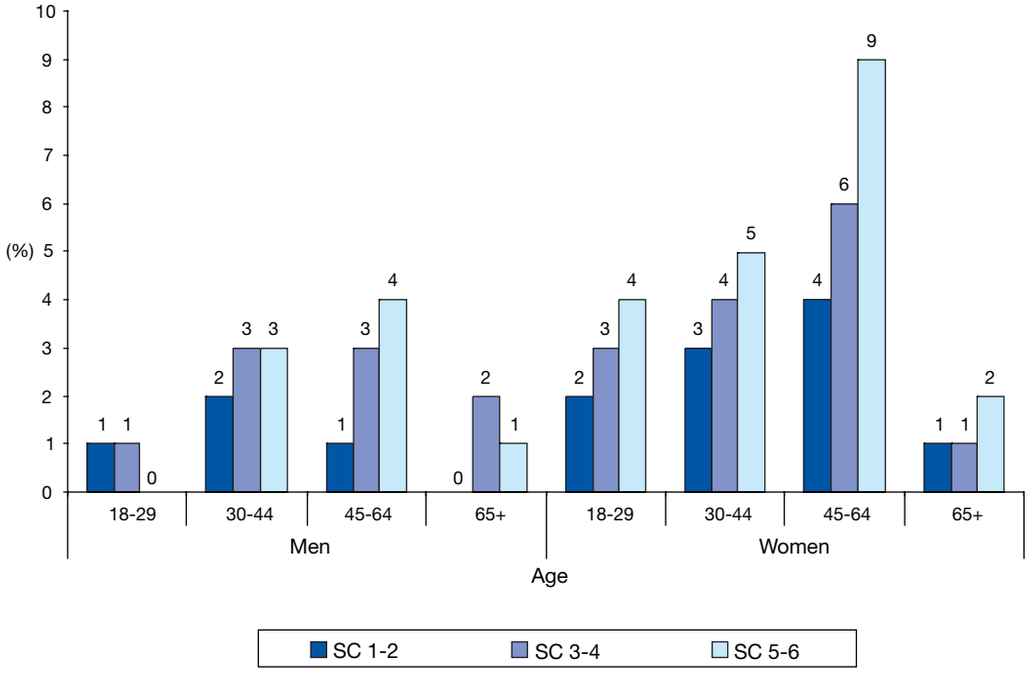
Comparisons of CIDI-SF diagnoses, self-ratings and doctor diagnoses

In addition to the formal depression assessment using the CIDI-SF scale, SLÁN 2007 respondents were also asked to report if they had depression in the last 12 months and if so, whether this condition was diagnosed by a doctor. About 6% reported[22] that they had depression, making it the 5th most common reported diagnosis in a list of common medical conditions. Of this group, 78% reported that their depression was also diagnosed by a doctor. The CIDI-SF diagnosed 47% of this group as having probable major depressive disorder.

GENERALISED ANXIETY DISORDER

Overall, 3% of SLÁN 2007 respondents are assessed with the CIDI-SF as having generalised anxiety disorder (GAD) in the past year, with prevalence higher among women (3%) than men (2%) ($p<0.001$). GAD is more prevalent in the 30-44 and 45-64 age groups (age 18-29: 2%; 30-44: 3%; 45-64: 4%; 65+: 1%) and in social classes 5-6 (SC 1-2: 2%; SC 3-4: 3%; SC 5-6: 4%) (*see Figure 17*). Women aged 45-64 in social classes 5-6 have a particularly high prevalence rate.

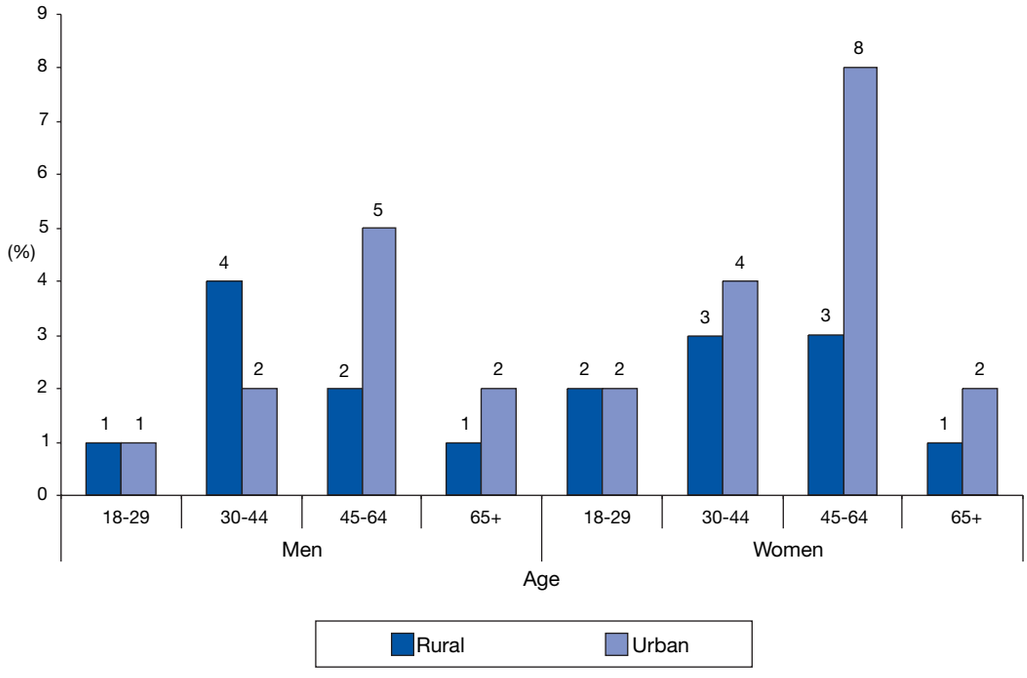
Figure 17: Percentage of respondents diagnosed as having generalised anxiety disorder (CIDI-SF) in the previous year, by gender, age and social class



The prevalence of GAD is found to be lower for those with higher levels of education (primary: 5%; post-primary: 3%; third-level: 2%; $p<0.001$). In addition, a higher percentage of those living in urban areas (3%) report GAD compared to those living in rural areas (2%) ($p<0.01$) (*see Figure 18*).

[22] Given that respondents were asked to report based on the last 12 months, a report of having been depressed may be self-rated depression, doctor-diagnosed depression or both.

Figure 18: Percentage of respondents diagnosed as having generalised anxiety disorder (CIDI-SF) in the previous year, by gender, age and residential location



A higher percentage of those with a medical card (5%) report GAD compared to those without a medical card (2%) ($p<0.001$).

GAD is also found to be associated with income group: more respondents in lower income groups report GAD (lowest income: 5%; 2nd: 4%; 3rd: 2%; 4th: 2%; highest income: 1%; $p<0.001$). GAD is also higher among divorced/separated respondents (single: 2%; married/cohabiting: 3%; divorced/separated: 7%; widowed: 3%) and among those who are not in paid employment (4%) compared to those who are (2%).

Of all the socio-demographic indicators, age, education and medical card status are the strongest predictors of general anxiety disorder. Those aged 65 and over are almost four times less likely to report GAD compared to those in the 18-29 age group (OR 0.26, $p<0.001$). Those with a medical card and those with only primary education (compared to those with third-level education) are both more than twice as likely to report GAD (OR 2.1 and OR 2.0 respectively).

Results in context: Generalised Anxiety Disorder

Some 3% of SLÁN 2007 respondents reported generalised anxiety disorder in the last year. This is comparable to the European average of about 2% reported by Lieb *et al* (2005) based on examination of studies that used the CIDI series of instruments. (For a broader overview of worldwide anxiety disorder rates obtained using the CIDI and DIS depression instruments, *see* Kessler, 2007.) The prevalence of anxiety is higher in lower social class groups (SC 5-6), which is consistent with previous research (Johnson *et al*, 1999). Middle-aged women in SC 5-6 living in urban areas have a particularly high prevalence.

Comparisons of CIDI-SF diagnoses, self-ratings and doctor diagnoses

In addition to formal GAD assessment, SLÁN 2007 respondents were also asked to report[23] if they had 'anxiety' in the last 12 months (as opposed to 'generalised anxiety disorder' or 'chronic anxiety', which is diagnosed by the CIDI-SF) and if so, whether this condition was diagnosed by a doctor. About 6% reported that they had anxiety, making it the 3rd most commonly reported diagnosis in a list of common medical conditions. Of this group, 68% reported that their anxiety was also diagnosed by a doctor. The CIDI-SF diagnosed 17% of this group as having generalised anxiety disorder.

SELF-HARM

Less than half a percent (0.4%) of SLÁN 2007 respondents (47 in total, consisting of 21 men and 26 women[24]) answered 'Yes' to the question about self-harm, which asked '*In the last 12 months, have you deliberately taken an overdose (e.g. of pills or other medication) or tried to harm yourself in some other way (such as cut yourself)?*'

Of the 47 respondents who harmed themselves in the last 12 months, the average age is 39 (age 18-29: 16; 30-44: 17; 45-64: 12; 65+: 2). Examined by social class, 8 of the respondents are in SC 1-2, 19 in SC 3-4 and 7 in SC 5-6 (13 were in the 'unclassified' category). By education level, 11 have primary school education only, 20 have post-primary education and 16 have third-level degrees. By residential location, 10 live in rural areas and 36 in urban areas. By medical card status, 27 have a medical card and 19 do not.

Over one-third of the 47 respondents who report self-harm are in the lowest income category (lowest income: 18; 2nd: 8; 3rd: 5; 4th: 6; highest income: 6); more than half are single (single: 28; married/cohabiting: 10; divorced/separated: 9; widowed: 0); 28 are not in paid employment, while 18 are in paid employment.

Of the 47 respondents, 22 went to hospital because of their most recent self-harm attempt and 22 did not go (3 provided no answer). 34 of the respondents also received help from one or more people or sources around the time of the most recent self-harm occasion (7 did not). The three most common sources were a friend (22 of 34), someone in the respondent's family (22 of 34) or hospital staff (16 of 34). 25 of 34 respondents received this help before the event, 32 of 34 immediately afterwards and 29 of 34 in the weeks and months afterwards.

[23] Given that respondents are asked to report based on the last 12 months, a report of having anxiety may be self-rated anxiety, doctor-diagnosed anxiety/generalised anxiety disorder or both.

[24] All figures presented in this section are unweighted and include respondents in the 'unclassified' social class.

Results in context: Self-harm

It is somewhat difficult to compare SLÁN 2007 results to other Irish studies and to international studies. Firstly, most other studies are based on teenage samples, while SLÁN 2007 is based on adults of 18 years and over. Second, a 'lifetime' version of the self-harm question is used in all except two of these studies (i.e. 'Have you *ever* deliberately taken an overdose …'), while the SLÁN 2007 question asks about self-harming in the last 12 months. Being mindful of these differences, some comparisons are reported here.

The only recent Irish study that reports 12-month rates for 18s and over is entitled *The Male Perspective: Young men's outlook on life* (Begley *et al*, 2004). The findings of this questionnaire study, involving 353 men aged 18-34, show that 4.6% of respondents reported self-harm – a higher figure than the SLÁN 2007 rate.

Another Irish survey examined lifetime self-harm rates among a sample of 3,881 young people, aged 15-17 (Morey *et al*, 2008; Sullivan *et al*, 2004) through anonymous questionnaires given to students in class. The *Young People's Mental Health* report (Sullivan *et al*, 2004) indicates a lifetime self-harm rate of 12.2%, with 9.1% of these fitting the standard deliberate self-harm description.

In a European context, 12-month rates are reported by the school class-administered 2007 self-report questionnaire study (Portzky *et al*, 2008) of a sample of 4,889 young people, aged 15-17, in the Netherlands (where the response rate was 2.6%) and Belgium (response rate of 7%). (Note, the response rate in SLÁN 2007 for the closest comparable age group (18-29) was 0.6%.) The self-harm rates differ between each of these countries and both exceed the SLÁN 2007 rate.

The SLÁN 2007 rate is also exceeded in the findings for Ireland in the European CASE (Child and Adolescent Self-harm in Europe) study (Madge *et al*, 2008). (It should be noted that Irish samples were from Cork and Kerry only.) This school questionnaire study examined 'last year' rates of deliberate self-harm (2.4% for boys and 8.8% for girls) among a (weighted) sample of 3,804 adolescents. However, unlike the CASE study, there is no evidence of a gender difference in the SLÁN 2007 sample.

Finally, in Australia, De Leo and Heller (2004) report a lifetime self-harm rate of 6.2% based on a 2002 classroom survey of 4,097 15-year-olds.

The 95% confidence interval for the self-harm rate (0.28% to 0.53%) in SLÁN 2007 corresponds to a rate of between 290 and 530 self-harm attempts per 100,000. This rate is higher than the 2005 age-standardised rate of deliberate self-harm presentations to hospital Accident and Emergency (A&E) departments of 198 per 100,000[25] reported by the National Suicide Research Foundation (NSRF, 2007).

[25] This average rate is much lower than the rates for the 15-19 male and female groups, which were 301 and 606 per 100,000 respectively. More generally, these incidence rates are thought to be the 'tip of the iceberg' because they do not include cases that do not present to hospital after an act of deliberate self-harm (Morey *et al*, 2008). In both Irish (Morey *et al*, 2008) and European (Madge *et al*, 2008) samples, only 11-12% of those who engaged in self-harm subsequently presented to hospital.

