



NORTHERN IRELAND  
association for  
mentalhealth

# Mental Health Promotion: Building an Economic Case

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# Foreword

Mental Health Promotion: Building an Economic Case is the third policy document in a series commissioned by NIAMH. The second paper, “Counting the Cost” produced with consultative input from the Sainsbury Centre for Mental Health presented an estimate of the economic and social costs of mental illness in Northern Ireland which amounted to nearly £3 billion in the year 2002-03, more than outweighing the total spend on all health and social care for all health conditions.

On any reckoning the costs of mental ill-health – and hence the potential benefits of prevention – are extremely high partly because of the widespread occurrence, partly because of its typically early manifestation and persistence throughout the life span and partly because of the multi-dimensional nature of its consequences. The treatment of many clinically diagnosed mental disorders is of limited effectiveness.

This report, produced by Lynne Friedli and Michael Parsonage, uses economic analysis to develop the case for greater investment in mental health promotion, defined as both the prevention of mental illness and the promotion of positive mental health.

This report demonstrates that the potential scale of economic benefits of preventing mental illness is considerable.

NIAMH commends the analysis, conclusions and recommendations of this report to those charged with deciding on the allocation of scarce resources to the greatest benefit over time to the population of Northern Ireland.

**Dr Graeme McDonald**  
Chairman  
NI Association for Mental Health

# Summary

This report uses economic analysis to develop the case for greater investment in mental health promotion, defined as the prevention of mental illness and the promotion of positive mental health.

Improving mental health, i.e. promoting the circumstances, skills and attributes associated with positive mental health is a worthwhile goal in itself: most people place a high value on a sense of emotional and social wellbeing. In addition, positive mental health also:

- ▶ contributes to preventing mental illness
- ▶ leads to better outcomes, for example in physical health, health behaviours, educational performance, employability and earnings, crime reduction.

These beneficial outcomes are not just the result of the absence of mental illness. They are due wholly, or in some degree, to aspects of positive mental health. Although there are many gaps in the data, the economic benefits of improving positive mental health may be extensive. For example, subjective well-being increases life expectancy by 7.5 years, provides a similar degree of protection from coronary heart disease to giving up smoking, improves recovery and health outcomes from a range of chronic diseases (e.g. diabetes) and in young people, significantly influences alcohol, tobacco and cannabis use. Positive affect<sup>1</sup> also predicts pro-social behaviour e.g. participation, civic engagement and volunteering. While the best outcomes are generally associated with the absence of mental illness, the presence of positive mental health brings additional benefits, including for people with mental health problems. The scale of the economic benefits of preventing mental illness is considerable:

- ▶ Mental health problems have very high rates of prevalence; they are often of long duration, and have adverse effects on many areas of people's lives, including educational performance, employment, income, personal relationships and social participation
- ▶ No other health condition matches mental ill-health in the combined extent of prevalence, persistence and breadth of impact
- ▶ Mental health problems often begin early in life and cause disability when those affected would normally be at their most productive (unlike most physical illnesses).

The scope for securing benefits by means of treatment, rather than prevention, appears to be distinctly limited.

The overall cost of mental health problems in Northern Ireland (2002/03) is estimated at **£2.85 billion** (larger than the total amount spent by the NHS in Northern Ireland on all health conditions combined in 2002/03 and equivalent in monetary value to 11.7% of Northern Ireland's GDP in that year).

Updating these figures and including figures for England, Scotland and Wales, it is calculated that the overall cost of mental health problems in the UK amounted to over **£110 billion in 2006/07**. Northern Ireland's share of the total is put at around £3.5 billion, reflecting a prevalence rate for mental health problems which is 20–25% higher than in the rest of the UK.

The cost of mental illness is also very large relative to other health conditions, accounting for more disability adjusted life years (DALY) lost:

<sup>1</sup> A tendency to be cheerful, energetic and to experience positive moods; sometimes referred to as a positive disposition.

Figures for England suggest that spending on mental health promotion is less than 1% of all NHS and local authority expenditure on mental health and may be less than 1% of all public spending on health promotion activity overall.

Mental illness (including suicide)	20.0%
Cardiovascular disease	17.2%
Cancer	15.5%

Relative to its importance as a health problem, spending on mental health is disproportionately low. Shown as a percentage of public expenditure on all health and social care, the figures are:

England	11.8%
Scotland	11.1%
Northern Ireland	9.3%

One example of a common mental health problem for which there is robust evidence of effective interventions is conduct disorder. According to new estimates presented in the report:

- ▶ Preventing **conduct disorders** in those children who are most disturbed would save around £150,000 per case in lifetime costs
- ▶ Promoting **positive mental health** in those children with moderate mental health would yield benefits over the lifetime of around £75,000 per case

For Northern Ireland, the total value of prevention in a one year cohort (23,000 births) would be **£172.5 million**, with the total value of promoting positive mental health amounting to **£776.25 million**.

In comparison, the costs of intervention are very low, ranging from £1350 to £6000 per child for parenting programmes. Substantial investment in these programmes is therefore justified even if their effectiveness is limited, given the size of potential benefits relative to costs. A range of evidence indicates that success rates at the level required can be achieved in real life settings.

For this reason, the report recommends investment in support for parents as the top priority in the provisional list of 'best buys' in promoting mental health, as follows:

- ▶ Supporting parents and early years: parenting skills training/pre-school education
- ▶ Supporting children and young people: health promoting schools and continuing education
- ▶ Improving working lives: employment/workplace
- ▶ Positive steps for mental health: lifestyle (diet, exercise, sensible drinking and social support)
- ▶ Supporting communities: environmental improvements

Although the evidence is incomplete in some cases, these areas of intervention appear to offer the most favourable balance of effectiveness, scale of potential benefit and likely cost of implementation. They demonstrate that all sectors have a role to play in improving mental health and the need for interventions that involve individuals and communities, but also those that address structural barriers to mental health and wellbeing.

Although there is now a much greater policy focus on positive mental health and well-being, there is still a great deal to do. There is a need for more consistent definition and measurement of mental health, to untangle the many different influences on mental well-being and to improve data on both the effectiveness and cost-effectiveness of interventions. New measures validated for use in the UK, for example the Warwick and Edinburgh Mental Well-being Scale (WEMWBS), will be of considerable value in providing a more complete picture of the mental health of the population. Nevertheless, even on the basis of existing data, the evidence summarised in this report demonstrates a very strong case for greater investment, not only in the prevention of mental illness but also in the promotion of positive mental health.





# 1.0 Introduction

The aim of this report is to analyse the case for mental health promotion from an economic perspective.

It was commissioned by the Northern Ireland Association for Mental Health (NIAMH) and is intended to complement an earlier publication, *Counting the cost: the economic and social costs of mental illness in Northern Ireland*, published by NIAMH in collaboration with the Sainsbury Centre for Mental Health (NIAMH 2004). It should also be read in conjunction with a report on mental health promotion, *Mental health improvement and well-being – a personal, public and political issue*, prepared for the Bamford Review of Mental Health and Learning Disability (Northern Ireland) by a committee chaired by Professor Alan Ferguson, Chief Executive of NIAMH (DHSSPS 2006b).

Developing the economic case for mental health promotion is a challenging undertaking. It raises a number of complex methodological problems and the extent of published evidence on the cost-effectiveness of different interventions is extremely limited, even drawing on international as well as UK studies. On the other hand, the wider (non-economic) literature on mental health promotion is now very substantial. Although some major gaps remain, there is increasing evidence of scope for effective action and its potential benefits. Using a variety of methods to add an economic component to the wider evidence base, this report explores two main issues: the general case for mental health promotion and possible priorities in the choice between interventions. For a variety of reasons the findings set out in this report are less clear-cut than those given in *Counting the cost*. The limited and provisional nature of the conclusions will be emphasised throughout. It is nevertheless possible to identify some clear messages which we hope will be of value to the intended audience of policy-makers and practitioners, particularly in stimulating debate and raising awareness. The report should not be seen as a contribution to academic research.

## 2.0 Promoting better mental health

### 2.1 Policy context

This report covers the prevention of clinically diagnosable mental illness and, more broadly, the promotion of positive mental health and well-being.<sup>2</sup> This broad focus is consistent with a growing policy acknowledgement of both the economic and public health case for a greater focus on promotion and prevention. The Wanless Report, for example, argues that the assessment of population health should move beyond morbidity and mortality

data, to the inclusion of measures of positive physical and mental health. 'A health service, not a sickness service' has become an increasingly significant catch phrase for the direction of NHS policy (Wanless 2002; 2004). In Northern Ireland, the rest of the UK<sup>3</sup> and in Europe, the past few years have seen an increasing shift in health policy from a predominant focus on mental illness, to recognition of the importance of mental health and well-being to overall health.

This trend is clear in the increasing emphasis on positive mental health in Northern Ireland. Promoting mental health and well-being is one of the objectives of *Investing for Health*, the regional health strategy launched in 2002 (DHSSPS 2002; DHSSPS 2003b) and is a key element of *A Healthier Future*, the twenty year vision for health in Northern Ireland (DHSSPS 2005). A dedicated mental health promotion strategy and action plan, *Promoting Mental Health* was published in January 2003 (to be reviewed shortly) and mental health promotion is also highlighted in *Protect Life*, Northern Ireland's suicide prevention strategy (DHSSPS 2003a; DHSSPS 2006a). In March 2007, the Health Promotion Agency (HPA) Northern Ireland launched a public information campaign, *Minding your head*, with a focus on promoting, protecting and enhancing mental health.<sup>4</sup>

The Bamford Review of mental health and disability services explicitly recognizes the importance of a wider mental health strategy, arguing that: "a holistic approach to the issues of mental ill-health also requires a robust strategy for prevention and mental health promotion" (Bamford 2004), and in a separate report on mental health promotion states:

<sup>2</sup> The term mental health promotion is generally used to refer to any action to promote mental health, prevent mental illness and/or improve quality of life for people with mental health problems. In this report, we distinguish between promoting positive mental health and preventing mental illness and use the general term mental health promotion to cover both promotion and prevention.