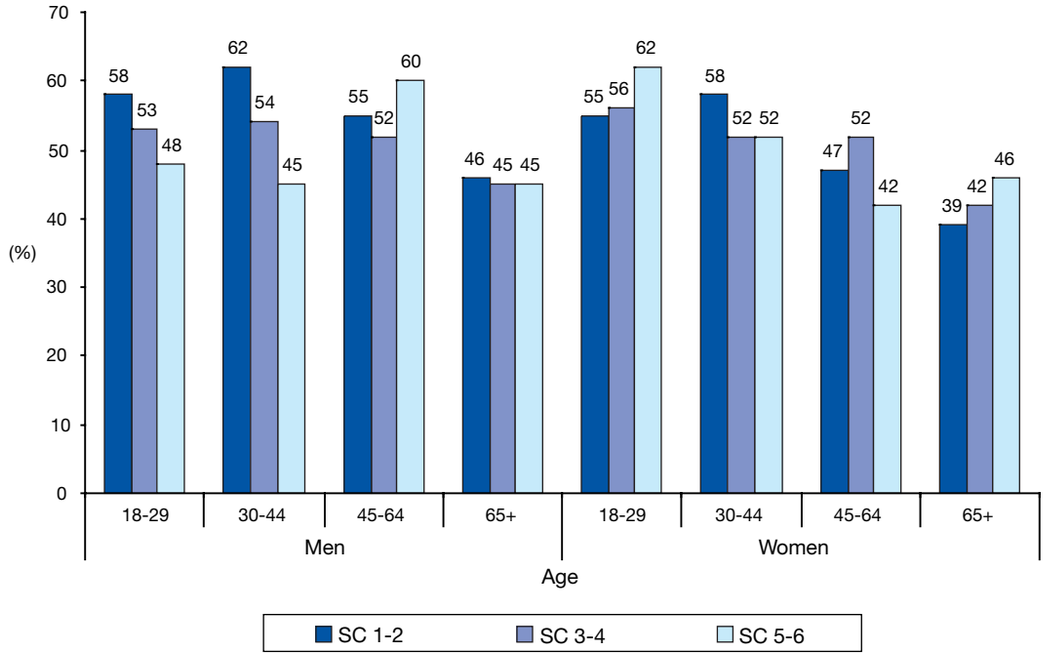
Less than half of the SLÁN 2007 respondents reported going to hospital after their most recent self-harm attempt – a figure that is consistent with other surveys (Arensman *et al*, n.d.; Madge *et al*, 2008; Morey *et al*, 2008).

Except for the A&E reported rate (NSRF, 2007), the SLÁN 2007 rate of self-harm is lower than the other studies mentioned above (Begley *et al*, 2004; Madge *et al*, 2008; Morey *et al*, 2008; Portzky *et al*, 2008; Sullivan *et al*, 2004). In their recent postal self-report and telephone interview survey on attitudes towards suicide in Ireland, Arensman *et al* (n.d.) provide evidence for one explanation for these differences – namely, the mode of administration of the survey: respondents interviewed by telephone were less likely to report self-harm than those respondents who self-reported by postal questionnaire.

PERCEIVED STIGMA

Just over half of the SLÁN 2007 respondents (52%) report that they 'agree' or 'strongly agree' with the statement *'If I was experiencing mental health problems, I wouldn't want people knowing about it'*. More men (53%) than women (51%) agree with the statement ($p<0.01$), indicating their stronger perception of stigma associated with mental health problems. Younger respondents also tend to agree more often (age 18-29: 55%; 30-44: 54%; 45-64: 51%; 65+: 43%; $p<0.001$), as do respondents in higher social classes (SC 1-2: 55%; SC 3-4: 52%; SC 5-6: 50%; $p<0.01$) (*see Figure 19*).

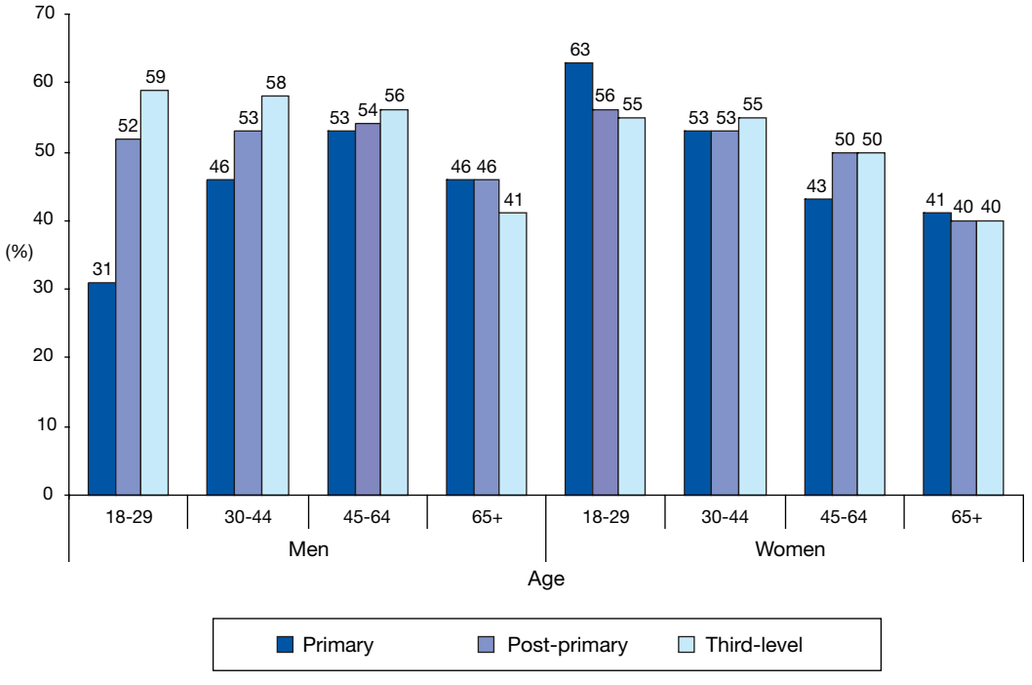
Figure 19: Percentage of respondents agreeing with the statement 'If I was experiencing mental health problems, I wouldn't want people knowing about it', by gender, age and social class*



* Percentages in Figure 19 differ from the SLÁN 2007 Main Report (Morgan *et al,* 2008). The percentage calculations in the Main Report exclude neutral responses. In the present report, neutral responses have been included.

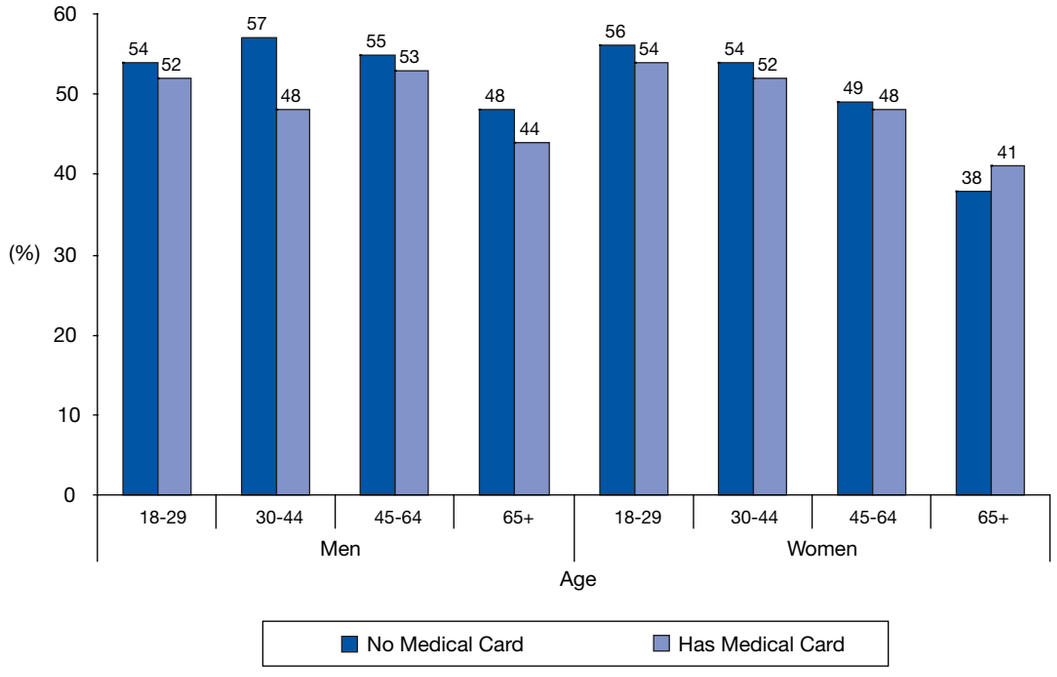
A larger proportion of respondents with higher levels of education agree with the statement (primary: 46%; post-primary: 52%; third-level: 55%; p<0.001) (*see Figure 20*). No differences emerge between those living in urban and rural areas (both 52%).

Figure 20: Percentage of respondents agreeing with the statement 'If I was experiencing mental health problems, I wouldn't want people knowing about it', by gender, age and level of education



Fewer respondents with a medical card agree with the statement (48%) than those who do not have a medical card (54%) (p<0.001) (*see Figure 21*).

Figure 21: Percentage of respondents agreeing with the statement 'If I was experiencing mental health problems, I wouldn't want people knowing about it', by gender, age and medical card status



More respondents in the highest income group agree with the statement compared to those in the lowest income group; however, there is no clear pattern among respondents in the middle 3 income groups (lowest income: 51%; 2nd: 54%; 3rd: 52%; 4th: 54%; highest income: 56%; $p<0.05$). Respondents in paid employment agree more often (54%) with the statement than those who are not in paid employment (48%) ($p<0.001$). Widowers are less likely to agree (single: 52%; married/cohabiting: 53%; divorced/separated: 52%; widowed: 42%; $p<0.001$).

Of all the socio-demographic indicators, age, marital status and employment status are the strongest predictors of perceived stigma of mental health problems. Those aged 65 and over are one-third less likely to agree compared to those in the 18-29 age group (OR 0.67, $p<0.001$). Those who are single are almost one-fifth less likely to agree than those who are married or cohabiting (OR 0.81, $p<0.001$). Finally, respondents who are not in paid employment are more than 10% less likely to agree than those in paid employment (OR 0.87, $p<0.05$).

Results in context: Perceived stigma

A number of other reports use the same, or a very similar, question to that used in SLÁN 2007 to investigate perceived stigma, thus allowing for comparisons to be made. The SLÁN 2007 results of 52% indicate lower rates of perceived stigma than a recent study conducted by the National Office for Suicide Prevention (NOSP, 2007), involving face-to-face interviews with a sample of 1,000 people, which reported a rate of 64% (this figure excludes the 'don't knows'). The SLÁN 2007 rate is also lower than the rate reported in Northern Ireland of 57% (again excluding 'don't knows'), obtained in a survey by the Health Promotion Agency (2006) involving face-to-face interviews with 1,013 respondents (quota sampling).

However, Republic of Ireland rates have yet to come down to the levels seen in Scotland. Perceived stigma of mental health problems has been measured there over a number of years (2002-2006) in a series of surveys called *Well? What do you think?* by the Scottish Government Social Research Unit. These surveys, involving face-to-face interviews with an average sample of approximately 1,333 people, employ a slightly different wording to SLÁN 2007 for the question on perceived stigma, i.e. 'If I were *suffering* from mental health problems, …' (as opposed to SLÁN's 'If I were *experiencing* mental health problems …'). The perceived stigma rate in 2002 was 50% (Glendinning *et al*, 2002); in 2004 it had decreased to 45% (Braunholtz *et al*, 2004); and in 2006 it had further decreased to 41% (Braunholtz *et al*, 2007). The Scottish *See-me* anti-stigma campaign began in 2002 and could be said to have had an effect on public attitudes and awareness of mental health problems (*see* www.seemescotland.org.uk).

When comparing SLÁN 2007 results with the national (e.g. NOSP, 2007) and international studies (e.g. Braunholtz *et al*, 2007), there are differences and similarities in how perceived stigma breaks down by socio-demographic variables. Both of the Irish studies (SLÁN 2007 and NOSP 2007) indicate that men are more likely to perceive stigma than women (although the Scottish 2006 survey showed no gender differences). However, contrary to general research findings on stigma, younger respondents (in SLÁN 2007 and NOSP 2007), those in higher social classes (in SLÁN 2007) and those with third-level education (in SLÁN 2007 and Scottish 2006 survey) are also more likely to perceive stigma.

When other stigma-related items are broken down by demographics in NOSP 2007 and the Scottish 2006 survey, it becomes clear that these results may be dependent on the particular 'stigma' question asked. Breakdown of the questions asked in both these surveys, '*The public should be better protected from people with mental health problems*' and '*I would find it hard to talk to someone with mental health problems*', by age and education show that those in younger age groups and with higher levels of education are less likely to perceive stigma. However, the effects of age and education are reversed in relation to the 'stigma' question in SLÁN 2007 (*'If I was experiencing mental health problems, I wouldn't want people knowing about it*'), with higher proportions of younger and more educated respondents not wanting others to know if they were experiencing mental health problems.

MENTAL HEALTH AND HEALTH BEHAVIOURS

The following discussion explores the relationship between positive and negative mental health and selected physical health behaviours.

Respondents were asked to report on their self-rated health and were asked a number of questions to indicate their physical health, such as their frequency and intensity of physical activity, their alcohol consumption and whether or not they smoked. Respondents could then be classified into the following health behaviour categories:

- IPAQ physical activity group (low, moderate, high);
- AUDIT-C alcohol consumption risk group (low risk, increased risk);
- smoking (current smoker, former smoker, never smoked).

Respondents with mental health problems were identified using the mental health data: those with a probable mental health disorder (i.e. respondents with an MHI-5 psychological distress score less than or equal to 52), probable major depressive disorder and generalised anxiety

disorder. In addition, respondents with higher levels of positive mental health (referred to as 'flourishing') were also identified based on scores of at least 95 on the Energy and Vitality Index (EVI).

Overall, about 7% of SLÁN 2007 respondents are identified as being in the 'flourishing' group. Table 3 shows percentages of respondents who are flourishing (total: 7%), have a probable mental health problem (total: 7%), probable major depressive disorder (total: 6%) or generalised anxiety disorder (total: 3%) by health behaviour category.

Table 3: Percentage of respondents reporting positive and negative mental health, by indicators of physical health

		INDICATORS OF MENTAL HEALTH			
		Positive	Negative		
INDICATORS OF PHYSICAL HEALTH	**Category descriptions**	**Flourishing (p = 7%)**	**Probable mental health problem (p = 7%)**	**Probable major depressive disorder (p = 6%)**	**Generalised anxiety disorder (p = 3%)**
Self-rated health	Excellent/ Very good	9.7%**	3.9%**	3.6%**	1.3%**
	Good/Poor/Fair	3.7%**	11.0%**	10.2%**	5.1%**
IPAQ Physical activity	High	9.7%**	3.7%**	6.4%*	2.0%**
	Moderate	7.0%**	6.6%**	5.7%*	2.6%**
	Low	5.3%**	10.1%**	7.4%*	4.3%**
AUDIT-C Alcohol consumption	Low risk	7.7%	5.6%	7.0%	2.9%
	Increased risk	6.6%	6.3%	6.3%	3.0%
Smoking	Smoker	5.4%**	11.6%**	10.2%**	5.2%**
	Former smoker	7.4%**	3.5%**	6.2%**	2.0%**
	Never smoked	7.8%**	5.6%**	4.4%**	1.9%**

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

Results in Table 3 indicate strong relationships between self-rated health, lifestyle behaviours and mental health. Respondents who rate themselves as having 'excellent' or 'very good' health are in general about three times less likely to report psychological distress, depression or generalised anxiety disorder, and they are more than twice as likely to be in the 'flourishing' group. There is evidence that reporting negative mental health is strongly associated with both smoking and not exercising: respondents who smoke (compared to those who never smoked) or who have low levels of physical activity (compared to high levels) are between twice and three times more likely to report psychological distress or generalised anxiety disorder. There is also evidence that reporting positive mental health, or 'flourishing', is associated with both not smoking and with a high level of physical activity. In particular, those who engage in a high level of physical activity are nearly twice as likely as those with a low level of physical activity to be in the 'flourishing' group. The analysis did not show any clear relationship between reported alcohol consumption patterns and mental health.