<sup>3</sup> See for example: Scotland's National Programme for Improving Mental Health and Well-being [www.wellscotland.info](http://www.wellscotland.info); NIMHE/CSIP (2005) Making it possible: improving mental health and well-being in England <http://kc.nimhe.org.uk/upload/making%20it%20possible%20Final%20pdf.pdf>; Welsh Assembly (2006) Mental Health Promotion action plan for Wales: consultation document <http://new.wales.gov.uk/consultations/currentconsultation/healandsoccarecurrcons/851364/?lang=en>

<sup>4</sup> [www.mindingyourhead.info](http://www.mindingyourhead.info)

We also want to see a society where everyone plays a role in and takes action to create an environment that promotes the mental health and well-being of individuals, families, organisations and communities (DHSSPS 2006b).

A focus on promotion and prevention has also been given a strong impetus by the WHO European Mental Health Declaration and Action Plan<sup>5</sup> and the positive response to the consultation for the EC Mental Health Green Paper, including a warmly supportive Resolution by the European Parliament (European Commission 2006; European Parliament 2006). Two important themes emerge:

- ▶ the social and economic prosperity of Europe will depend on improving mental health and well-being
- ▶ promoting mental health, i.e. building communities and environments that support mental well-being, will deliver improved outcomes for people with mental health problems.

This focus on the benefits of *positive* mental health is matched by research demonstrating the value of a focus on assets, as opposed to a deficit model and a call for more studies on the determinants of health, as distinct from studies on the determinants of illness.<sup>6</sup> The case for promotion and prevention has also been strengthened by the publication of two major WHO reports highlighting emerging evidence of effectiveness (WHO 2004a; 2004b).

#### WHO Declaration (2005)

[www.euro.who.int/document/mnh/edoc06.pdf](http://www.euro.who.int/document/mnh/edoc06.pdf)

“mental health and mental well-being are fundamental to the quality of life and productivity of individuals, families, communities and nations, enabling people to experience life as meaningful and to be creative and active citizens.

#### European Commission Social Agenda 2005-2010

[http://ec.europa.eu/employment\\_social/social\\_policy\\_agenda/social\\_pol\\_ag\\_en.html](http://ec.europa.eu/employment_social/social_policy_agenda/social_pol_ag_en.html)

“the mental health of the European population is a resource ... to put Europe back on the path to long-term prosperity”.

More broadly, there is a growing interest in well-being generally (sometimes referred to as the ‘happiness debate’),<sup>7</sup> and in how a ‘well-being focus’ might influence the future direction of UK policy on the economy, health, education, employment, culture and sustainable development (Callard & Friedli, 2005; Marks and Shah 2004). The UK Government’s Office of Science and Innovation is conducting a wide ranging review of *Mental Capital and Mental Well-being* as part of its Foresight programme.<sup>8</sup> A Whitehall Well-being Group (WG3) has been established and DEFRA has commissioned a number of major reports on different aspects of well-being, including a review of influences on personal well-being and the relationship between sustainable development and well-being.<sup>9</sup>

The factors that influence how people think and feel – in schools, in the workplace, in the delivery of services, in the built and natural environment and in local communities – are becoming mainstream concerns, even if they are not labelled mental health promotion. There are also concerns that economic growth does not necessarily result in greater well-being and may have consequences that damage mental health – issues that are of special relevance in both Northern Ireland and the Republic (Eckersley 2006; Donovan & Halpern 2002).

<sup>5</sup> The WHO European ministerial conference on mental health, in Helsinki, brought together all 52 countries in the European region of the WHO. Organised in partnership with the European Union and the Council of Europe, the conference’s declaration and action plan informed the EC Mental Health Green paper and will drive the policy agenda on mental health for the coming years (WHO 2005a and b).

<sup>6</sup> WHO defines a health asset as any factor (or resource) that enhances the ability of individuals, communities, populations etc to maintain health and well-being. Evidence shows that interventions to maximize and take advantage of health assets can counter negative social and economic determinants of health, especially among vulnerable groups. The result is improved health outcomes ([http://www.euro.who.int/socialdeterminants/assets/20050623\\_1?language=French](http://www.euro.who.int/socialdeterminants/assets/20050623_1?language=French))

<sup>7</sup> Cf Layard 2005

<sup>8</sup> [www.foresight.gov.uk](http://www.foresight.gov.uk)

<sup>9</sup> <http://www.sustainable-development.gov.uk/what/latestnews.htm#ln210906>.

Overall, the policy environment and the public zeitgeist has never been more favourable to the principle of promoting mental health and to raising questions about the potential economic and environmental costs of not paying greater attention to emotional and social well-being. The challenge lies in matching this 'in principle' commitment with much greater levels of investment. This economic analysis aims to add weight to the arguments for doing so.



## 2.2 What is positive mental health?

There is ongoing debate about what might be called the 'signs and symptoms' of mental health and what constitute the necessary or sufficient elements making up positive mental health and well-being, although there is widespread agreement that mental health is more than the absence of clinically defined mental illness (WHO 2004b).

Broadly, the literature distinguishes between two dimensions of 'well-being' or 'positive mental health'<sup>10</sup>:

- ▶ Hedonic: positive feelings or positive affect (subjective well-being and life satisfaction)
- ▶ Eudemonic: positive functioning (engagement, fulfilment, social well-being)

(Keyes 2002; Huppert 2005; Lyubomirsky et al 2005; Carlisle 2007)

Keyes describes the combination of positive feelings and positive functioning as 'flourishing', with individuals exhibiting at least seven of thirteen elements of subjective well-being described as flourishing (Keyes 2002).

Others categorise the key elements slightly differently e.g. a sense of autonomy, a sense of competence and a sense of relatedness (Ryan and Deci 2001). Lyubomirsky et al focus on the experience of frequent positive emotion and less frequent (but not absent) negative emotion. While many studies are based on measures of positive feeling, there is growing interest in the social dimensions of positive mental health, reflected in indicators of participation, integration, trust and acceptance of others.

Clearly, how positive mental health is defined influences how it is measured and any cost benefit that can be attached to it. Well-being, for example, may be assessed through either subjective measures (self-assessed e.g. responses to social survey questions on life

satisfaction, quality of life, happiness etc) and/or objective measures of factors known to influence well-being e.g. crime, environment, housing, debt. Much of the current debate about well-being is driven by different views on the relative importance of material factors (income, housing, employment) and psycho-social factors or attributes (relationships, life satisfaction, positive affect, cognitive style), as well as the influence of material inequalities on people's subjective well-being (Wilkinson 2005; Eckersley 2006; Pickett et al 2006). For example, the Sustainable Development Commission proposes indicators of social well-being that include individual subjective well-being, as well as some measure of 'fairness' or social justice.

In Scotland, the National Programme for Improving Mental Health and Well-Being is working to establish a set of national mental health and well-being indicators that can be used to create a summary mental health profile for Scotland, based on indicators at an individual, community and structural level.<sup>11</sup> The indicator for individual positive mental health currently includes the following key elements:

- ▶ emotional well-being
- ▶ life satisfaction
- ▶ optimism/hope
- ▶ self-esteem
- ▶ resilience/coping
- ▶ social integration
- ▶ spirituality

<sup>10</sup> The terms 'well-being' and 'positive mental health' are largely synonymous in the literature and are therefore used interchangeably in this report.

<sup>11</sup> [www.wellscotland.info](http://www.wellscotland.info); [www.healthscotland.com/understanding/population/mental-health-indicators.aspx](http://www.healthscotland.com/understanding/population/mental-health-indicators.aspx)

Most of these elements are covered by the Warwick Edinburgh Mental Well-being Scale (see [www.healthscotland.com/uploads/documents/3046-Measuring%20mental%](http://www.healthscotland.com/uploads/documents/3046-Measuring%20mental%20well-being)). This new scale has recently been validated for use in the UK and provides a very promising opportunity for assessing population mental health (as distinct from the prevalence of mental illness).

Traditionally, mental health has been measured using scales designed to identify mental illness. The availability of measures of positive mental health will contribute significantly to future research on the relationship between mental health and other outcomes. It will also strengthen opportunities to evaluate the mental health impact of interventions (Tennant et al in press).

### 2.3 Rationale for mental health promotion

The rationale for mental health promotion is based on the case for preventing mental illness and the case for promoting positive mental health i.e. fostering the skills and attributes associated with positive mental health. In practice, the distinction between promotion and prevention is not always clear-cut.

For example, mental health promotion in the workplace may prevent stress related illness, but may also result in broader positive mental health outcomes e.g. higher job satisfaction, increased morale, greater productivity. Equally, interventions designed to prevent a specific mental health problem, e.g. post-natal depression, may not reduce prevalence, but may have socio-economic benefits associated with positive affect e.g. better mother/infant attachment, uptake of education or increased support networks.

Improved mental health and well-being is:

- a worthwhile goal in itself
- leads to better outcomes, for example in physical health, health behaviours, educational performance, employability and earnings, crime reduction.

Making the case for promoting positive mental health involves demonstrating that these outcomes are not just the result of the absence of mental illness, but are due, wholly or in some degree, to aspects of positive mental health, for example those included in WEMWBS and other scales. This includes identifying the benefits of promoting positive mental health for people with a diagnosis. For example confidence, self-esteem, hopefulness and social integration are now known to influence both clinical and quality of life outcomes for people with mental health problems (Social Exclusion Unit 2004; Pevalin and Rose 2003). As around half of people with common mental health problems are limited by their condition and around a fifth disabled by it (Melzer et al 2004), the benefits of promoting positive mental health and well-being with this population are also likely to be considerable.