4. RESULTS: SOCIAL WELL-BEING

4. RESULTS: SOCIAL WELL-BEING

SLÁN 2007 respondents were asked a number of questions relating to perceived social support and social well-being.

SOCIAL SUPPORT

Social support as perceived by respondents was assessed in SLÁN 2007 using three questions comprising the 14-point Oslo Social Support Scale (Brevik and Dalgard, 1996). The questions were (i) on the number of close friends that a respondent has; (ii) on other people showing a friendly interest in the respondent; and (iii) on ease of getting practical help from neighbours if needed.

Overall, the findings on these questions, in turn, are: (i) 78% of respondents (76% men and 79% women) report that they have 3 or more people close to them on whom they could count if they had serious personal problems ($p<0.001$); (ii) 81% (79% men and 83% women) report that other people take a friendly interest in what they are doing; and (iii) 74% (73% men and 75% women) report that they find it 'easy' or 'very easy' to get practical help from their neighbours. With further analysis, the following socio-demographic findings emerge.

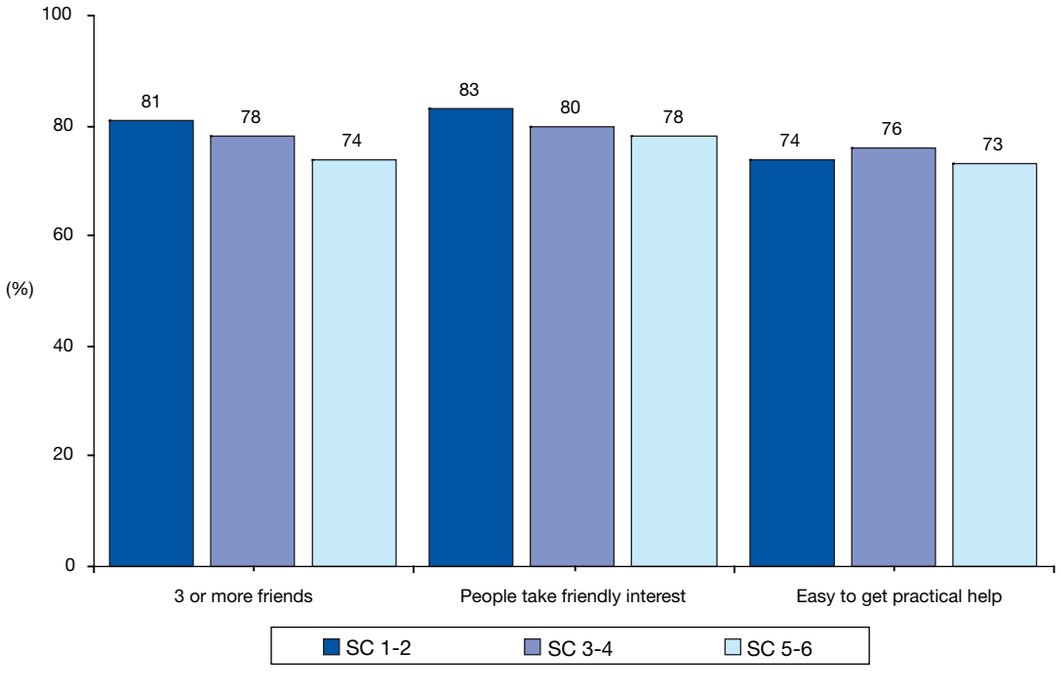
Age group

No age pattern is evident in respondents' reports about having 3 or more close friends or about people taking a friendly interest in them. However, fewer respondents in the age group 18-44 report that they find it easy to get practical help from neighbours compared to respondents aged 45 and older ($p<0.001$).

Social class

A social class gradient is evident in relation to having 3 or more close friends ($p<0.05$) and in relation to people taking a friendly interest in what respondents are doing ($p<0.05$). This gradient suggests that those in higher social classes experience higher levels of support (*see Figure 22*). Such a gradient is not evident in relation to assessing practical support from neighbours.

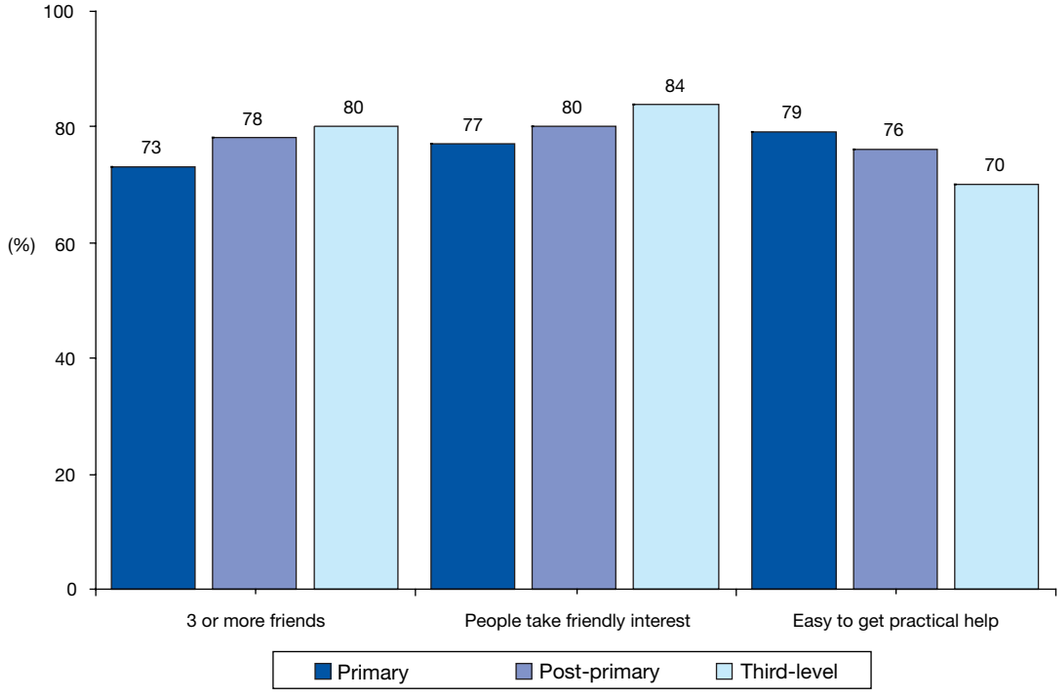
Figure 22: Perceptions of social support, by type of support and social class



Education level

Similar to social class, those with higher levels of education are more likely to report having 3 or more close friends (primary: 73%; post-primary: 78%; third-level: 80%; $p<0.001$) and having people taking a friendly interest in them (primary: 77%; post-primary: 80%; third-level: 84%) (*see Figure 23*). The opposite pattern is evident in relation to ease of getting practical help from neighbours – fewer respondents with higher levels of education report ease of getting practical help from neighbours (primary: 79%; post-primary: 76%; third-level: 70%).

Figure 23: Perceptions of social support, by type of support and level of education



Residential location

Residential location is not associated with having 3 or more close friends, with the same percentage (78%) reporting this from both rural and urban areas. About 82% of those living in rural areas and 80% of those living in urban areas report that other people take a friendly interest in what they are doing ($p<0.05$). Residential location is, however, associated with ease of getting practical help from neighbours, with a higher percentage of those living in rural areas (84%), as opposed to urban areas (68%), reporting that they find it 'easy' or 'very easy' to get help ($p<0.001$).

Medical card status

Social support is associated with medical card status: 75% of people holding a medical card and 79% of those with no medical card report that they have 3 or more close friends ($p<0.001$); 78% of those with a medical card and 82% of those without one report that other people take a friendly interest in what they are doing ($p<0.001$); and 76% of those with a medical card and 73% of those without one find it 'easy' or 'very easy' to get practical help from their neighbours ($p<0.05$).

Income group

Social support is associated with income: the percentage reporting 3 or more close friends increases with income quintile (lowest income: 73%; 2nd: 76%; 3rd: 81%; 4th: 79%; highest income: 82%; $p<0.001$). The percentage reporting people taking a friendly interest has a similar trend (lowest income: 78%; 2nd: 80%; 3rd: 81%; 4th: 81%; highest income: 85%). However, finding it 'easy' or 'very easy' to get practical help differs from this pattern, with the increasing trend reversed in the top highest income quintiles (lowest income: 72%; 2nd: 76%; 3rd: 77%; 4th: 73%; highest income: 73%).

Marital status

Social support is associated with marital status. Divorced/separated and widowed respondents are least likely to have 3 or more close friends on whom they could count (single: 77%; married/cohabiting: 79%; divorced/separated: 70%; widowed: 80%; $p<0.001$). Widowers are less likely to report having people take a friendly interest in them (single: 81%; married/cohabiting: 81%; divorced/separated: 77%; widowed: 78%; $p<0.05$). Single and divorced/separated respondents are less likely to find it 'easy' or 'very easy' to get practical help from neighbours (single: 66%; married/cohabiting: 79%; divorced/separated: 68%; widowed: 83%; $p<0.001$).

Employment status

Social support is associated with employment status. Respondents in paid employment are more likely (82%) than respondents not in paid employment (79%) to have other people take a friendly interest in them ($p<0.01$). On the other hand, respondents in paid employment are less likely (73%) than respondents not in paid employment (77%) to get practical help from their neighbours ($p<0.001$).

Overall predictors of social support

When comparing the differential effects of socio-demographic indicators predicting social support, it emerges that income and age are the strongest predictors of reporting having 3 or more close friends. Those in the lowest income quintile are over one-third less likely to report having 3 or more close friends than respondents in the highest income quintile (OR 0.61, $p<0.001$). Those aged 30-44 are also about one-third less likely to have 3 or more close friends compared to those in the 18-29 age group (OR 0.65).

With regard to reporting that other people take a friendly interest, income and gender are the strongest socio-demographic predictors. Those in the lowest income quintile are over one-quarter less likely to report others taking a friendly interest in them than those in the highest income quintile (OR 0.73, $p<0.001$). Women are almost one-third more likely than men to report others taking a friendly interest in them (OR 1.29).

Of all the socio-demographic indicators, age and residential location are the strongest predictors of reporting ease of getting practical help from neighbours. Respondents aged 65 years and over are more than twice as likely to report ease of getting practical help (OR 2.3, $p<0.001$) than 18-29 year-olds (OR 2.2 for 45-64 year-olds; OR 1.4 for 30-44 year-olds). Respondents from urban areas are less than half as likely to report ease of getting practical help than those living in rural areas (OR 0.5).

Results in context: Social support

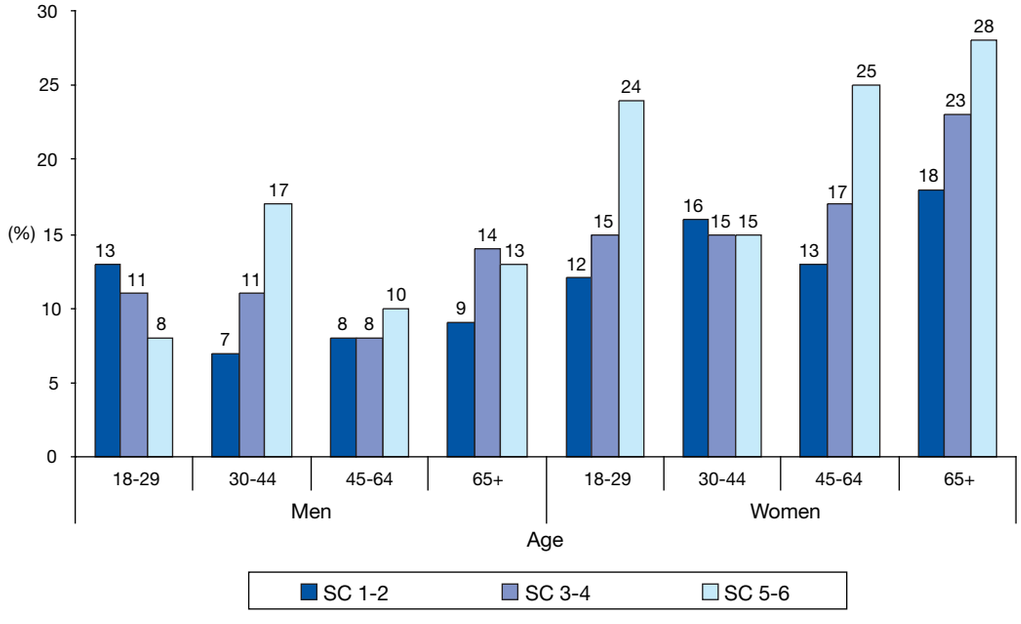
In a recent Irish face-to-face interview survey among a sample of 1,000 people, 64% of respondents felt that they had 3 or more people close to them on whom they could count if they had serious personal problems (NOSP, 2007). This is somewhat lower than the figure of 78% reported in SLÁN 2007.

The percentages for each of the three SLÁN 2007 social support questions can also be compared to available international data, such as the ODIN survey (postal/telephone and home visits/interviews among 8,764 respondents) of 5 European countries[26] (Dalgard *et al*, 2006). Comparing SLÁN 2007 data with the ODIN survey *excluding the Irish data* reveals that 78% of SLÁN respondents report having 3 or more close friends compared to 68% of ODIN respondents (Dalgard, 2008, unpublished data/personal communication). In terms of ease of getting practical help from neighbours, 74% of SLÁN respondents find this 'easy' or 'very easy' compared to 55% of ODIN respondents. On the other hand, 81% of SLÁN respondents report that other people show 'some' or 'a lot' of concern in what they are doing compared to 82% of ODIN respondents. A very similar pattern emerges when comparing the SLÁN 2007 data with the Irish data only from the ODIN survey.

LONELINESS

Overall, 14% of SLÁN 2007 respondents (10% men, 17% women; p<0.001) responded 'Yes' to the question '*Have you often felt lonely in the last 4 weeks?*'. Older respondents feel somewhat more lonely than their younger counterparts (age 18-29: 12%; 30-44: 13%; 45-64: 13%; 65+: 17%; p<0.001), as do respondents in social classes 5-6 (SC 1-2: 11%; SC 3-4: 13%; SC 5-6: 16%; p<0.001) (*see Figure 24*).

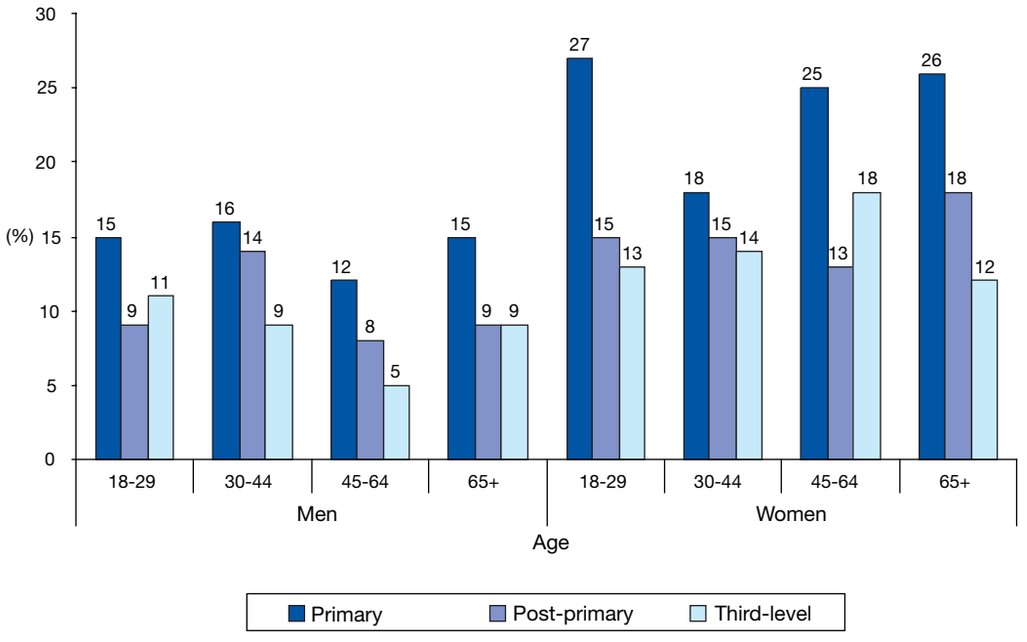
Figure 24: Percentage of respondents replying 'Yes' to the question 'Have you often felt lonely in the last 4 weeks?', by gender, age and social class



Those with primary education only are more likely to experience loneliness compared to those with higher education levels (primary: 19%; post-primary: 12%; third-level: 12%; p<0.001) (*see Figure 25*).

[26] The countries included in the ODIN postal survey (Dowrick *et al*, 2000) were Norway, Spain, Ireland, Finland and the UK.

Figure 25: Percentage of respondents replying 'Yes' to the question 'Have you often felt lonely in the last 4 weeks?', by gender, age and level of education



A higher percentage of those living in urban areas (15%) feel lonely compared to those living in rural areas (12%) ($p<0.001$). A higher percentage of those with a medical card (19%) feel lonely compared with those without a medical card (11%) ($p<0.001$). A greater number of respondents in lower income groups report being lonely (lowest income: 21%; 2nd: 13%; 3rd: 13%; 4th: 10%; highest income: 10%; $p<0.001$). Divorced/separated and widowed respondents also tend to be more lonely (single: 16%; married/cohabiting: 9%; divorced/separated: 29%; widowed: 32%; $p<0.001$), as are respondents not in paid employment (18%) compared to those who are employed (11%) ($p<0.001$).

Of all the socio-demographic indicators, marital status, employment status and age are the strongest predictors of feeling lonely. Those who are widowed are about five times more likely to feel lonely than those who are married or cohabiting (OR 5.03, $p<0.001$). Respondents not in paid employment are almost twice as likely to be lonely (OR 1.94, $p<0.001$). Finally, those in the age group 30-44 are almost 50% more likely to be lonely compared to those in the age group 18-29 (OR 1.46, $p<0.001$).

Results in context: Loneliness

It must be noted at the outset of this discussion that other studies cited here use different scales to measure loneliness to that used – for the first time ever – in SLÁN 2007, hence it is difficult to compare results. Also, the 'loneliness' item used in SLÁN 2007 is dichotomous and most single-item loneliness studies use multi-category items (Wenger *et al*, 1996). Furthermore, most population research on loneliness is carried out with older respondents (typically those aged 65 and over).

However, despite these limitations, some form of comparison can be made with earlier studies in this area. Victor *et al* (2002), for example, summarised four UK surveys, carried out between 1948 and 2001, investigating loneliness among people aged 65 and over. They concluded that the percentage reporting that they were 'often' lonely was remarkably constant, at around 8% (range 5%-9%), while the 'sometimes' lonely group varied from 11% to 25%. In SLÁN 2007, 17% of respondents aged 65 and over reported being 'often' lonely, which is much larger than the rates reported by Victor *et al* (2002). The larger SLÁN 2007 rate may be due to the restricted set of response options provided in the question used to assess loneliness (i.e. 'Yes' or 'No'), compared to the 4 or more response options allowed in Victor *et al*'s loneliness questions.

A number of other Irish studies have also examined loneliness, but again use different measures to SLÁN 2007. In 2000, the National Council of Ageing and Older People (NCAOP) carried out an interview study with 937 people aged 65 and over; the majority of respondents said that they were 'never' or 'not very often' bothered by loneliness, while 85% said that they had a high level of emotional and social support (NCAOP, 2001). Another NCAOP study on loneliness was carried out in 2005 – this time, a cross-sectional telephone survey with 683 respondents, aged 65 and over – and the report by Treacy *et al* (2005) contained the following figures based on the short form of the Social and Emotional Loneliness Scale for Adults (SELSA-S): 50% were moderately lonely *romantically*, 10% were moderately lonely *socially* and 7.2% were moderately lonely *in relation to their family*. Reports of being very lonely were infrequent (e.g. only 2% were very lonely socially).

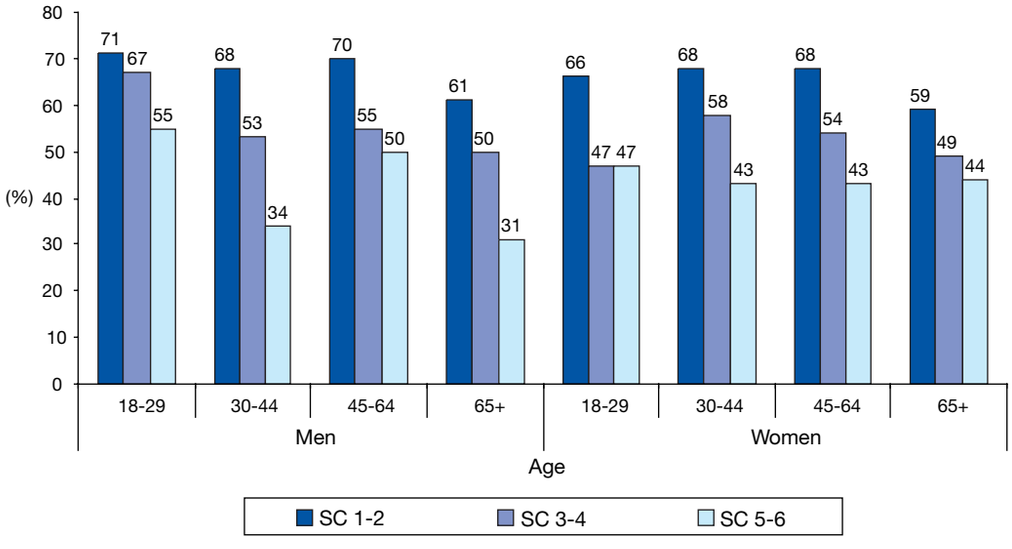
In an all-Ireland study, conducted by the Healthy Ageing Research Programme in 2004, about 2,000 respondents aged 65 and over from the Republic of Ireland and Northern Ireland were interviewed at home and asked the question '*How often in the last 12 months have you been bothered by loneliness?*' (McGee *et al*, 2005). Response options ranged from 'very often', 'quite often', 'not very often' to 'never'. Findings showed that some 13% of respondents (1,003 people) in the Republic of Ireland felt lonely 'quite often' or 'very often' in the last 12 months, while the comparable figure among 1,000 respondents from Northern Ireland was 17%.

COMMUNITY INVOLVEMENT

To explore involvement in the local community, SLÁN 2007 respondents were asked if they regularly take part in the activities of community organisations, such as sport clubs, political parties, trade unions or environmental groups, parent–child associations, tenant groups, neighbourhood safety, religious or voluntary activities, evening classes and social clubs.

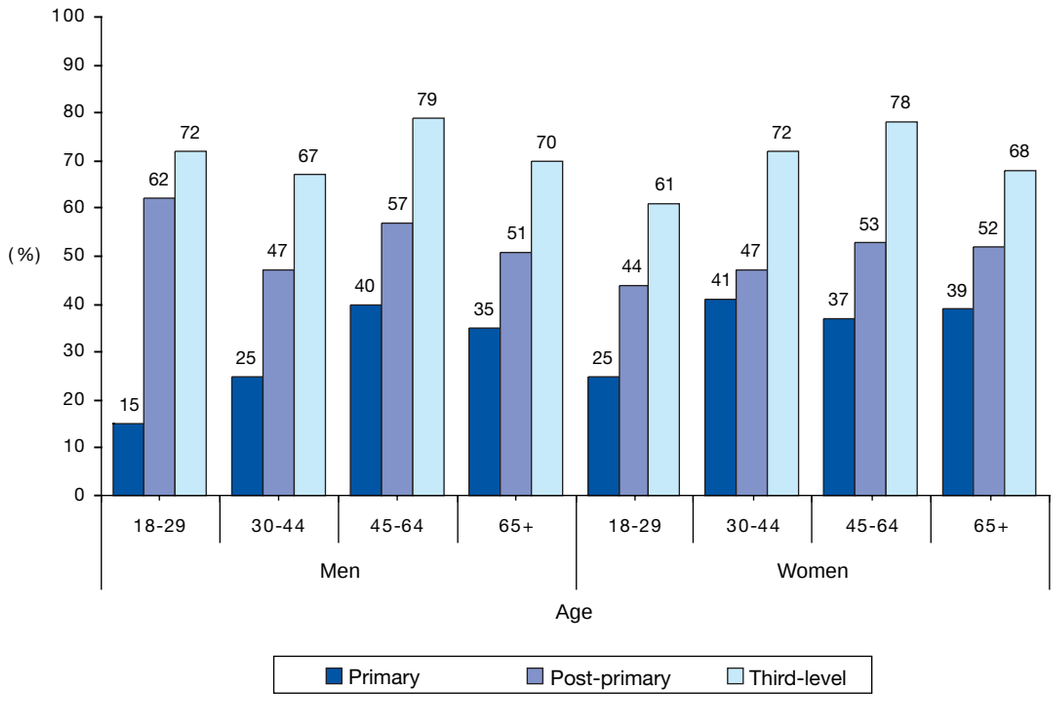
Overall, 55% of respondents (56% men and 54% women) report attending at least one community activity on a regular basis ($p<0.001$). Involvement in community activities is more common in higher social classes (SC 1-2: 68%; SC 3-4: 55%; SC 5-6: 43%) and less common among those aged 65+ (age 18-29: 58%; 30-44: 56%; 45-64: 56%; 65+: 47%) (*see Figure 26*).

Figure 26: Percentage of respondents reporting regularly attending one or more community activities, by gender, age and social class



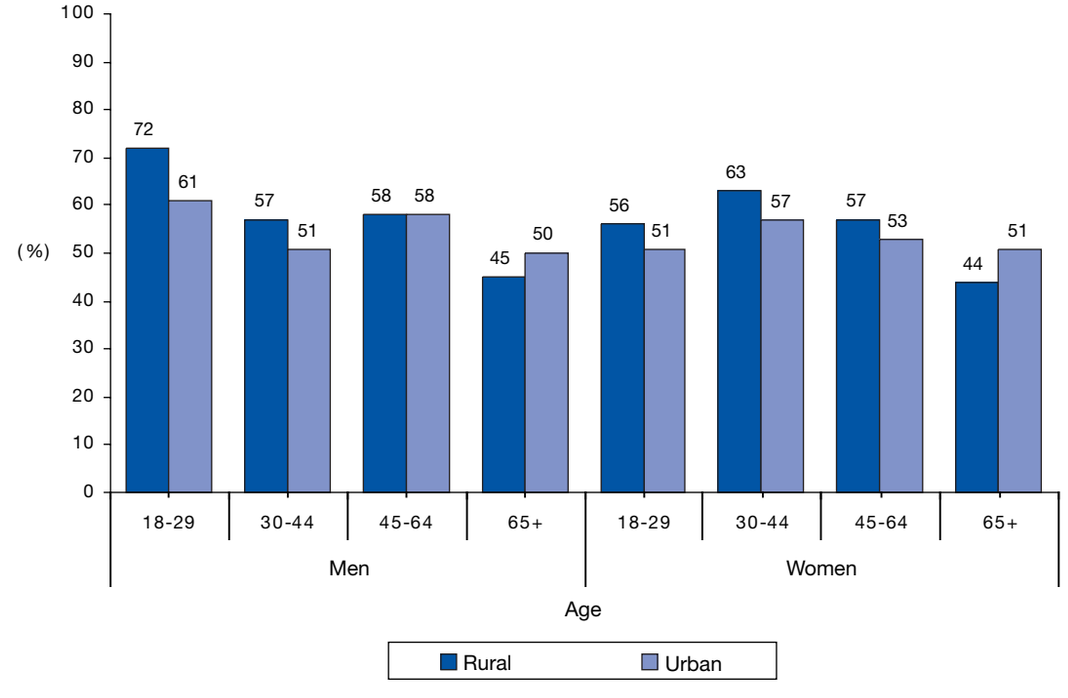
In relation to education, 36% of those with primary education, 52% with post-primary education and 70% with third-level education report that they regularly attend community activities ($p<0.05$) (*see Figure 27*).