Further details on the relationship between positive mental health and outcomes across a range of different domains are included in section 3.2.



## 2.4 Economic evaluation

Building on this general rationale, any specific intervention to improve mental health needs to be justified in the first instance on the basis of evidence of its effectiveness: does it work? In other words, how much does the intervention improve mental health and well-being, along with other relevant outcomes such as physical health?

Economic analysis adds the further test of value for money: not only 'does it work?' but 'is it worth it?' All interventions entail the use of scarce resources and choices have to be made between different ways in which these resources could be deployed. Pursuing one course of action necessarily precludes another. Deciding on priorities is unavoidable. The role of economic evaluation is to clarify the nature of these choices for decision-makers and to ensure that all resources are used as productively as possible.

Economic evaluation may take various forms but can broadly be defined as a systematic attempt to identify, measure and compare all the costs and all the benefits of alternative interventions, including a baseline option of not intervening. A number of points follow from this definition:

- ▶ The economic case for mental health promotion is not just or even mainly about achieving narrowly defined economic or financial benefits such as reducing future NHS costs or increasing GDP. Such benefits should certainly be included but are usually of relatively minor importance. It is emphatically not part of the economic approach that the direct improvements in mental health and well-being which form the fundamental rationale for promotion should be ignored or excluded simply because they are not conventionally valued, marketed or counted in national income.

- ▶ Economic evaluation requires the comprehensive coverage of costs and benefits, including not only the benefits of better mental health and well-being accruing directly to individuals, as just described, but also any wider benefits for society as a whole, financial or otherwise (e.g. reduced crime). No particular preference should be given to benefits accruing to the Exchequer in terms of lower public spending or higher taxation.
- ▶ Economic evaluation does not require all the outcomes of an intervention to be expressed in monetary terms; indeed, it should be recognised from the outset that the benefits of mental health promotion extend beyond those that can realistically or sensibly be given a monetary value. Cost-effectiveness can readily be assessed using non-monetary outcome measures.
- ▶ Economic evaluation does require that all outcomes can at least be quantified in some way, including the subjective elements of well-being. The need to make comparisons between alternative interventions highlights the importance of developing standardised indicators or measures of well-being which can be applied consistently across different settings and population sub-groups.<sup>12</sup>

Economic analysis thus aims to provide a framework for the systematic assessment of costs and benefits, in quantitative but not necessarily monetary terms.

<sup>12</sup> A review of the strengths and weaknesses of different measures of well-being has been commissioned by NHS Health Scotland and will be available shortly.



## 2.5 Constraints and limitations

Analysing the effectiveness and cost-effectiveness of mental health promotion is inherently difficult for a number of reasons. These include the following:

- ▶ Mental health remains a contested concept which can be defined and measured in various ways. The conceptualisation in positive rather than negative terms which is now central to policy frameworks for mental health promotion puts the focus on positive indicators of well-being, but these are still in the development stage.
- ▶ Better mental health is worthwhile not only in its own right but also because it leads to improved outcomes in a range of other domains. Capturing these indirect benefits in evaluation studies raises various problems of coverage, measurement and attribution.
- ▶ The benefits of improved mental health are not only multi-dimensional but may also accrue over many years, even a lifetime in the case of childhood interventions. This can give rise to serious difficulties of length as well as breadth of analysis in research work.
- ▶ Mental health is subject to many influences and the impact of a specific intervention may be difficult to disentangle from the effects of confounding factors. Statistical associations between mental health and other variables are often open to interpretation, concerning for example the direction of causation.
- ▶ Policy interventions take a wide variety of forms; for example, some may be targeted on high-risk individuals whereas the focus of others is community-wide. Research methods need to reflect such variety, but the use of different evaluative approaches can lead to problems of comparability and consistency. The randomised controlled trial, often seen as

the gold standard for health research, is most suitable for single-component interventions in highly controlled settings, but many interventions to promote mental health do not take this form.

- ▶ The working of many interventions, particularly those targeted on individuals, will be mediated by broad structural factors such as poverty or unemployment. The role of socio-economic context needs to be taken into account in evaluation studies but this is rarely straightforward.

These and other difficulties in the analysis of mental health promotion have two main consequences. First, there remain significant gaps in the evidence base. This is particularly so in the area of cost-effectiveness. Few published studies contain primary economic data on costs and benefits and, among those that do, the coverage is usually incomplete; for example, the collection of financial information is often confined to effects on the public sector.

Second, the evidence base may be subject to various forms of bias. For example, some types of intervention are easier to evaluate than others, resulting in the likely availability of more studies – with more conclusive results – in the former area. Similarly, some components of cost and benefit are easier to identify and collect than others. In general, costs are easier to measure than benefits, particularly long-term benefits. The available evidence may therefore systematically understate the net returns on mental health promotion, particularly those interventions which have long-lasting effects.

## 3.0 Benefits of mental health promotion

This section develops the general economic case for mental health promotion, looking at both the benefits of preventing mental illness and those of promoting positive mental health.



### 3.1 The benefits of preventing mental illness

The essence of the case for prevention is that on any metric, mental illness imposes an enormous burden, both on individuals and on the wider community. Mental health problems have very high rates of prevalence; they are often of long duration, even lifelong in some cases; and they have adverse effects on many areas of people's lives, including educational performance, employment, income, personal relationships and social participation.

No other health condition matches mental ill-health in the combined extent of prevalence, persistence and breadth of impact.<sup>13</sup> Following the logic that a cost saved is a benefit gained; the very substantial scale of costs associated with mental illness implies that the potential benefits of successfully tackling the problem, whether through prevention or treatment, are correspondingly large. As will be seen below, the scope for securing these benefits by means of treatment appears to be distinctly limited, at least in the current state of knowledge. The role of prevention is therefore potentially enormous.

The burden or cost of mental illness takes various forms and can be measured in various ways. The approach taken in *Counting the cost: the economic and social costs of mental health problems in Northern Ireland* (NIAMH 2004), is to identify and quantify all the main costs of mental ill-health and to combine these in a single total using the common measuring rod of money. Cost is defined broadly to include any adverse effect of mental illness, wherever it falls and whether or not it is conventionally measured in monetary terms. The main components of cost are identified as:

- ▶ the costs of health and social care for people with mental health problems, including services paid for by the NHS and also the informal care provided by family and friends;
- ▶ the costs of output losses in the economy that result from the adverse effects of mental illness on people's ability to work; and

- ▶ a monetary estimate of the less tangible but crucially important personal or human costs of mental ill-health, particularly its negative impact on the health-related quality of life.

Broad estimates of costs in Northern Ireland for 2002/03 under these three headings are as follows:

	£ million	% of total
Health and social care	372	13.0
Output losses	789	27.7
Human costs	1,691	59.3
<b>Total</b>	<b>2,852</b>	<b>100.0</b>

The overall figure of £2,852 million is larger than the total amount that was spent by the NHS in Northern Ireland on all health conditions combined in 2002/03 and is equivalent in monetary value to 11.7% of Northern Ireland's GDP in that year.

<sup>13</sup> It is difficult to distinguish the extent to which certain adverse effects are a result of the illness or are due to the consequences of exclusion and discrimination experienced by people with mental health problems. Several reports suggest that the latter are more significant than the former, notably in relation to employment (Social Exclusion Unit 2004; Cameron et al 2003) and challenging stigma and discrimination has been a key element of mental health campaigns across the UK.

Estimates of the costs of mental health problems using the same methodology are also available for England (Sainsbury Centre for Mental Health 2003) and Scotland (Scottish Association for Mental Health 2006). Updating these figures and including a broad allowance for Wales, it is roughly calculated that the overall cost of mental health problems in the UK amounted to over £110 billion in 2006/07. Northern Ireland's share of the total is put at around £3.5 billion, which is significantly larger than might be expected on the basis of relative population numbers and mainly reflects a prevalence rate for mental health problems which is 20-25% higher than in the rest of the UK. As an interesting comparison, it has been calculated that in England the costs of mental ill-health are greater than the total costs of crime and there is every reason to believe that this is also the case in the UK as a whole.

These figures demonstrate that the costs of mental health problems are extremely large in absolute terms. They are also very large relative to the costs of other health conditions. Unfortunately comparative information on monetary costs, calculated on the same basis as described above for mental illness, is not currently available. Reference may be made instead to work by the World Health Organisation (WHO) on the cost or burden of disease using a composite non-monetary measure, the disability-adjusted life year or DALY, which combines morbidity and premature mortality in a single figure (WHO 2005c).

Estimates prepared by the WHO show that in the UK mental illness now accounts for more DALYs lost per year than any other health condition. Thus the figures for 2002, the latest available year, indicate that 20.0% of the total burden of disease in the UK was attributable to mental illness (including suicide), compared with 17.2% for cardiovascular diseases and 15.5% for cancer (WHO 2006). No other condition exceeded 10%.

Of the total health burden, just under half is attributable to premature mortality and just over half to non-fatal outcomes (morbidity and disability). Mental illness including suicide accounts for less than 5% of all premature mortality but for over 30% of all morbidity and disability. No other health condition accounts for more than 10% of the total burden of disease within the living population.

Looking ahead, the share of mental illness in the overall burden is likely to rise. This is not so much because of any clear evidence that the prevalence of mental health problems is increasing but rather because the burden imposed by the two other leading health conditions (cardiovascular diseases and cancer) is declining. This reflects falling death rates from these conditions, associated with advances in medical treatment and past falls in the prevalence of smoking.

The relative size of the burden associated with mental illness is therefore likely to increase even if the numbers affected remain broadly unchanged.

The above figures suggest that, on any reasonable assessment of priorities, mental health should account for a large (and rising) share of total public expenditure on health and social care. What the evidence appears to show is that spending on mental health is disproportionately low. Set against the WHO estimate that mental ill-health accounts for 20.0% of the total burden of disease in the UK, figures given in the costing studies quoted earlier show that spending on mental health as a share of public expenditure on all health and social care is only 11.8% in England, 11.1% in Scotland and 9.3% in Northern Ireland. The figure for Northern Ireland looks particularly low, given the above-average prevalence of mental health problems. Of special relevance to this study, spending on mental health promotion is also extremely low, accounting for less than 1% of all NHS and local authority expenditure on mental health services in England (Mental Health Strategies 2006) and for less than 1% of all public spending on health promotion activity.

The substantial scale of costs associated with mental ill-health means that the benefits of effective action to reduce the prevalence and severity of mental health problems are potentially very large. A further strand in the general economic case for prevention is that the scope for cost-effective action in the form of treatment after illness has been incurred appears to be relatively limited. For example, a recent study uses mental health survey data collected in Australia to assess how much the burden of disease (measured in DALYs) that is attributable to mental disorders could be averted by current and optimal (evidence-based) treatments (Andrews et al 2004).

Summing across all disorders, this study finds that the current coverage and mix of treatment interventions provided in Australia reduces the overall burden of mental illness by just 13%. This would increase to 20% if coverage were maintained at its present level but the current mix of interventions were replaced by optimal treatment according to best-practice evidence-based medicine, and to 28% if coverage as well as treatment were set at its optimal level according to cost-effectiveness criteria. Finally, it is estimated that even with 100% coverage and complete evidence-based medicine, only 40% of the overall burden appears to be avertable. In other words, three-fifths of the burden of mental disorders remains unavertable by treatment, described as “a sobering fact about the limitations of current knowledge in psychiatry but one that is consistent with clinical practice”.

The limited effectiveness of treatment implies a sizeable role for prevention if significant progress is to be made in reducing the costs associated with mental illness. As already seen, the potential benefits of making such progress are extremely large and are likely to be even more significant if efforts to prevent mental illness are combined with efforts to reduce the effects of stigma and discrimination (Crisp 2004).

### 3.2 Benefits of promoting positive mental health

‘Curing illness does not necessarily result in health’  
Pat Barker (2000)

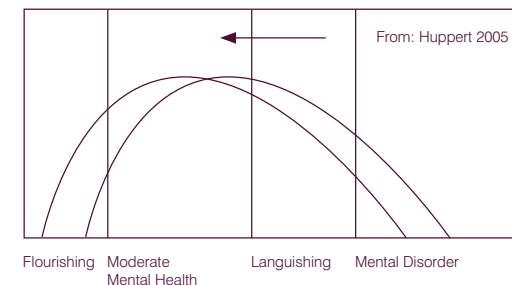
The benefits of promoting positive mental health are less clearly established in quantitative/financial terms than the benefits of preventing mental illness. Nevertheless they are likely to be substantial, partly because of the very large numbers of potential gainers. According to Keyes, only 18% of adults in the US are in the “flourishing” category, implying that over 80% of the population could benefit. A recent survey in Scotland using WEMWBS described 14% of the sample as having ‘good mental well-being’, 73% with average and 14% with poor mental well-being (Braunholtz et al 2007). These figures suggest that even small improvements in overall levels of population mental wellbeing could result in significant benefits.

A population-wide approach to promoting mental health for all has been used to make the case for the benefits both of improving mental health and preventing mental health problems. In addition it has been argued, applying the principle of ‘herd immunity’, that the more people in a community (e.g. a school, workplace or neighbourhood) who have high levels of mental health (i.e. who have characteristics of emotional and social competence), the more likely it will be that those with both acute and long term problems can be supported (Stewart-Brown 1998; Blair et al 2003 p.143).

Huppert, using the Keyes classification (languishing, moderate mental health, flourishing), applies the work of Rose (1992) to argue for shifting the whole population in a positive direction (figure 1):

- by reducing the mean number of psychological symptoms in the population, many more individuals would cross the threshold for flourishing.
- a small shift in the mean of symptoms or risk factors would result in a decrease in the number of people in both the languishing and mental illness tail of the distribution (Huppert 2004; Huppert 2005).

Figure 1  
Population distribution of mental Health  
(Huppert 2005)





A UK population study of participants in the Health and Lifestyle Survey found that the prevalence of mental disorders was directly related to the mean number of symptoms in the sub-population (excluding those with a disorder). In a seven year longitudinal follow up, Whittington and Huppert showed that the change in the mean number of symptoms in subpopulations (excluding those with a disorder) was highly correlated with the prevalence of disorders (Whittington and Huppert 1996). For this reason, population-level interventions to improve overall levels of mental health could have a substantial effect on reducing the prevalence of common mental health problems, *as well as the benefits associated with moving people from 'languishing' to 'flourishing'* (Huppert 2005).

A key question then, is whether there are any significant differences in outcomes for people who have good mental health, compared to those with average or poor mental health. Keyes 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 more limitations in daily living (Keyes 2004; 2005). Keyes found that cardiovascular disease was lowest in adults who were the most mentally healthy, and higher among adults with major depressive episodes, minor depression and moderate mental health (Keyes 2004). This is consistent with review level evidence that CHD risk is directly related to the severity of depression: a 1–2-fold increase in CHD for minor depression and 3–5-fold increase for major depression (Bunker et al 2003).

In other words, intermediate levels of mental health are different from mental illness as well as from flourishing. Other research has shown that positive affect and negative affect have a degree of independence in the long term and that positive outcomes are the result of the *presence* of positive affect, rather than simply the *absence* of negative affect (Diener et al 1995).

In a parallel analysis of adolescents, (using measures of emotional well-being, psychological well-being and social well-being as three distinct but correlated factors), Keyes found that prevalence of conduct problems (arrests, truancy, alcohol, tobacco and marijuana use) decreased and measures of psychosocial functioning (self determination, closeness to others and school integration) increased, as mental health increased. Based on his findings, he argues that children without mental illness are not necessarily mentally healthy. Flourishing youth were found to be functioning better than moderately mentally healthy or languishing youth (Keyes 2006).

In summary, while the best outcomes are associated with the absence of mental illness, the presence of positive mental health brings additional benefits. The economic implications of this analysis are considered further in section 3.4.



### 3.3 Outcomes associated with positive mental health

“Improving the mental health of the population contributes to achieving a wide range of cross government priorities for children and adults. Improving mental health will contribute to meeting Public Service Agreement (PSA) targets, in health, education, neighbourhood renewal, crime, community cohesion, sustainable development, employment, culture and sport.”  
(NIMHE 2005)

The relationship between positive mental health and positive outcomes depends to some extent on which aspect of mental health and well-being is being measured and which scales are used.<sup>14</sup> This is a weakness in any attempt to draw firm conclusions about the influence of positive mental health in different domains, although there tends to be a reasonably good correlation between different elements e.g. life satisfaction, positive affect, optimism, psychological well-being, quality of life and 'happiness' (Blanchflower and Oswald 2004).

There are also wider considerations of cultural specificity and potential cultural bias, as well as the fact that a high proportion of 'mental well-being' studies are based on relatively privileged cohorts e.g. students, white collar workers. Positive affect, for example, may have a greater influence on outcomes for people who are relatively well-resourced.<sup>15</sup> As Lyubmirsky et al observe 'being happy is more adaptive in certain situations than in others' (p.842).

Direction of causality is even more problematic, because much of the literature is based on cross-sectional studies. Nevertheless, many of the associations between positive mental health and positive outcomes are increasingly being confirmed in longitudinal and experimental studies.

In a summary of experimental studies, Lyubmirsky et al found the following associations with positive affect:

- sociability and activity
- altruism
- liking of self and others
- strong bodies and immune systems
- effective conflict resolution skills

The evidence is weaker, but still consistent that pleasant moods promote original thinking and may improve performance on complex mental tasks (Lyubmirsky et al 2005 p.840)

Broadly, then, there is reasonably robust evidence that positive mental health is a significant causal influence in the following domains: physical health and longevity, health behaviours, economic productivity and social engagement. (See also section 3.3)

<sup>14</sup> For a review of a wide range of well-being scales validated for use in the UK see Speight et al 2007 (in press).

<sup>15</sup> Diener found that among affluent students, positive affect was a significant determinant of improved educational and employment outcomes, whereas for less affluent students, parental income was a more significant determinant (Diener 1995)



### 3.3.1 Physical health and life expectancy

Prevention will benefit physical health because people with mental health problems have much higher rates of physical illness, with a range of factors contributing to greater prevalence of, and premature mortality from: coronary heart disease, stroke, diabetes, infections and respiratory disease (Harris and Barraclough 1998; Wulsin et al 1999; Phelan et al 2001; Osborn et al 2007).

Promoting positive mental health benefits physical health by improving:

- ▶ Lifetime mortality rates (Danner et al 2001);
- ▶ Longevity (by 7.5 years) (Levy et al 2002)
- ▶ Overall health (Benyamini et al 2000)
- ▶ Stroke incidence and survival (Ostir et al 2000; 2001)
- ▶ Protection from heart disease: Keyes found that absence of positive mental health is a greater risk factor for CVD than smoking. Other studies also suggest that psychosocial factors (notably mood, social support and isolation) are on a par with smoking, high blood pressure, and raised cholesterol (Bunker et al 2003; Keyes 2004; Kubzansky and Kawachi 2000)
- ▶ Lowest number of chronic physical diseases by age (Keyes 2007)

### 3.3.2 Health behaviour

Key elements of mental health influence physical health through their influence on health behaviour. These include self-esteem (evaluative and affective sense of self), self-efficacy, and 'future time perspective'. Improved self-esteem<sup>16</sup> in combination with 'life skills' in school children is associated with reduced risk-taking behaviour (alcohol, cannabis, tobacco). The relative contribution of individual characteristics (i.e. affect, cognitive and social skills) and social context (i.e. peers, social networks, relationships) is difficult to untangle and interventions to improve health behaviour through improving mental health (in schools for example) often attempt to address both (Catalano et al 2002; Garcia et al 2006).