Figure 27: Percentage of respondents reporting regularly attending one or more community activities, by gender, age and level of education



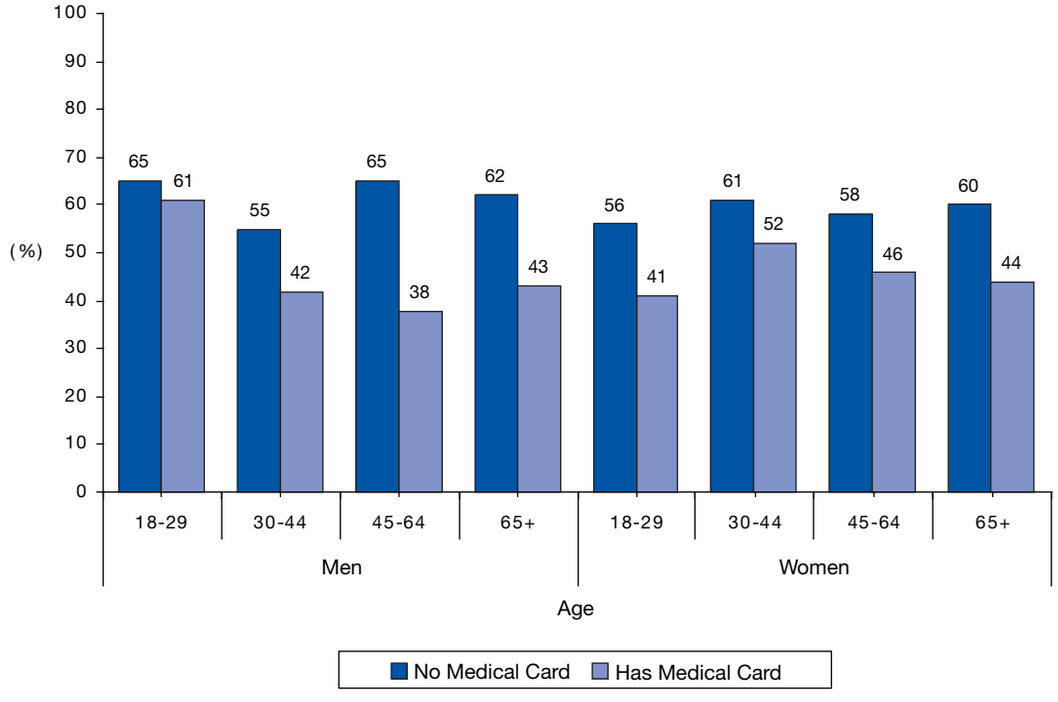
Residential location is also associated with involvement in community activities, with 57% of those living in rural areas and 54% in urban areas reporting that they regularly attend community activities ($p<0.05$) (*see Figure 28*).

Figure 28: Percentage of respondents reporting regularly attending one or more community activities, by gender, age and residential location



Overall, 45% of those holding medical cards and 60% of those with no medical card regularly attend one or more community activities (p<0.001) (*see Figure 29*).

Figure 29: Percentage of respondents reporting regularly attending one or more community activities, by gender, age and medical card status



Income is associated with regular involvement in community activities: the lower the income, the fewer respondents who report regular involvement in community activities (lowest income: 44%; 2nd: 51%; 3rd: 59%; 4th: 62%; highest income: 69%; p<0.001). Marital status is also associated with regular involvement in community activities: those who are separated or widowed are less likely to report involvement in community activities compared to single and married/cohabiting respondents (single: 54%; married/cohabiting: 58%; divorced/separated: 48%; widowed: 48%). Respondents in paid employment are more likely (60%) than those not in paid employment (49%) to report regular involvement in community activities.

When examining the differential effect of various socio-demographic indicators on involvement in community, a number of gradients are evident. Respondents in social classes 5-6 are one-third less likely to participate in community activities compared to those in SC 1-2 (OR 0.67, p<0.001). Higher levels of education (compared to primary education) are associated with more community involvement, with respondents having post-primary education being one and a half times more likely (OR 1.6, p<0.001) to participate in community activities, while people with third-level education are three times more likely to do so (OR 3.04, p<0.001). Respondents in the two lowest income groups are less likely to participate in community activities compared to those in the highest income group (lowest income: OR 0.64; 2nd: OR 0.72; p<0.001 for both).

Results in context: Community involvement

Overall, the findings from SLÁN 2007 show that participation in community activities is more common among respondents in higher social classes, in paid employment, with higher levels of education and with higher incomes. About half of those surveyed (56%) report that they regularly participate in one or more community activities. This compares with 59% reported in SLÁN 2002[27] (Kelleher *et al*, 2003), indicating a slight decrease in participation in community activities.

Another comparison can be made with the World Values study data (Dekker and van den Broek, 1998), which examined community involvement using face-to-face interviews with samples of 1,000-3,500 people in 13 countries in Europe (including Ireland) and North America. Percentages of respondents who reported 'volunteering' (one specific form of community involvement) varied from a high of 46% in the USA to a low of 12% in Spain. Overall, Ireland was ranked 8th, with 26% reporting involvement in community activities (the full list was USA: 46%; Canada: 43%; Sweden: 39%; Norway: 37%; The Netherlands: 36%; Germany (West): 30%; Belgium: 28%; Ireland: 26%; Denmark: 26%; Italy: 24%; France; 23%; UK: 22%; and Spain: 12%). The differences between the Irish figure in the World Values study and the SLÁN 2007 figure may be accounted for by the different types of community activities included in the World Values study.

NEIGHBOURHOOD PERCEPTIONS

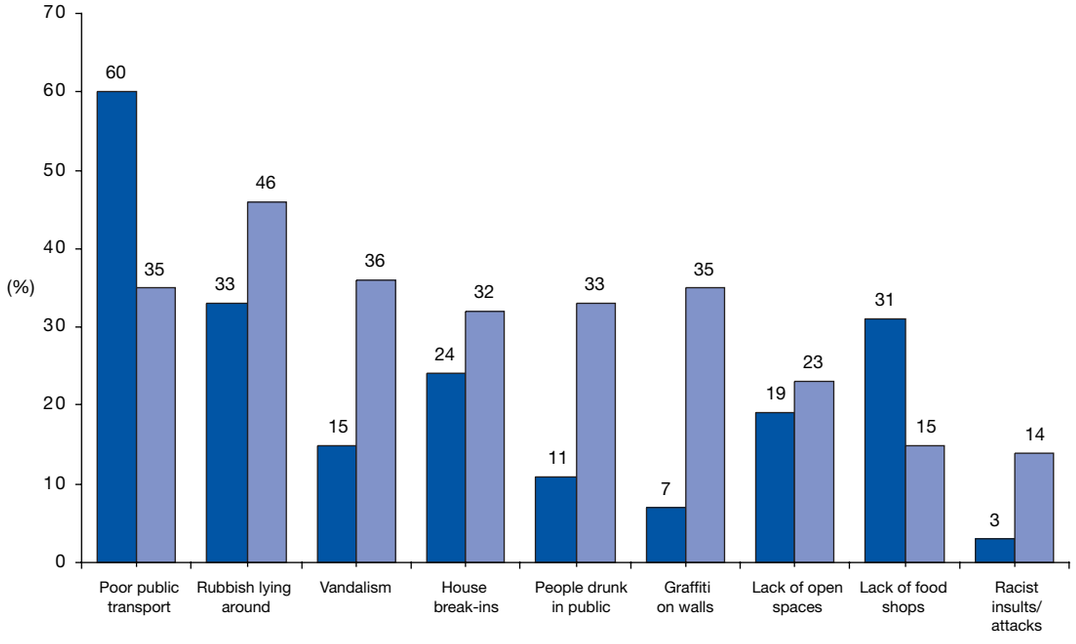
SLÁN 2007 respondents were given a list of potential problems that can occur in a neighbourhood and were asked to state how much they were a problem in *their* neighbourhood or local area. The list included questions about rubbish or litter lying around; vandalism or deliberate damage to property; racist insults or attacks; house break-ins; poor public transport; lack of food shops/supermarkets that are easy to get to; graffiti on walls or buildings; people being drunk in public; and lack of open public places.

Some 41% of respondents report that rubbish or litter lying around is a problem in their neighbourhood; 27% report vandalism or deliberate damage to property; 9% report racist insults or attacks; 28% report house break-ins; 45% report poor public transport; 21% report lack of food shops/supermarkets that are easy to get to; 24% report graffiti on walls or buildings; 24% report people being drunk in public; and 21% report lack of open public places.

No clear gender, social class or education gradients are evident. However, for almost all items on the list, younger respondents are more likely to perceive them to be a problem in their neighbourhood. Differences are found in relation to residential location: respondents in rural areas are more likely to report that poor public transport and lack of food shops are problematic, while respondents in urban areas are more likely to report that rubbish lying around, vandalism, house break-ins, people being drunk in public, graffiti and insults are a problem (*see Figure 30*).

[27] Note that different methodologies were used in the two surveys: SLÁN 2002 was a postal survey, while SLÁN 2007 was based on face-to-face interviews.

Figure 30: Percentage of respondents reporting specific problems in their neighbourhood, by potential problem and residential location



Additional differences are found in relation to income and marital status. Those with high income report more frequently that poor public transport, house break-ins and graffiti are problems in their neighbourhood, whereas those with low income report more frequently that lack of food shops and racist insults and attacks are problems in their neighbourhood. Respondents who are single are more likely to perceive *all* potential problems to be a problem in their neighbourhood, while widowed respondents are least likely to perceive *any* of the listed problems as a problem, with the exception of lack of food shops.

Results in context: Neighbourhood perceptions

Of the list of potential problems in the neighbourhood included in SLÁN 2007, 7 items were also used in SLÁN 2002 (Kelleher *et al*, 2003). Comparing the two surveys, there has been an overall decrease in negative perceptions of the neighbourhood, although caution should be exercised in making comparisons due to the different survey methodologies used (postal survey 2002 and face-to-face interviews 2007). More detailed comparisons can be found in Table 4.

Table 4: Perceived problems in the neighbourhood, SLÁN 2002 and SLÁN 2007*

	SLÁN 2002 %	SLÁN 2007 %
No perceived problems	27	16
Rubbish or litter lying around	48	41
Vandalism	33	27
Racist insults/attacks	11	9
House break-ins	44	28
Poor public transport	59	45
Lack of food shops	31	21
Lack of open public places	26	21

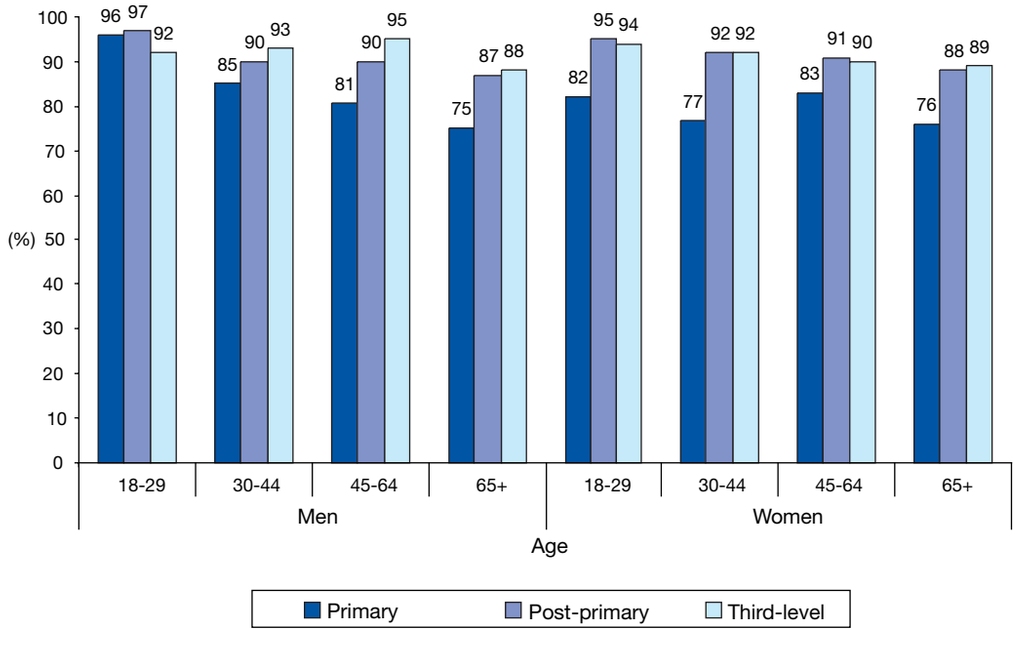
* SLÁN 2002 was a postal survey; SLÁN 2007 was based on face-to-face interviews.

QUALITY OF LIFE

The majority of SLÁN 2007 respondents (90%) rate their quality of life as 'good' or 'very good'. There are no differences between men and women. Percentages are higher for younger respondents (age 18-29: 94%; 30-44: 91%; 45-64: 89%; 65+: 82%; p<0.001) and for respondents in higher social class groups (SC 1-2: 93%; SC 3-4: 91%; SC 5-6: 86%).

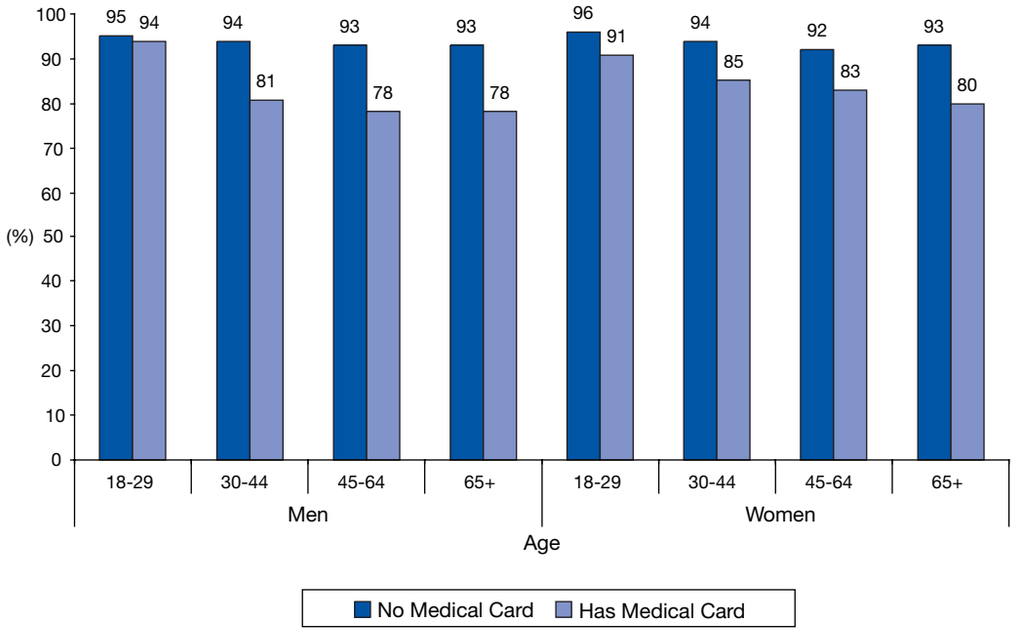
In addition, a higher percentage of those with education levels beyond primary rate their quality of life as 'good' or 'very good' (primary: 80%; post-primary: 92%; third-level: 93%; p<0.001) (*see Figure 31*).

Figure 31: Percentage of respondents reporting their quality of life as 'good' or 'very good', by gender, age and level of education



A higher percentage of those living in rural areas (91%) rate their quality of life highly compared with those living in urban areas (89%) ($p<0.01$). A lower percentage of those with a medical card (82%), compared to those without one (91%), rate their quality of life as 'good' or 'very good' ($p<0.001$) (*see Figure 32*).

Figure 32: Percentage of respondents reporting their quality of life as 'good' or 'very good', by gender, age and medical card status



A higher percentage of those in higher income groups rate their quality of life as 'good' or 'very good' (lowest income: 82%; 2nd: 88%; 3rd: 91%; 4th: 94%; highest income: 95%; $p<0.001$), as do respondents in paid employment (94%) compared to those not in paid employment (84%). Single and married/cohabiting respondents are more likely to rate their quality of life as 'good' or 'very good' (single: 91%; married/cohabiting: 91%; divorced/separated: 84%; widowed: 81%).

Of all the socio-demographic indicators, age, income and employment status are the strongest predictors of quality of life. Those in the age group 45-64 are two-thirds less likely to rate their quality of life as 'good' or 'very good' compared to those in the 18-29 age group (OR 0.37, $p<0.001$). Those in the lowest income quintile are almost half as likely to report a 'good' or 'very good' quality of life compared to those in the highest quintile (OR 0.54). Similarly, respondents not in paid employment are half as likely to report a 'good' or 'very good' quality of life (OR 0.54).

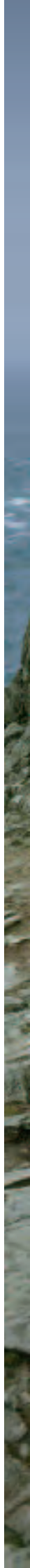
Results in context: Quality of life

SLÁN 2007 respondents report relatively high levels of quality of life, with 90% overall reporting it as 'good' or 'very good'. This rate is slightly higher than a recent Irish face-to-face interview survey carried out by the National Office for Suicide Prevention with a sample of 1,000 adults (NOSP, 2007), in which 86% of respondents said they had a 'good' or 'very good' quality of life.

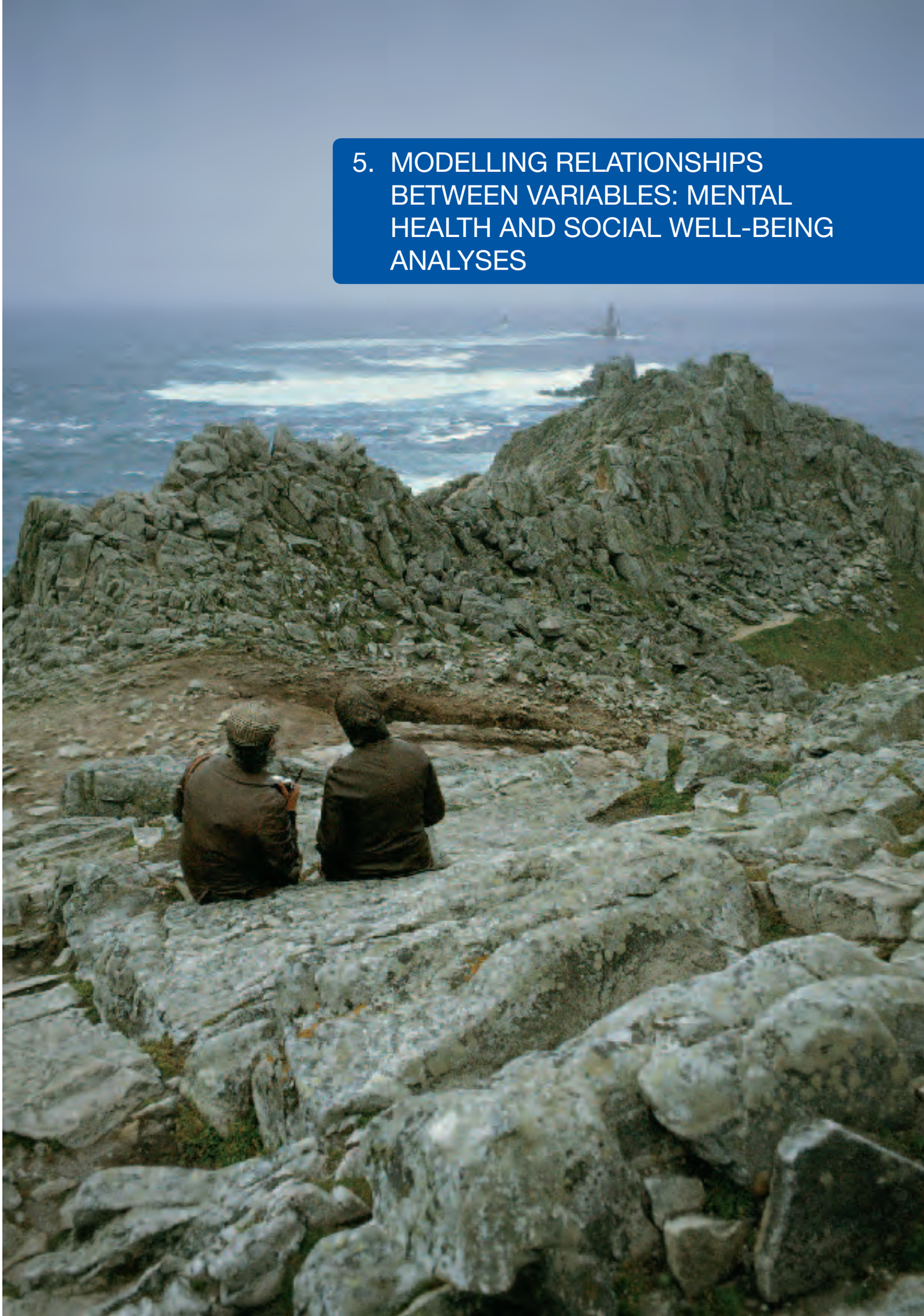
A recent Irish telephone study, undertaken for the Health Research Board (Tedstone Doherty *et al*, 2007), explored psychological well-being and distress among a sample of 2,711 people, with a response rate of 48%-51%. This study found that 81% of respondents reported having a 'good' or 'very good' quality of life – again lower than the rate reported in SLÁN 2007 (90%).

The Inequalities in Perceived Health study, conducted by the Institute of Public Health in Ireland during 2003, also reported lower rates for both the Republic of Ireland (87%) and Northern Ireland (78%) in a face-to-face study involving 1,000 people in both countries, with a response rate of about 52% (Balanda and Wilde, 2004).

The SLÁN 2007 mean 'quality of life' item score (4.3) is also higher than that reported from a recent European study (3.7) which included this item in its overall quality of life scale (Schmidt *et al*, 2006). This European study involved telephone and face-to-face interviews with 4,849 participants from 10 countries (UK, France, Germany, Croatia, Czech Republic, Romania, Slovakia, Lithuania, Latvia and Israel).



5. MODELLING RELATIONSHIPS BETWEEN VARIABLES: MENTAL HEALTH AND SOCIAL WELL-BEING ANALYSES



5. MODELLING RELATIONSHIPS BETWEEN VARIABLES: MENTAL HEALTH AND SOCIAL WELL-BEING ANALYSES

In order to better understand how the variables in this report relate and predict one another, correlations and regression analyses are now examined.

CORRELATIONS

Mental health correlations

Among the mental health and related variables, the strongest correlation (0.6) exists between the two SF-36 scale variables, psychological distress (MHI-5) and the Energy and Vitality Index (EVI) (*see Table A1 in Appendix for correlation matrix*). Consistent with comorbidity studies (Andrews *et al*, 2002; Kessler, 2007; Kessler *et al*, 2005), there is a moderate correlation between probable major depressive disorder and generalised anxiety disorder (0.3). The psychological distress and energy and vitality variables correlate moderately (0.3) with quality of life. Self-rated health correlates more strongly (0.4).

Mental health and social well-being correlations

Loneliness stands out as the variable that correlates most strongly and consistently with the mental health variables (*see Table A2 in Appendix*). Quality of life also correlates strongly with both psychological distress and energy and vitality. Involvement in sports correlates more strongly with the mental health variables than does involvement in other community activities. Neighbourhood problems has smaller correlations with quality of life and self-rated health than do the other social well-being variables of social support and community involvement.

LOGISTIC AND LINEAR REGRESSIONS

The analyses presented in Tables 5-7 are logistic regressions and linear regressions. All analyses were carried out in steps, beginning with socio-demographic variables and followed by variables in different areas of prediction (e.g. mental health indicators, social well-being indicators). The last model in each table is the final model that includes only the variables that were statistically significant in the previous steps.

Table 5 presents logistic regression models predicting ‘very good’ quality of life (reported by about 40% of respondents). Findings in Model I, which includes socio-demographic variables, indicate that women, younger respondents, those who are married or cohabiting, and respondents from higher social classes are all more likely to report a ‘very good’ quality of life. In addition, respondents with third-level education, those in rural areas, those with high incomes and respondents who do not hold medical cards are all more likely to report a ‘very good’ quality of life.

In Model II, measures of social well-being were added. Findings indicate that respondents reporting poor social support are nearly 3 times *less* likely to report ‘very good’ quality of life compared to those with strong social support. Feeling lonely, having moderate levels of social support, not being involved in the community and there being one or more problems in the neighbourhood also predict a poorer quality of life.

Table 5: Logistic regression models predicting 'very good' quality of life (odds ratios)

SOCIO-DEMOGRAPHIC BACKGROUND		Model I Socio-demographic	Model II Social well-being	Model III Mental health	Model IV Final
Gender	Female (vs.Male)	1.41*	1.42*	1.39*	1.38*
Social class	SC 1-2	1	1	1	1
	SC 3-4	0.80*	0.81*	0.80*	0.79*
	SC 5-6	0.69*	0.73*	0.69*	0.68*
Age group	18-29	1	1	1	1
	30-44	0.68*	0.72*	0.73*	0.74*
	45-64	0.65*	0.63*	0.74*	0.75*
	65+	0.76*	0.70*	0.87	0.82
Level of education	Primary	0.63*	0.64*	0.74*	0.73*
	Post-primary	0.95	0.95	1.01	1.01
	Third-level	1	1	1	1
Residential location	Urban (vs. Rural)	0.89*	0.99	–	–
Medical card status	Has medical card	0.79*	0.81*	0.89	–
Equivalised income	Lowest income level	0.50*	0.57*	0.57*	0.53*
	Income level 2	0.52*	0.54*	0.57*	0.54*
	Income level 3	0.68*	0.72*	0.70*	0.68*
	Income level 4	0.78*	0.82*	0.83*	0.81*
	Highest income level	1	1	1	1
Martial status	Married/ Cohabiting	1	1	1	1
	Single	0.85*	0.94	0.98	0.97
	Divorced/ Separated	0.50*	0.61*	0.59*	0.57*
	Widowed	0.52*	0.55*	0.54*	0.53*
Employment status	Not in paid employment	0.88	0.93*	–	–
SOCIAL WELL-BEING					
Social support	Strong		1	1	1
	Moderate		0.61*	0.61*	0.61*
	Poor		0.35*	0.39*	0.38*
Loneliness	Is lonely		0.49*	0.66*	0.65*
Community involvement	Is not involved		0.78*	0.84*	0.85*
Problems in neighbourhood	One or more (vs. none)		0.87*	0.86*	0.86*
MENTAL HEALTH					
Psychological distress	Has psychological distress (<=52)			0.70*	0.70*
Depression	Has depression			0.56*	0.58*
General anxiety	Has GAD			0.64*	0.64*
Self-rated health	Good/Fair/ Poor (vs. Very good/ Excellent)			0.30*	0.30*
Nagelkerke R-Square		0.10	0.15	0.24	0.24
N		7,866	7,582	7,515	7,620

* significant, p<0.05

In Model III (Table 5), mental health and general health variables were added. Results indicate that self-rated health is the strongest predictor of good quality of life: respondents reporting poor health are nearly 3.5 times *less* likely to report 'very good' quality of life. Reported mental health problems (psychological distress, depression and anxiety) also predict poorer quality of life. The addition of mental health variables weakens the role of age, education and loneliness in the prediction of good quality of life

Table 6 presents linear regression models predicting positive mental health as measured by the Energy and Vitality Index (EVI). Of the socio-demographic indicators, gender is the strongest predictor, with men being more likely to report positive mental health. The socio-demographic variables explained 5% of positive mental health. In Model II, indicators of social well-being were added. Results indicate that loneliness is the strongest predictor of positive mental health: those reporting that they do not feel lonely report more positive mental health, over and above the impact of the socio-demographic variables. The addition of social well-being variables increased the explained variability of the model to 12%. The final model did not add new information.

Table 6: Linear regression models predicting* energy and vitality (standardised coefficients)

SOCIO-DEMOGRAPHIC BACKGROUND	Model I Socio-demographic	Model II Social well-being	Model III Final
Gender (Male = 0)	-0.11**	-0.10**	-0.10**
SC 3-4 (SC 1-2 = 0)	0.02	–	–
SC 5-6 (SC 1-2 = 0)	-0.01	–	–
Age	0.01	–	–
Level of education	0.06**	0.04**	0.04**
Residential location (Rural = 0)	-0.06**	-0.09	–
Medical card status (Does not have = 0)	-0.07**	-0.05**	-0.05**
Equivalised income	0.02	–	–
Single (Married/Cohabiting = 0)	0.01	–	–
Separated/Divorced (Married/Cohabiting = 0)	-0.01	–	–
Widowed (Married/Cohabiting = 0)	0.02	–	–
In paid employment (In = 0)	-0.09**	-0.08**	-0.08**
SOCIAL WELL-BEING			
Social support		0.10**	0.10**
Is lonely (Not = 0)		-0.23**	-0.23**
Community involvement (Not involved = 0)		0.05**	0.05**
Problems in neighbourhood (None = 0)		-0.10**	-0.10**
R-Square	0.05	0.12	0.12
N	7,601	8,066	8,145

* All socio-demographic and social well-being variables are 'increasing' continuous variables unless otherwise stated.