Improving positive mental health reduces the following:

- ▶ Alcohol intake (Graham et al 2005)
- ▶ Smoking (Graham et al 2005)
- ▶ Drinking above recommended levels (Petersen et al 1998)
- ▶ Delinquent activity<sup>17</sup> (Windle 2000)

### 3.3.3 Productivity

Improved mental health reduces sickness absence and increases supervisor assessed performance/productivity:

- ▶ Job performance/productivity<sup>18</sup> (Harter et al 2003; Cropanzano and Wright 1999) in this and other studies, well-being predicts good job performance although job satisfaction does not.
- ▶ Job performance/productivity/creativity (Wright and Staw 1999) (assessed by supervisors)
- ▶ Reduced absenteeism (Pelled and Xin 1999; Keyes 2005b)

### 3.3.4 Crime

Mental health problems make a substantial contribution to offending behaviour and a very high proportion of people in prison (including those on remand) have one or more mental disorders (Singleton et al 1998), so prevention is likely to result in considerable savings. Small improvements in mental health could also reduce prison populations and potentially also reduce re-offending rates which are currently just under 60% (committed an offence within two year follow up and convicted: 57.6 per cent in 2000 and 58.9 per cent in 2003). (<http://www.homeoffice.gov.uk/rds/pdfs06/hosb2006.pdf>)

### 3.3.5 Pro-social behaviour

A number of cross sectional studies show a not entirely unexpected correlation between well-being and pro-social behaviour e.g. participation, civic engagement, volunteering (Dolan et al 2006). In a longitudinal study (3 years) Thoits and Hewitt (2001) found well-being (positive affect) predicted participation in volunteering and volunteering also increased positive affect. In adolescents, Keyes found that positive mental health was associated with greater school integration and closeness to others, as well as reduced incidence of conduct problems (Keyes 2006).

<sup>16</sup> Links between self-esteem and other outcomes <http://her.oxfordjournals.org/cgi/content/full/19/4/357>

<sup>17</sup> It is important to note that only a small proportion of those adolescents who manifest high levels of risk taking behaviour will continue to do so into adulthood. This study attempts to identify aspects of 'temperament' associated with ongoing delinquency

<sup>18</sup> Jobs that are higher in complexity and worker autonomy are correlated more often with job satisfaction and performance

### 3.4 Lifetime benefits

There is increasingly powerful evidence from birth cohort and other longitudinal data of a high degree of persistence or continuity between adverse mental states in childhood and those in adult life.

For example, one study has found that of all people with mental health problems at age 26, half had first met diagnostic criteria for a psychiatric disorder by age 15 years and nearly 75% by the late teens (Kim-Cohen et al 2003). A recent review article has suggested that “on this evidence, many adult disorders could be re-framed as extensions of juvenile difficulties” (Maughan and Kim-Cohen 2005).

Continuity between childhood and adult life is particularly important in the context of mental health promotion and prevention, for two main reasons. First, it highlights the fact that many forms of emotional and behavioural response are formed in the early years and may be extremely difficult to change in later life. Fostering the development of appropriate emotional and social skills from the outset is therefore likely to be more effective than later intervention, particularly to the extent that the latter requires the establishment of significant new responses and pathways.

Second, the evidence on continuity also draws attention to the fact that the costs of mental ill-health may be extremely high purely because of the length of time over which they are incurred. The majority of serious mental health problems begin early in life and, unlike cancers and most heart disease, they cause disability when those affected would normally be at their most productive. The frequent early manifestation of poor mental health and its persistence over the lifetime are untypical of poor health generally and constitute a major reason why the overall cost or burden is so large.

The importance of continuity suggests that a valuable way of developing the economic case for promotion is to look at the costs of poor mental health (and hence the potential benefits of promoting better mental health) over the lifetime, as a supplement to the annual measures of cost quoted above. To demonstrate the approach, some broad estimates of the lifetime costs of childhood conduct disorder have been prepared for this report and are set out below. It is hoped that the findings will be of interest but they should be regarded as highly provisional, the main aim being to illustrate a method of analysis that merits further development rather than to provide definitive results at this stage.

### 3.5 Conduct disorder

Conduct disorder is the most common mental health problem in childhood. According to a recent survey by the Office for National Statistics, it affects 5.8% of all children in Great Britain between the ages of 5 and 16, with the rate rising from 4.9% among those aged 5-10 to 6.6% among those aged 11-16 (Green et al 2005). Prevalence is roughly twice as high among boys as among girls.

Longitudinal studies suggest that conduct disorder persists into adulthood in about 40% of cases and is strongly predictive of a range of poor outcomes, including criminal behaviour, substance misuse, poor educational and labour market performance and disrupted personal relationships (Stewart-Brown 2004).

Some evidence on the long-term costs of childhood conduct disorder is given in a recent study which uses data from a small longitudinal survey carried out in inner London (Scott et al 2001). This calculates the cumulative costs of public services used up to age 28 by a sample of 142 individuals assessed for conduct problems at age 10 and finds that costs for those with conduct disorder were nearly 10 times as large as among those with no conduct problems (£70,019 against £7,423, at 1998 prices). Of the public services covered in the study, those relating to crime incurred the largest costs, representing 64% of total costs among those with conduct disorder.

These are important findings, but – as the authors of the study fully recognise – the overall costs of conduct disorder are understated, perhaps severalfold, partly because coverage is restricted to costs incurred by the public sector and also because these effects are truncated at age 28. To illustrate the first point, a recent study of the costs of crime in England carried out by the Home Office found that costs falling on the public services (police, prisons etc) account for only about a fifth of the total costs of crime, with the great bulk of costs being those incurred directly by the victims of crime (Brand and Price 2000).

#### Longitudinal evidence on adult outcomes

To undertake a more comprehensive analysis of long-term costs, use has been made of a recent study (Fergusson et al 2005) which presents data from a 25-year longitudinal study of a birth cohort of young people in New Zealand. Information was collected on child conduct problems at age 7-9 and subsequently on a wide range of outcomes in early adulthood, including crime, substance use, mental health, sexual/partner relationships and education/employment. Assuming a broadly similar pattern of prevalence and adult consequences in the UK, it is possible to express many of these outcomes in monetary terms, using a variety of data sources for this country.

Looking first at prevalence, the sample population in the New Zealand survey can be divided into three broad groups, corresponding to those with no conduct problems at age 7-9, those with some conduct problems and those with conduct disorder. Relative numbers in each group are 50%, 45% and 5% respectively. The figure of 5% for the size of the most disturbed group corresponds closely with the estimate of 4.9% quoted above for the prevalence of childhood conduct disorder among 5-10 year olds in Great Britain. A comparison may also be made with a study of mental health among children in the USA which uses the three-way classification of mental health proposed by Keyes: flourishing, moderately mentally healthy and languishing (Keyes 2006). The relative numbers of 12-14 year olds in these three groups are 49%, 45% and 6%, a breakdown which is remarkably similar in terms of relative numbers to the three-way classification in the New Zealand study based on disturbed behaviour.

Building on this similarity, it seems not unreasonable to use the New Zealand data on adult outcomes to attempt broad monetary estimates of both the benefits of preventing mental health problems and the benefits of promoting positive mental health. Two main sets of figures are therefore given below, as follows:

- the potential benefits of prevention, as given by the saving in lifetime costs that would result if those in the bottom 5% (i.e. those with conduct disorder) were enabled to achieve the same adult outcomes as those in the middle 45%; and
- the potential benefits of promoting positive mental health, as given by the saving in lifetime costs that would result if those in the middle 45% were enabled to achieve the same adult outcomes as those in the top 50%.

Clearly there is a degree of arbitrariness in this approach, but it may nevertheless be helpful as a way of illustrating possible magnitudes in both absolute and relative terms.

Concerning adult outcomes, the New Zealand survey confirms the evidence of other longitudinal studies that conduct problems in childhood are associated with a wide range of adverse consequences in later life. Importantly, this association holds true even after controlling for potentially confounding factors such as individual intelligence and socio-economic disadvantage in early life. It is found, for example, that those in the bottom 5% in terms of disturbed childhood behaviour are four times as likely as those in the top 50% to have committed a violent offence by age 25, three times as likely to have attempted suicide and nearly three times as likely to have become a teenage parent, after controlling for other potential influences in each case.

#### Monetary estimates

Monetary estimates have been prepared for six adult outcomes, as follows:

*Crime:* the New Zealand study gives five separate indicators of criminal behaviour (property offending, violent offending, repeated traffic offences etc) and these have been converted into a single (unweighted) measure. Costings are based on the Home Office study of the costs of crime mentioned above.

*Smoking:* by far the most important consequence of smoking is that it leads to premature mortality, killing about 120,000 people a year in the UK and on average reducing life expectancy by 10 years (Wanless 2004). Smoking thus results in an annual loss of around 1.2 million life-years. A methodology for attaching monetary value to life-years is discussed in *Counting the cost* (NIAMH 2004), where it is noted that a range of evidence

suggests a figure of around £30,000 per life-year in 2002/03 prices. Allowance is made in the costings given below for the long-term decline in the overall prevalence of smoking, which implies that the overall scale of adverse health effects will be markedly lower among the current generation of children and young people than among previous generations.

*Use of illicit drugs:* according to a report commissioned by the Home Office, the economic and social costs of drug abuse in England and Wales were around £12 billion in 2000 (Godfrey et al. 2002). However, nearly 90% of this total represented drug-related costs of crime and it would be double-counting to include these along with the overall costs of crime described above. Costings are therefore based on the residual component which mainly represents costs falling on the NHS.

*Mental illness:* the New Zealand study gives prevalence rates in early adulthood for major depression/anxiety disorder and the extent of inter-group variation in prevalence for this condition is assumed to be the same for all other forms of mental illness. Costings are based on the figures for the economic and social costs of mental illness in the UK quoted earlier, excluding costs associated with suicide (dealt with separately).

*Suicide:* there are currently around 5,500 suicides a year in the UK. A methodology for applying monetary values to these, covering both human costs and output losses, is discussed in *Counting the cost*, where the overall figure amounts to about £1.25 million per case in 2002/03 prices.



*Earnings:* use is made of data in the New Zealand survey on the proportions in each group who entered the labour market without any educational qualifications. UK information shows that the employment rate among people with no qualifications is only 65% of the average among all people of working age and also that, among those in the former group who are in full-time work, earnings are only 67% of the national average (Office for National Statistics 2006). Taken together, these two observations suggest that the lifetime pay of someone without qualifications is only about 44% of the national average.

Based on these and other assumptions, estimates of the potential long-term benefits of preventing mental illness and promoting positive mental health are as follows (all figures are UK averages, in 2006/07 prices):

▶ : 32

▶ **Prevention: estimated saving in lifetime costs = £230,000 per case**

Prevention is defined here in terms of early intervention to help those who would otherwise be in the most disturbed 5% of the childhood population (i.e. those with conduct disorder), such that they are able to achieve the same adult outcomes as those in the middle 45% (i.e. those with some conduct problems in childhood but not conduct disorder). The associated saving in lifetime costs is estimated at around £230,000 per case. Savings in costs relating to crime are the largest component, accounting for 71% of the total, followed by savings in costs resulting from mental illness in adulthood (13%) and increases in lifetime earnings (7%). The importance of costs linked to crime is very much in line with the findings of the study by Scott et al quoted earlier.

▶ **Promotion: estimated saving in lifetime costs is £115,000**

Promoting positive mental health is defined here in terms of action to help those in the middle 45% of the childhood population to achieve the same adult outcomes as in the top 50%. The lifetime benefit is estimated at around £115,000 per case, which is more or less exactly half the benefit of preventing a case of childhood conduct disorder. Again savings in crime costs are the largest single element (61% of the total), followed by savings in the costs of adult mental illness (19%) and increases in lifetime earnings (9%).

Two main points may be noted by way of commentary on these results. The first is important but relatively technical, namely that further adjustments are needed if the above figures are to be used in detailed evaluation studies. One reason for this is that the figures are based on 2006/07 prices and make no allowance for the fact that the value of many of the underlying cost components is likely to increase over time in real terms. This applies most obviously to earnings but is of general relevance and a reasonable assumption might be that the estimates should incorporate annual increases in all the cost streams of around 2% a year, corresponding to the trend growth rate of real GDP per head. Going the other way, no allowance is made in the figures for time discounting, but it is a convention in economic appraisals to apply a progressively lower weight to costs and benefits arising in the future, reflecting a general preference in society for jam today over jam tomorrow. The discount rate for public sector appraisals promulgated by the Treasury is currently set at 3.5% a year in real terms. Because this is larger than the suggested upward adjustment of 2% a year for real increases in value, the combined impact of the two changes would be to reduce the overall size of the estimates, with the precise effect depending on the time paths of the various cost streams. A rough calculation suggests that the overall cost saving from prevention (as defined above) allowing for both adjustments works out at around £150,000 per case and the equivalent benefit from promotion at around £75,000.



The second point to note is that, whatever the precise method of measurement, the scale of potential benefits as estimated here is extremely large, reflecting not only the breadth of adverse outcomes in adult life but also their likely duration. It is possible that some of the identified effects may attenuate with increasing age, but equally it is clear that others, such as a lack of educational qualifications, are likely to have a measurable impact throughout the lifetime. As expected, the benefits of prevention are significantly larger per case than those of promoting positive mental health, but the latter are still very sizeable in absolute terms and the overall number of potential beneficiaries is much larger.

#### **UK figures**

Every year about 700,000 children are born in the UK. Using the 50/45/5 split found in the New Zealand study, about 35,000 children in each one-year cohort are therefore likely to be diagnosed with conduct disorder, whereas around 315,000 will be in the intermediate group, with some conduct problems. Using the adjusted values of £150,000 and £75,000 respectively for the benefits of helping an individual case in each of these two groups, it can be calculated that the total value of the benefits of prevention in a one-year cohort of children in the UK is £5.25 billion (35,000 x £150,000), while the corresponding figure for promoting positive mental health is £23.625 billion (315,000 x £75,000).

#### **Northern Ireland figures**

There are 23,000 births each year in Northern Ireland. The total value of the benefits of prevention in a one year cohort is £172.5 million. The total value of the benefits of promoting positive mental health in a one year cohort is £776.25 million.

Potential benefits of this size provide an extremely strong prima facie case for intervention on a substantial scale.

## 4.0 Effectiveness, cost effectiveness & priorities

While some major gaps still remain, there is now a large and growing body of evidence on the effectiveness of interventions, covering both prevention and promotion (WHO 2004a; 2004b; Hermann et al 2005; Barry and Jenkins 2007). In contrast, the published evidence on cost-effectiveness is much more limited.





A further drawback of the literature is the lack of standardised outcome measures, which limits the scope for comparisons, particularly between different target groups (e.g. children v. older-aged adults) or settings (e.g. schools v. workplaces). Finally, notwithstanding the strength of the evidence on the wider social, economic and environmental determinants of mental health and mental illness (Melzer et al 2004; Rogers and Pilgrim 2004; Whitehead and Dahlgren 2006), there are few examples of the evaluation of effectiveness or cost effectiveness of interventions at these levels.

All this makes it difficult to offer strong statements on priorities. A judgemental assessment suggests the following provisional list of “best buys”. These cover selected areas of intervention which appear, on the basis of admittedly incomplete evidence, to offer the most favourable balance of effectiveness, overall scale of potential benefit and likely cost of implementation:

- ▶ Supporting parents and early years: parenting skills training/pre-school education
- ▶ Supporting children and young people: health promoting schools
- ▶ Improving working lives: employment/workplace
- ▶ Positive steps for mental health: lifestyle (diet, exercise, alcohol)
- ▶ Supporting communities: environmental improvements

#### 4.1 Parenting skills and pre-school education

### Interventions targeting parents and pre-school children show a high level of effectiveness and cost effectiveness.

Meta-analysis of the effect size of pre-school programmes aimed at children and parents shows that positive outcomes for the intervention group samples exceed 62% of those in the control/comparison groups (Nelson et al 2003).

- ▶ Parenting skills training improves the mental health of parents and the mental health, behaviour and long-term life chances of children
- ▶ Parenting group programmes prevent the development of conduct disorder and reduce serious antisocial behaviour in children in real life conditions (Scott et al 2001b; Hutchings et al 2007)<sup>19</sup>
- ▶ Pre-school prevention programmes i.e. those that include an educational component directly involving the child and family/parenting support<sup>20</sup> improve social/emotional behaviour, cognitive function and family well-being with long-term (age 27) improvements in earnings and reduced criminal behaviour
- ▶ Follow-through in primary school significantly improves long-term outcomes (Nelson et al 2003).

<sup>19</sup> Parenting skills training is now recommended by NICE as part of the management of conduct disorders in children (NICE 2006).

<sup>20</sup> In their meta-analysis, MacLeod and Nelson (2000) found the highest effect sizes ( $d=.58$ ) for comprehensive, multi-component programs compared with single component programs. Children living with highest economic deprivation and related environmental stressors benefit most.

### Cost effectiveness

A number of US studies have demonstrated significant cost benefits in the long-term (Karoly et al 1998; Olds, et al 1993; Schweinhart & Weikart, 1997).

- ▶ The High/Scope Perry Pre-school programme (HSPPP) achieved a 7-8 fold return on the initial investment of \$1,000 per child through decreased welfare and criminal justice costs and higher earnings.<sup>21</sup>
- ▶ At age 27, HSPPP returned \$7.16 for every dollar invested. A more recent follow-up (when participants were aged 40) showed a return to society of more than \$17 for every dollar invested (Schweinhart et al 2005).
- ▶ The Chicago Child-Parent Centers programme, showed costs per participant of \$6,692 and cumulative benefits at age 25 of \$48,000, i.e. a benefit: cost ratio of over 7 to 1. Every dollar invested yielded a return to the programme participants of \$3.29 (mainly higher earnings) and \$3.85 to the wider community (mainly reduced costs of crime and higher taxation associated with higher earnings). (Reynolds et al 2001).
- ▶ Edwards et al 2007 is a rare example of a UK cost effectiveness study, although its focus is short-term and based solely on child behaviour scores. However, it found that the parenting programme involves modest costs and demonstrates strong clinical effect, suggesting it would represent good value for public spending.

The typical costs of parenting programmes vary. A review published in Health Technology Assessment (Dretzke et al 2005) gives the following figures:

#### Typical cost of parenting programmes (2003 prices)

Group programme, community based	£603-899
Group programme, clinic based	£423-629
Individual programme, home based	£3,839

For global costings, the authors suggest increasing the figures by 50%, to allow for a refresher course a year after the original intervention. If we assume:

- ▶ each one-year cohort in the UK includes around 35,000 children with conduct disorder and 315,000 with conduct problems (see section 3.3);
- ▶ parents of all the former receive an individual, home-based programme, while the parents of all the latter participate in a community-based group programme;
- ▶ the unit cost of the individual programme is £6,000 (£3,839 rounded up to £4,000 and then increased by 50% for the refresher element), while the unit cost of the group programme is £1,350 (£900 as the upper end of the cost range for group programmes, again increased by 50%).