** significant, $p<0.05$

Table 7 presents logistic regression models predicting psychological distress. Findings in Model I indicate that women and respondents from lower social classes and those with low income are more likely to report psychological distress. In additional, respondents with primary or post-primary education, urban dwellers, single respondents and those holding medical cards are all more likely to report psychological distress. Older respondents (aged 65 and over), on the other hand, are about two and half times less likely to experience psychological distress.

In Model II, social well-being variables were added. Results indicate that those who feel lonely and those with poor social support are substantially more likely to experience psychological distress. The addition of the social well-being variables increased the explained variability (Nagelkerke R-Square increased from 0.08 to 0.19), but weakened the role of gender in the prediction of distress.

Table 7: Logistic regression models predicting psychological distress (MHI-5 <=52) (odds ratios)

SOCIO-DEMOGRAPHIC BACKGROUND		Model I Socio-demographic	Model II Social well-being	Model III Final
Gender	Female (vs. Male)	1.24*	1.16	–
Social class	SC 1-2	1	1	1
	SC 3-4	1.24	1.22	1.25
	SC 5-6	1.52*	1.41*	1.42*
Age group	18-29	1	1	1
	30-44	1.67*	1.46*	1.46*
	45-64	1.32	1.26	1.23
	65+	0.41*	0.45*	0.45*
Level of education	Primary	1.59*	1.43*	1.50*
	Post-primary	1.40*	1.24	1.23
	Third-level	1	1	1
Residential location	Urban (vs. Rural)	1.59*	1.43*	1.51*
Medical card status	Has medical card	1.40*	1.30*	1.37*
Equivalised income	Lowest income level	1.83*	1.52*	1.68*
	Income level 2	1.75*	1.56*	1.65*
	Income level 3	1.72*	1.50*	1.57*
	Income level 4	1.41	1.26	1.29
	Highest income level	1	1	1
Martial status	Married/Cohabiting	1	1	1
	Single	1.76*	1.23	1.19
	Divorced/Separated	1.27	0.74	0.74
	Widowed	1.05	0.55*	0.56*
Employment status	Not in paid employment	1.43*	1.19	–
SOCIAL WELL-BEING				
Social support	Strong		1	1
	Moderate		0.86	0.87
	Poor		1.74*	1.72*
Loneliness	Is lonely		5.53*	5.82*
Community involvement	Is not involved		2.05*	1.99*
Problems in neighbourhood	One or more (vs. none)		1.20	–
Nagelkerke R-Square		0.08	0.19	0.19
N		7,750	7,479	7,665

* significant, p<0.05

6. CONCLUSIONS AND POLICY IMPLICATIONS

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For the first time in Ireland, the SLÁN 2007 survey provides comprehensive information on population mental health status and the factors that influence mental health and social well-being on a large, representative sample of the Irish population. The findings from SLÁN 2007 and their implications within the Irish policy context are now considered.

POSITIVE MENTAL HEALTH AND WELL-BEING

The majority of the Irish adult population report reasonably good quality of life and positive mental health, which compares favourably with reports from similar studies in other European countries. In keeping with previous findings, there is evidence of a strong association between levels of positive mental health, gender and social and economic factors. Markers of social advantage (such as having higher income, higher education and being in paid employment) are all found to be strongly predictive of better mental health. Lower levels of loneliness and higher levels of social support also emerge as being protective of positive mental health.

These findings have implications for promoting population mental health since they clearly point to the need for policy-level interventions that address the social determinants of mental health, as well as the more individual-level determinants. There is a tendency to view mental health as an attribute of the individual, to emphasise the importance of more proximal psychological factors, and, in turn, to underestimate the impact of the wider social and structural determinants. Having access to a job, income and good education are all critical to positive mental health, as is having close supportive relationships. There is, therefore, a need for integrated, intersectoral policy initiatives since many of the key determinants or drivers of mental health are outside the 'health' sector. Recognition of the social determinants of mental health has led to a growing emphasis on models of mental health promotion that seek to intervene at the level of strengthening individuals, strengthening communities and removing the structural barriers to mental health through initiatives to reduce poverty, discrimination and inequalities (Barry and Friedli, 2008; Herrman *et al*, 2005).

In addressing the need to foster and protect population mental health and well-being, the report of the Expert Group on Mental Health Policy, entitled *A Vision for Change* (Department of Health and Children, 2006), calls for the implementation of evidence-based prevention and promotion programmes to be incorporated into *all levels* of mental health and health services. The existence of review-level evidence of the effectiveness of mental health promotion interventions and their cost-effectiveness further strengthens the case for action (Barry and Jenkins 2007; Friedli and Parsonage, 2007; Jané-Llopis *et al*, 2005; Keleher and Armstrong, 2005; WHO, 2002, 2004a and 2004b).

The findings from SLÁN 2007 support the call for interdepartmental cooperation in developing cross-cutting health, economic and social policies that seek to reduce health inequalities and promote well-being. Early-years interventions, family support, pre-school, parenting and school-based approaches have a strong evidence base on improving mental health and also have good evidence of wider health and social gain and cost-effectiveness (Friedli and Parsonage, 2007). The need to scale-up such interventions at the national level is supported by the SLÁN 2007 findings since they will contribute to maintaining and promoting positive mental

health across the lifespan, especially for those most in need. Promoting mental health and well-being will deliver improved outcomes, not only for mental health but also for people with mental health problems and for a range of health and social outcomes (Jané-Llopis *et al*, 2005; WHO, 2004a).

LEVELS OF PSYCHOLOGICAL DISTRESS

SLÁN 2007 respondents report experiencing relatively low levels of psychological distress in the past 4 weeks, with some 7% of the population reporting 'probable mental health problems'. As discussed in Chapter 3, this is notably lower than that reported in a recent Irish and Europe-wide study, but similar to a 2000 British study. The possible effects of social desirability in a face-to-face interview (Bowling, 2005; Bowling *et al*, 1999; Kessler, 2007) and the influence of cultural factors in expressing and reporting inner feelings and emotions may lead to under-reporting of negative emotions and problems by respondents. In addition, the relatively high levels of reported perceived stigma may impact negatively on people's readiness to self-report on negative emotions and mental health-related issues (Begley *et al*, 2004).

Levels of psychological distress are found to be higher among women. Older respondents report less psychological distress, mirroring findings for depression (however, as might be expected, older respondents also report lower levels of energy and vitality). The influence of social and economic factors on levels of reported psychological distress is also very evident. Respondents in the lowest income quintile and those with primary education only are up to twice as likely to report probable mental health problems compared to those in the highest income quintile and those with third-level education respectively. The higher risk of experiencing clinical levels of psychological distress is particularly noticeable for urban females in social classes 5 and 6. This points to the importance of analysing the effect of gender by social and economic position. Poor levels of social support and experiencing loneliness are also strongly associated with reporting psychological distress. These findings highlight the importance of addressing the social and economic determinants of psychological distress for those in more socially disadvantaged and low income positions. In particular, there is a need to address the social support needs of women and to redress the negative effects of social and material disadvantage.

The findings from SLÁN 2007 underscore the importance of access to a comprehensive range of interventions in primary care for mental health problems. As recommended in *A Vision for Change* (Department of Health and Children, 2006), this requires access to professionals in the primary care setting, including GPs, psychologists and counsellors, trained in the recognition and effective management and treatment of common mental health problems. There is a need for a range of evidence-based interventions, extending beyond medication and psychological therapies, including access to more intensive support resources and services, including early intervention, prevention and promotion interventions, debt management, family support, childcare, education and employment opportunities, improved housing and living conditions, and community support services. Comprehensive health and social care systems need to be in place, especially for those who cope with multiple disadvantages and for people experiencing particular life stresses, such as an increase in social support for new mothers, for those who are recently bereaved, for divorced/separated people and for those who have lost their jobs. Effective promotion and prevention programmes at this level can impact significantly on improving mental health and reduce the need for specialist services.

DEPRESSION AND ANXIETY DISORDERS

With regard to levels of mental disorders in Irish society, probable major depressive disorder and generalised anxiety disorder were assessed in SLÁN 2007 using the CIDI-SF measures, employing a 12-month timeframe. Both disorders are found to have comparable rates in comparison to reported European averages employing similar scales – Ireland: depression 6% compared to European average of 5%; Ireland: anxiety 3% compared to European average of 2%.

In keeping with a large body of previous evidence, women are more likely to report probable major depressive disorder in comparison to males, particularly women in lower social class groups aged 18-29 and 45-64. Similar to the findings on psychological distress (*see p. 77*), reported levels of depression are higher among urban residents, medical card-holders, lower income groups, divorced/separated people and those not in paid employment. It is noticeable that respondents who are not in paid employment are more than twice as likely to be depressed, supporting previous research. A similar pattern emerges for generalised anxiety disorder, which is found to be more prevalent among women, lower social class groups, urban residents, those with lower levels of education, medical card-holders, lower income, not in paid employment and divorced/separated people. Respondents with a medical card and those with primary education only are more than twice as likely to have generalised anxiety disorders.

Overall, there is a clear social gradient in evidence for the levels of psychological distress, probable major depressive disorder and generalised anxiety disorder, with those respondents from lower social classes and lower income groups being more likely to report mental health problems and clinical disorders. The variance within gender is also noticeable, in that women under 65 years of age from lower social class groups living in urban areas show almost twice the rates of depression and anxiety disorders as their counterparts in higher social class groups. The interaction of gender with social position needs to be taken into account in understanding the particular causes that may underlie these effects.

The findings from SLÁN 2007 endorse the recommendations of *A Vision for Change* (Department of Health and Children, 2006) on the provision of accessible community-based mental health services offering a comprehensive range of medical, psychological and social therapies relevant to the needs of service users and their families. The findings highlight the need for services that will meet the needs of people with depression and anxiety disorders, especially for women and those with higher levels of social disadvantage. The provision of gender-appropriate effective treatment and comprehensive services that are tailored to the social circumstances and living conditions of service users is underscored. As highlighted in *A Vision for Change* (p. 93), 'the social context of mental illness has often been overlooked' and this results in very little practical support and help being offered to people in managing their needs and stresses in the everyday settings of the home, community and workplace, with the inevitable consequence of high levels of relapse. A multidisciplinary approach to evidence-based treatment is required, with links to local community resources relevant to the service users' needs.

Markers of social disadvantage (such as low education, low income, holding a medical card, being unemployed) are all associated with poorer mental health in SLÁN 2007. This is consistent with the international literature, where poor mental health has been found to be associated with unemployment, less education, low income or material standard of living, in

addition to poor physical health and adverse life events (Kessler, 2007; Lancet Global Mental Health Group, 2007; Melzer *et al*, 2004; Patel, 2005). While it is difficult to determine the direction of causation of effect in these findings, it is now being recognised that mental health is both a cause *and* a consequence of social and economic inequalities, i.e. mental health problems both reflect deprivation and contribute to it (Melzer *et al*, 2004; Social Exclusion Unit, 2004).

Recent research also suggests that higher national levels of income inequality are linked to a higher prevalence of mental disorders (Pickett *et al*, 2006). To date, mental health has not figured in debates about the impact of inequality in Irish society. It has been a relatively neglected area, both in terms of understanding the consequences of inequality on people's mental health and the extent to which poor mental health contributes to health inequalities. The WHO Commission on the Social Determinants of Health (2008) points to the need to address the systemic causes of inequality, or 'the causes of the causes', in society in order to bring about improved health and well-being. Tackling mental health inequalities in Ireland requires addressing the structural determinants and systemic causes of inequality in Irish society. This requires multi-sectoral policy coordination via bottom-up and top-down approaches, including interventions addressing issues of poverty, marginalisation, discrimination, social inclusion, education, employment and living standards.

SELF-HARM

SLÁN 2007 was the first time that representative self-harm data have been collected in the Irish adult population. The reported levels from this community-based study are lower than those reported in previous studies of treated populations and Irish and international non-community-based studies, and no gender differences were found in the SLÁN 2007 data. The use of the interview method (as used in SLÁN 2007) may partially account for the difference in prevalence because surveys using anonymous self-report questionnaires tend to show higher prevalence rates of self-harm (Arensman *et al*, n.d.). It is noticeable, however, that some 50% of those who report self-harm did not come to the attention of a general hospital, which is in line with other population-based studies ((Arensman *et al*, n.d.; Madge *et al*, 2008; Morey *et al*, 2008). This finding underscores the need for implementation of the strategies recommended in *Reach Out: The National Strategy for Action on Suicide Prevention* (HSE and Department of Health and Children, 2005), including risk management, assessment and treatment of deliberate self-harm. The *Reach Out* strategy endorses a broad-based public health approach, combined with targeting high-risk and vulnerable groups.

PERCEIVED STIGMA

With over half the respondents in SLÁN 2007 perceiving that mental health problems are stigmatising, it is clear that stigma still persists in Irish society in relation to mental health problems and their perceived social impact. These perceptions may impinge negatively on self-reported levels of mental health problems and people's willingness to disclose and seek help for mental health difficulties. In response to the specific question posed in SLÁN 2007, it is noticeable that men, those in higher social class and income groups, higher educated, those not having a medical card, married/cohabiting and those in paid employment are more likely to agree that they would not want others to know if they were experiencing mental health

problems. This suggests that mental health problems are perceived as impacting negatively on people's social and economic position, particularly by those groups that may perceive themselves as having more to lose in this respect.

Two recent surveys – *Mental Health in Ireland: Awareness and Attitudes* (NOSP, 2007) and *Well? What do you think?* (Braunholtz *et al*, 2007) – employed a larger set of stigma questions than SLÁN 2007 and report that many people who hold the most positive attitudes toward people with mental health problems nonetheless also say that they would be reluctant to disclose a mental health problem to others. The Irish and Scottish findings suggest that respondents still perceive a fair amount of prejudice surrounding mental health problems in society. This has clear implications for intervention strategies in early detection of mental disorders, help-seeking, suicide prevention and the social inclusion of those with diagnosed mental disorders in Irish society. The SLÁN 2007 findings support the need for initiatives such as the 'Your Mental Health' campaign and evidence-based strategies aimed at tackling stigma and raising greater public awareness of mental health.

SOCIAL WELL-BEING

Irish adults in SLÁN 2007 report overall positive social well-being, with more than three-quarters of respondents reporting that they have support from neighbours and friends, and over half regularly participating in community activities. One in 4 report that they perceive their neighbourhood to be free of problems.

While the overall picture is positive, further analysis reveals that such positive social well-being is not enjoyed by all, especially not by those who are economically disadvantaged. Similar findings were reported by Baum *et al* (2007) based on an Australian study. They reported that those living in less well-off neighbourhoods, including neighbourhoods with low levels of education and high unemployment rates, have less positive perceptions of their neighbourhood, lower trust, lower levels of social capital and social support, and lower levels of volunteering; in addition, fewer respondents from the less well-off neighbourhoods reported that their health was 'good', 'very good' or 'excellent'. This combination of circumstances only furthers the disadvantage and social exclusion of people living in less well-off neighbourhoods. The SLÁN 2007 study investigated social well-being and its relationship to health and socio-economic disadvantage in the Irish context.

SOCIAL SUPPORT

Social support was measured in SLÁN 2007 using three questions: how many close friends one has, do other people show an interest in one's life and how easy is it to get practical help from neighbours. Conceptually, these questions can be viewed as examining the quantity of one's support, its quality and practical support as suggested by Brummett *et al* (2005). Overall, 78% of SLÁN 2007 respondents report having 3 or more close friends; 81% report that others take a friendly interest in them; and 74% state that they find it 'easy' or 'very easy' to get practical help from their neighbours. Higher quantity and quality of social support is more likely to be reported among those in higher social classes, those with higher education levels, those in the highest income quintile and those not holding medical cards. Conversely, higher levels of practical support are reported by those in lower social classes, those with lower education

levels, medical card-holders and those who are not in paid employment. Higher levels of practical support are also reported by rural residents compared to urban dwellers.

These findings suggest that those who are less well-off economically are also experiencing some level of inequality in relation to their perceived social support; they are less likely to report having many friends or have their neighbours take a friendly interest in them. To examine the overall effect of social support, a composite measure of social support was created, classified into strong, medium and poor levels of social support. The findings from this analysis suggest that people reporting poor social support are 1.7 times more likely to report high levels of psychological distress and almost 3 times less likely to report 'very good' quality of life. These findings are supported by previous studies (Brummett *et al*, 2005).

Contrary to previous findings (such as Bertera's 2005 study of mental health among US adults), SLÁN 2007 did not find associations between social support and major depressive or generalised anxiety disorders.

LONELINESS

Overall, 14% of SLÁN 2007 respondents report that they felt lonely in the last 4 weeks, with women, older people and respondents in lower classes reporting higher levels of loneliness.

The SLÁN 2007[28] figure of 17% for respondents aged 65 and over is higher than the 'often' lonely (8%) figure for over-65s reported in the review by Victor *et al* (2002) of loneliness in the UK. It should be noted, however, that a number of recent European studies indicate higher rates (25%-45%) of loneliness for older people (Holmén and Furukawa, 2002; Lindgren *et al*, 1994; Mullins *et al*, 1988; Panak and Garber, 1992; Victor *et al*, 2006), suggesting that the SLÁN 2007 65+ rate may be closer to the lower end of reported prevalences in Europe.

In SLÁN 2007, marital status (being widowed) and employment status (not being in paid employment) are the strongest overall predictors of loneliness. Loneliness is associated with the quality, rather than the quantity, of relationships (Lauder *et al*, 2004 and 2006) and given that one's spouse is often the relationship of highest quality in any person's life, this result is to be expected. With regard to employment status, the SLÁN 2007 results highlight the additional mechanism of 'loneliness' as one by which employment status might have an effect on mental health.

The importance of loneliness to mental health and social well-being is gaining increasing recognition in the scientific community (Cacioppo and Patrick, 2008). In SLÁN 2007, the reasons for its growing importance are evident in the regression model odds ratios and standardised coefficients (*see Chapter 5*). While loneliness plays a moderate role in predicting quality of life (OR 0.65), it is twice (standardised coefficient: -0.23) as important as gender in predicting energy and vitality, and it is by far the greatest predictor of psychological distress (OR 5.6). These results are largely consistent with earlier research. Loneliness has been shown to be a predictor of quality of life (Ekwall *et al*, 2005), energy and vitality, and psychological distress (DeBerard and Kleinknecht, 1995).

[28] Note that all other studies cited in this section use different scales to measure loneliness to that used in SLÁN 2007.

COMMUNITY INVOLVEMENT

Some 55% of SLÁN 2007 respondents report that they regularly participate in community activities. Those from higher social class groups, in paid employment, with higher levels of education and with high income report higher levels of community participation. Medical cards-holders and those residing in urban settings report lower levels of community participation.

The findings from SLÁN 2007 indicate that those not involved in community activities are slightly less likely to report 'very good' quality of life and more than twice more likely to experience psychological distress compared to those who are regularly involved in community activities. Similar findings – of this association between community involvement and physical and mental health – have been reported in other studies (De Silva *et al*, 2005; Lindstrom *et al*, 2004; Nummela *et al*, 2008; Veenstra, 2005). Findings presented here suggest that social inequalities go beyond social class, income and education – they are also present in relation to social well-being and should be addressed at that level. Promoting community development and involvement could be one way of reducing such inequalities.

NEIGHBOURHOOD PERCEPTIONS

Since the mid-1990s, a body of literature has been developed exploring the relationship of health and place, focusing on neighbourhood characteristics and physical health, using an ecological approach (e.g. Hart *et al*, 1997). A similar approach was taken in SLÁN 2007, asking respondents to report, in relation to a list of issues, how much they perceived them to be a problem in their neighbourhood.

Poor public transport is the most commonly perceived problem, with 45% of respondents saying it is a problem in their area. Racist insults and attacks are the least perceived problem, reported by 9% of respondents. No clear gender, social class or education gradients are evident in any of the reported problems. Income is found to be associated with some neighbourhood problems, but not with others. House break-ins, graffiti on walls and poor transport are more frequently reported by those in higher income groups, whereas lack of food shops and racist insults/attacks are more frequently reported by those in low income groups. This is partly in agreement with a previous study that suggested that those from low SES report more on all types of problems (Ellaway *et al*, 2001).

Similar to previous findings, for almost all items on the list, younger respondents in SLÁN 2007 are more likely to perceive them to be a problem in their neighbourhood (Poortinga *et al*, 2008). Differences are also found in relation to residential location: respondents in rural areas are more likely to report that poor public transport and lack of food shops are a problem in their neighbourhood, whereas respondents in urban areas are more likely to report that rubbish lying around, vandalism, house break-ins, people being drunk in public, graffiti and insults are a problem. Such findings have not been previously published for Ireland. The discovery of this urban/rural difference (residential location difference) helps fill a gap in research findings recently highlighted by Pampalon *et al* (2007) in their Canadian study which explored associations between neighbourhood problems and higher levels of psychological distress and lower levels of energy and vitality. Although the associations reported were not strong, they coincide with previous literature (Ellaway *et al*, 2001; Gary *et al*, 2007).

QUALITY OF LIFE

Irish adults report very high levels of 'quality of life' – an overall measure of subjective well-being – with 90% of SLÁN 2007 respondents stating that their quality of life is either 'good' or 'very good'. Younger people, those in higher social classes, higher income groups, with higher education levels, rural residents, non-medical card-holders and those in paid employment – all report higher levels of quality of life. It is noticeable that lower levels of quality of life are reported by those in the 45-64 age group, in the lowest income quintile and those who are not in paid employment. Reported mental health does, however, appear to have a significant influence on reported quality of life, with levels of psychological distress, depression and anxiety all predicting poorer quality of life. This finding is not unexpected in that the breadth of impact of mental disorders on people's quality of life is well documented.

This finding highlights the need to address the wider impact of mental health problems and disorders on people's lives in recovery and treatment interventions.

MENTAL HEALTH AND HEALTH BEHAVIOURS

Clear associations emerge in SLÁN 2007 between reported levels of mental health, physical health and health behaviours (with the exception of alcohol consumption). Findings indicate that levels of probable major depressive disorder, generalised anxiety disorder and higher levels of psychological distress are associated with lower levels of physical activity, poorer self-rated health and smoking. It is difficult to interpret the direction of this effect; however, the data on positive mental health confirm that those with higher levels of mental health (who may be regarded as 'flourishing') are more likely to report better self-rated health, to be physically active and less likely to smoke.

These findings are in keeping with a number of population cohort studies, which report that mental health problems, such as depression, show a strong prospective association with coronary heart disease, onset of Type 2 diabetes and fatal and non-fatal stroke (Prince *et al*, 2007). Other studies also support a strong association between mental disorder and risk factors for chronic diseases, such as smoking, reduced activity, poor diet, obesity and hypertension. This clustering of risk and protective factors in terms of lifestyle, health behaviours and mental health points to the intertwined nature of physical and mental health, and the wider health and social gains that may be achieved through effective health promotion interventions. Mental health needs to be recognised as an integral component of health promotion and practice in primary and secondary healthcare. Primary healthcare workers, who are the first and most frequent point of contact, need to be trained in the recognition and evidence-based management of mental health problems and their association with the onset and treatment of chronic diseases.

There is a need for greater visibility of the importance of mental health to individuals and society, both in terms of overall health and well-being and more generally as a resource for everyday life. There is also a need for public education regarding the factors that are supportive and protective of mental health and the behaviours and social circumstances that damage mental health. The report of the Expert Group on Mental Health Policy, *A Vision for Change* (Department of Health and Children, 2006), endorses the call for education and the promotion

of positive mental health in the general community. The recent TV campaign 'Mind Your Mental Health' by the HSE National Office for Suicide Prevention is a useful example of a first step in this direction.

FINAL COMMENTS

The SLÁN 2007 survey gives an estimate of the prevalence of mental health problems and disorders in Ireland and their determinants in the general adult population, including those who are not in contact with services. However, the survey did not include the most vulnerable members of society (such as those in psychiatric or other long-stay health-related settings, those who are homeless, illegal immigrants, asylum-seekers, prisoners and other marginalised groups) and may as a result underestimate the overall population prevalence rates in this community-based sample. As discussed earlier, the face-to-face interview method used in SLÁN 2007 may also lead to a certain amount of under-reporting of mental health problems and levels of self-harm. Further data and analysis are needed of prevalence levels in population sub-groups and at all ages across the lifespan to examine the determinants and patterns of mental health in order to inform service planning and delivery for those who are most vulnerable.

Mental health is an integral and increasingly important aspect of health and well-being, and is both a cause and contributor to health inequalities. The findings from the SLÁN 2007 survey highlight the urgency of implementing the recommendations of the mental health policy *A Vision for Change*. The clear relationship between mental health, social well-being, quality of life, self-rated health and health behaviours indicates that mental health needs to be integrated into all elements of health and social policy, health system planning and healthcare delivery. The clear influence of the social and economic determinants of mental health supports the call for mental health to be placed more centrally in the policy framework for population health improvement and the reduction of health inequalities. The need for cross-sectoral collaboration in the development and implementation of health, social and economic policy is indicated. The consequences of not doing this are high in terms of both economic and social costs to society.

There is a sound international knowledge base to guide the implementation of effective, feasible, sustainable and cost-effective interventions. If population health is to be placed at the heart of public policy, as recommended in the national health policy *Quality and Fairness* (Department of Health and Children, 2001, p. 61), and to serve as a foundation for social and economic development, there needs to be investment in the future health and well-being of the Irish population. This includes implementing policies that will help create and maintain a mentally healthy society, with consequent health, economic and social benefits for all.

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APPENDIX

APPENDIX:
MENTAL HEALTH AND SOCIAL WELL-BEING CORRELATIONS

Table A1 shows correlations between mental health variables (including quality of life) and Table A2 shows correlations between mental health and social well-being variables. Ordinal variables are indicated with an 'o'. All other variables are dichotomous. The Spearman correlation coefficient has been used to calculate correlations between ordinal variables. Kendall's tau-b correlation coefficient has been used for all correlations involving dichotomous variables.

Table A1: Correlations between mental health variables

	SF36 Energy and Vitality Index (o)	SF36 Psycho-logical Distress[a] (MHI-5) (o)	SF36 Probable Mental Health Problem	CIDI-SF Probable Major Depressive Disorder	CIDI-SF Generalised Anxiety Disorder	WHO-QOL Quality of Life (o)	CASE Self-harm	CDC HRQOL-4 Self-rated Health (o)
Energy and Vitality Index (o)	1.00							
Psychological Distress[a] (MHI-5) (o)	0.61**	1.00						
Probable Mental Health Problem	-0.27**	-0.37**	1.00					
Probable Major Depressive Disorder	-0.19**	-0.23**	0.31**	1.00				
Generalised Anxiety Disorder	-0.15**	-0.18**	0.28**	0.34**	1.00			
Quality of Life (o)	0.33**	0.30**	-0.18**	-0.15**	-0.12**	1.00		
Self-harm	-0.05**	-0.07**	0.12**	0.15**	0.14**	-0.03**	1.00	
Self-rated Health (o)	0.35**	0.22**	-0.14**	-0.14**	-0.12**	0.41**	-0.04**	1.00

** Correlation is significant at the 0.01 level (2-tailed).

[a] Low scores indicate greater distress.

Table A2: Correlations between mental health and social well-being variables

	SF36 Energy and Vitality Index (o)	SF36 Psycho-logical Distress[a] (MHI-5) (o)	SF36 Probable Mental Health Problem	CIDI-SF Probable Major Depressive Disorder	CIDI-SF Generalised Anxiety Disorder	WHO-QOL Quality of Life (o)	CASE Self-harm	CDC HRQOL-4 Self-rated Health (o)
Loneliness	-0.21**	-0.26**	0.26**	0.29**	0.23**	-0.17**	0.08**	-0.15**
Social support (o)	0.13**	0.21**	-0.09**	-0.05**	-0.05**	0.21**	-0.02*	0.09**
Strong social support	0.09**	0.16**	-0.08**	-0.04**	-0.05**	0.18**	-0.01	0.07**
Community involvement (o)	0.10**	0.09**	-0.10**	-0.02	-0.04**	0.15**	-0.02*	0.11**
Community involvement (sport)	0.12**	0.09**	-0.10**	-0.03**	-0.07**	0.15**	-0.02*	0.14**
Community involvement (no sport) (o)	0.03**	0.04**	-0.07**	-0.06	-0.08	0.08**	-0.02	0.05**
Neighbourhood problems (o)	-0.11**	-0.14**	0.05**	0.05**	0.03**	-0.03**	0.03**	0.02
Neighbourhood problems	-0.08**	-0.10**	0.03**	0.05**	0.03**	-0.01	0.01	0.04
Quality of Life (o)	0.33**	0.30**	-0.18**	-0.15**	-0.12**	1.00	-0.03**	0.38**

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

** Correlation is significant at the 0.01 level (2-tailed).

[a] Low scores indicate greater distress.

NOTES