The total cost of intervention is therefore £210 million for the children with conduct disorder (£6,000 x 35,000) and £425 million (£1,350 x 315,000) for those with conduct problems. The figures for Northern Ireland are £6.9 million for children with a conduct disorder and £14.0 million for children with conduct problems.

In comparison, the potential lifetime benefits of effective intervention, according to the figures given in section 3.3, are:

**UK: £5.25 billion and £23.6 billion respectively**  
**Northern Ireland: £172.5 million and £776.25 million**

To be worth undertaking, the intervention thus needs a success rate of only 1 in 25 for conduct disorder and 1 in 55 for conduct problems. In other words, the potential benefits are so large relative to costs that the intervention is worthwhile even if its effectiveness is very limited. The literature to date suggests that success rates at this level can be achieved in real life settings.

<sup>21</sup> See Barry and Jenkins 2007 for a full description of the HSPPP.



#### 4.2 Health Promoting Schools and continuing education

There is a robust case both for strengthening investment in mental health promotion in school settings and for increasing educational opportunities for adults. Support for emotional and social development is as important as help with school work for young people in increasing the chances of educational success, notably for children facing difficulties at home (Bartley 2006; Weare and Gray 2003).

Promoting mental health in schools has been effective in the following areas, although data on cost effectiveness is extremely limited, partly because so few studies include details of the cost of interventions:

- ▶ preventing mental health problems, notably depression
- ▶ improving academic outcomes
- ▶ improving emotional and social functioning
- ▶ reducing health damaging behaviour e.g. smoking and substance abuse
- ▶ reducing bullying

(Wells et al 2001; Lister-Sharp et al 1999; NHS National Library for Health <http://www.library.nhs.uk/mentalhealth/ViewResource.aspx?resID=111333>)

Looking just at depression, a meta-analysis by Durlak and Wells (1997) found a weighted mean effect size of 0.22. This finding, equivalent to an 11% improvement in the intervention groups compared with the control groups, was confirmed in another more recent meta-analysis (Jane Llopis et al 2003).

The most effective programmes:

- ▶ focus on promoting mental health rather than preventing mental health problems (Wells et al 2001; Lister-Sharp et al 1999);
- ▶ involve social competence and cognitive approaches – broadly described as life skills training (i.e. improving emotional, social and cognitive skills/attributes, including resilience/problem solving and peer support);
- ▶ adopt a whole school approach: involving teachers, pupils, parents and the wider community is more effective than curriculum based projects;
- ▶ peer tutoring and cross age tutoring are effective for children with emotional and behavioural difficulties (Frey and George-Nichols 2003; McKinstery and Topping 2003)

#### Cost effectiveness

The cost of life skills training (LST) programmes in the USA (based on several schools purchasing materials and coordinating training) is between \$5-\$10 per pupil per annum (Botvin et al 1998).

The LST programme reduced alcohol, cannabis and tobacco intake by 50-70%. These effects were sustained through to the end of secondary school.

- ▶ 66% fewer intervention than control group used tobacco, alcohol or marijuana (Botvin et al 1995; Botvin et al 2003)
- ▶ Marijuana (use and experimentation) was 47% less at 40 months. (Botvin et al 2000).

Replication of LST in other countries has had mixed results and the effects may not be sustained in the long term (Barry and Jenkins 2007). However, the very low cost would justify even short-term effects.

#### **Mental health impact of education**

It is also worth noting the impact of educational achievement on mental health. In a longitudinal econometric study, Chevalier and Feinstein found that education reduces the risk of poor mental health, with the largest impact for gaining low level credentials (Chevalier and Feinstein 2006). The positive effect of education is present at all ages and remains even after accounting for work and family characteristics, although it is significantly stronger among women than men. They found that education reduced the risk of transition to depression and that education improves mental health even at a low level of malaise score. This suggests that the literature focusing solely on depression as an outcome underestimates the effect of education on mental health. This study strengthens the case for addressing academic under-achievement and for targeting help at low achievers.

Based on a simple calculation of the returns to education in terms of improved mental health, they estimate as follows:

- ▶ A policy increasing the education of females from no to basic qualification will reduce the total cost of depression for the population of interest by £230 million a year or £4.9 billion over the working life of these women, assuming a discount rate of 3.5 per cent.
- ▶ Alternatively, if the probability of depression is not constant over the life time and is only about half as prevalent for the first 20 years of adulthood, the present value of such a policy would drop to £3.2 billion.
- ▶ These estimates can be considered under-estimates, as they assume no effect for men or other education group. This is an additional substantial return to policies increasing education for individuals with low level of achievement.





#### 4.3 Employment/workplace

Overall, paid employment has a much more positive effect on mental health than unemployment, although beneficial health effects depend on the nature and quality of work (Waddell and Burton 2007). There is a significant body of evidence, including studies in the Whitehall II series, that the way in which work is organised and the work climate have a strong influence on health and also contribute to the social gradient in health (Ferrie 2007).

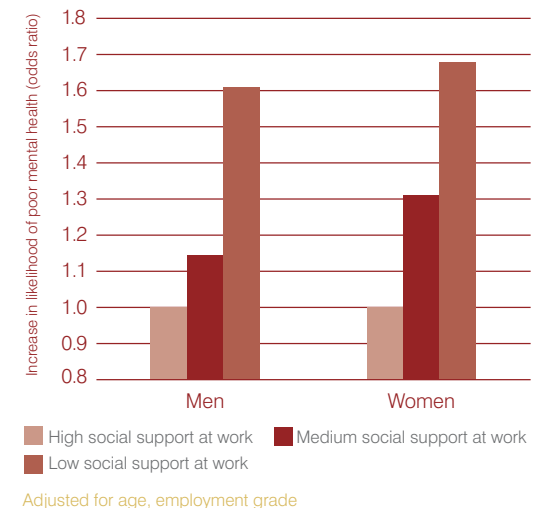
A poor work environment, including poor social support at work, was one of the main factors explaining the higher prevalence of depressive symptoms among participants in lower employment grades (Stansfeld et al 1997; 1999).

The costs associated with poor mental health in the workplace may be considerable. The HSE put the cost to society of work-related stress at £7.6 billion (MacKay 2004). Pattani et al (2001) found that 20% of those who retired early from the NHS on ill-health grounds did so for psychiatric reasons (1988/89 figures). The estimated cost is £83.2 million more than would have been expected if they had retired normally.

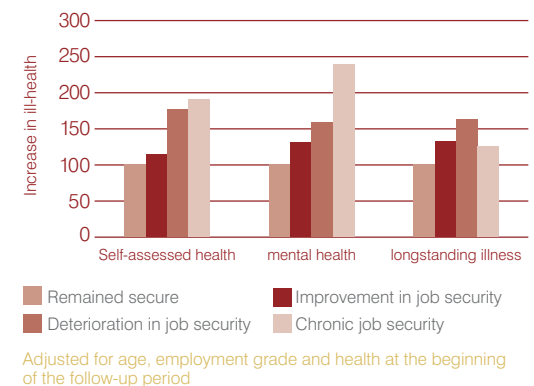
Key factors influencing mental health in the workplace are:

- ▶ high demands and low control (although high demand is independently associated with poor health);
- ▶ lack of support from supervisors and unclear or inconsistent information from supervisors: two-fold increased risk of poor general mental health (figure 1);
- ▶ job insecurity (also increases use of health services) (figure 2);
- ▶ effort-reward imbalance (although most strongly associated with increased risk of CHD) (Kuper et al 2002).

**Figure 1:** Social support at work as a risk factor for subsequent poor mental health (from Ferrie 2007 p.11)



**Figure 2:** Effects of loss or gain of job security and of chronic job insecurity in women (from Ferrie 2007 p.15)



These determinants of mental health at work form the basis of the Health and Safety Executive Stress Management Standards, which although not currently mandatory, have been widely adopted.<sup>22</sup> The HSE 'business case' for adopting these standards is based on reducing the cost of sickness absence, increasing productivity and avoiding the legal costs associated with non-compliance with health and safety legislation.

#### Effectiveness and cost effectiveness

Although there is review level evidence on the key factors influencing mental health in the workplace (demand, control, support, relationships, role clarity and managing change), a number of HSE research reviews acknowledge the lack of 'hard' empirical evidence concerning the costs and benefits of interventions to tackle these issues (HSE 2003). Interventions fall broadly into individual level approaches i.e. those that address the psychological responses and resources of workers (e.g. counselling, cognitive behavioural therapies, stress reduction/relaxation techniques) and organisation level strategies i.e. those that focus on workplace factors (e.g. improving effort/reward balance, minimising job insecurity, improved change management and reducing bullying) (British Occupational Health Research Foundation 2005). There are fewer evaluations of interventions addressing the latter and while there is some evidence of effectiveness across all intervention types<sup>23</sup>, there is no data on cost-effectiveness.

Review level evidence found that effective interventions to improve psychological health and levels of sickness absence included training and organisational approaches to:

- ▶ increase participation in decision making and problem solving
- ▶ increase support and feedback
- ▶ improve communication (Van der Klink et al 2001; Williams et al 1998)

Increasing job control in hospital cleaning staff resulted in a 2.3% reduction in sickness absence at 6 months, but this was not maintained at 12 months (Michie et al 2003). A recent systematic review found that organisation level interventions to increase employee control reduced anxiety and depression but may not protect employees from poor working conditions (Egan et al 2007).

The effectiveness of individually focussed interventions e.g. workplace counselling may be influenced by levels of seniority. One review found that stress reducing interventions resulted in larger effect sizes for employees with 'high-control' jobs. The only cognitive behavioural study involving employees with low-control jobs found no significant effect on their levels of occupational stress. (Taylor et al 2007).

The Australian beyondblue National Depression in the Workplace Program aims to equip staff with a range of skills and practical strategies to promote early detection of depression and increase knowledge and confidence to support and encourage people to access appropriate help. Pre and post training evaluation showed a significant increase in knowledge and confidence, although it is too soon to assess whether this has led to increased recovery, reduced absenteeism and increased productivity (Jorm et al 2005)

<sup>22</sup> <http://www.hse.gov.uk/pubns/indg406.pdf>

<sup>23</sup> The effect sizes of interventions addressing workplace factors were: psychological resources (0.28), physical health (0.30) and complaints (0.27). The corresponding effect sizes for interventions focused on individuals were: 0.48, 0.30, 0.42. All effect sizes were significant at  $p < 0.05$ . (Taylor et al 2007)

#### 4.4 Lifestyle (diet, exercise, alcohol and social support)

Lifestyle messages have rarely been promoted in terms of mental health benefits, although the recently launched Minding your head campaign in Northern Ireland does include guidance on looking after your mental health<sup>24</sup> and NHS Health Scotland has recently commissioned a review of 'positive steps' for mental health (Friedli et al forthcoming).

The review found that although the quality and quantity of studies vary, overall there is evidence to support the effectiveness of lifestyle messages for the promotion of positive mental health, including exercise, diet, learning new skills, creative pursuits and social participation.

Achieving change in relation to exercise, diet and alcohol has potentially very large mental health benefits with relatively low cost interventions, particularly in primary care. Behaviour change will be influenced by a very wide range of factors, and capacity, motivation and opportunity to adopt a healthy lifestyle are strongly influenced by mental health, as well as by socio-economic factors. Nevertheless, evidence from smoking and alcohol show that brief advice from a health care professional can be effective. For this reason, mental health and lifestyle advice should be routinely and opportunistically offered in primary care and other health promotion settings, with a focus on diet, exercise, alcohol and social support.

##### Diet

A healthy diet has a wide range of positive outcomes and some specific mental health benefits. The cost of harmful eating patterns associated with anorexia, obesity and other eating disorders is high. For example, obesity reduces a person's life expectancy by 9 years on average and increases the risk of a wide variety of health conditions, including not only physical disease but also psychosocial problems such as reduced self-esteem and increased risk of depression and social isolation; in 2002 23% of women and 22% of men were obese compared to 8% of women and 6% of men in 1980 (Wanless 2004).

##### Diet:

- contributes to balanced mood which is associated with academic success in children and improvements in behaviour;
- may influence risk, symptoms and outcomes for some mental health problems, including depression, schizophrenia and attention deficit disorder; and
- may also influence anti-social behaviour, including violence (based on a study of young adult prisoners).

(Gesch et al 2002; Peet 2004; Mental Health Foundation 2005; Sustain 2005).

##### Alcohol

Excessive alcohol consumption and certain patterns of alcohol consumption e.g. binge drinking, appear to increase risk of depression and anxiety, although direction of causation is not always clear. There is a clear relationship between alcohol abuse, social functioning and factors that influence mental health e.g. violence, intimate partner violence and sexual abuse of children, as well as risk-taking behaviour, self-harm and suicide (Cabinet Office 2004; Strategy Unit 2003; Mental Health Foundation 2006). According to the WHO, alcohol misuse accounts for 6.7% of the total disease burden in Western European countries, covering the effects on premature mortality and disability/morbidity. The estimated costs of alcohol misuse in England (2000/01) were £20.0 billion, covering health care costs, workplace and wider economy costs and costs of alcohol-related crime (Cabinet Office Strategy Unit 2003).

<sup>24</sup> <http://www.mindingyourhead.com/uploads/MentalHealthNewsletter.pdf>



## Effective approaches to reducing alcohol consumption include:

- ▶ brief interventions in primary care, A&E and criminal justice settings
- ▶ life skills programmes in schools
- ▶ increasing the price/reducing availability of alcohol  
(Ashenden et al 1997; Health Development Agency 2005).

Some people may be using alcohol to self-medicate stress, anxiety and depression and in these cases may benefit from talking therapies, exercise, improved diet or self-help groups (Mental Health Foundation 2006).

### Physical activity

Physical activity has significant health benefits, although these have mainly been calculated in relation to physical health benefits. Adults who are physically active have a 20-30% reduced mortality risk compared with those who are inactive. Physical activity can help to prevent mental illness, as well as CHD, diabetes, musculoskeletal disorders, cancer and obesity, as well as having preventative and immediate effects on children's health. The WHO rates physical inactivity as one of the ten leading causes of death in developed countries. In addition to the effects on health and the personal costs of diseases, inactivity costs the UK economy an estimated £8.2 billion annually through lost productivity, sickness absence and costs to the NHS (Wanless 2004).

For mental health, physical activity is effective in:

- ▶ Treating and improving symptoms for a wide range of mental health problems including depression, anxiety, phobias, panic attacks, stress disorders and schizophrenia;
- ▶ Improving mental well-being including self-esteem, motivation, self-efficacy, mood, self-perception, quality and quantity of sleep;
- ▶ Improving cognitive function in children and maintaining cognitive function in adults; and
- ▶ Preventing depression, although there is insufficient data to determine the optimal level of exercise needed to reduce risk.  
(Department of Health 2004).

Effective approaches to increasing physical activity include brief interventions in primary care. There is limited evidence on the effectiveness of exercise referral schemes and community walking/cycling schemes although NICE recommends that all efforts to increase physical activity should continue (NICE 2006).

### Cost-effectiveness

There is robust evidence to suggest that advice from GPs can have a beneficial effect on lifestyle behaviours. Much of this relates to smoking, where there is review-level evidence to show that simple, brief, unsolicited advice from GPs is effective in increasing rates of smoking cessation (Law and Tang 1995) and is extremely cost-effective, mainly because it is so cheap: a typical 10-minute GP consultation cost £21 in 2005/06 (Curtis and Netten 2006). There is also good evidence of effectiveness in relation to alcohol, where a review of six published studies suggests that between 5 and 10 minutes of advice from GPs to patients with harmful alcohol consumption leads to reductions in consumption of around 25-35% at follow-up six months or a year later (Anderson 1993). While the evidence in relation to diet and exercise is less strong, in all these areas only a very low level of effectiveness is needed to make the intervention cost-effective, given the scale of potential benefits and the very modest cost of GP advice.<sup>25</sup>

<sup>25</sup> However, a significant limitation of lifestyle advice is that it may reinforce or increase health inequalities as uptake is greater among people in higher socio-economic groups.

### Social support

There is good quality longitudinal and cross-sectional evidence, including some review level studies, that strong social networks and social support play a significant role in protecting mental well-being, preventing mental health problems and improving outcomes (Brugha et al 2005; Melzer et al 2004). The level of perceived support appears to be a key factor in influencing mental health. Although material living conditions and socio-economic status are stronger predictors of ill-health, social support can partially offset the effects of deprivation, notably for children. A major programme of research exploring health assets concluded recently that social relationships are most effective in maintaining resilience in the face of adversity, notably through their impact on feelings of integration, competence, self-belief and positive planning for the future (Bartley 2006).

Strengthening levels of social support and identifying structural barriers to social contact, notably for those who are isolated or excluded, presents a significant policy challenge and is likely to involve action across many different areas including transport, housing, regeneration and residential care.



#### 4.5 Environment

The natural world, the built environment and public spaces all influence mental health (Halpern 1995; Weich et al 2002; Whitley et al 2005; Ellaway et al 2001; Hopton et al 1996). Although there is limited data on effective interventions and almost no available data on–cost effectiveness, there is growing public and policy concern about the environment and its impact on well-being.

Environmental predictors of poor mental well-being include:

- Neighbour noise
- Feeling overcrowded
- Feeling unsafe/fear of crime
- Damp housing is significantly and independently associated with GHQ12 scores over 5 (Hopton and Hunt 1996)

Protective features include places to escape to (e.g. green open spaces), places to stop and chat, events to bring people together, community facilities and social and entertainment facilities.

(Guite et al 2006; Chu et al 2004; Clarke et al 2007)

Those living in the most deprived areas are most likely to experience 'street level environmental incivilities' (litter, dog fouling, lack of safe places for children to play, few pleasant places to walk). Those with the highest level of street level incivilities are twice as likely to report anxiety and 1.8 times more likely to report depression (Curtice et al 2005). These findings, although from cross-sectional studies, suggest the potential of addressing street level concerns that may be relatively low in cost.

A Japanese study found longevity of older people in urban areas increased in accordance with the access to proximity of walk-able green spaces (Takano et al 2002).

After controlling the effects of the residents' age, sex, marital status, and socioeconomic status, the factor of walk-able green streets and spaces near the residence showed significant predictive value for the survival of the urban senior citizens over the following five years ( $p < 0.01$ ).

The UK has lower levels of thermal efficiency in comparison with most of Europe (DTI 2001), an important contributor to fuel poverty and with consequences for mental health. The Warm Front Health Impact evaluation found that increases in bedroom temperatures resulting from insulation and heating improvements were associated with significantly better mental health (Gilbertson et al 2006). In the short and medium term, residents with bedroom temperatures at 21C are 50% more likely than those with temperatures at 15C to avoid a GHQ12 score over 4.

#### **Cost effectiveness**

While it is not possible to provide any definitive statements on the cost benefits, investing in environmental improvements may not necessarily involve high cost interventions (e.g. addressing street level incivilities) and will help to ensure a balance between interventions that focus on individuals and those that address the wider determinants of mental health and well-being (Wilkinson 2005).



## 5.0 Conclusions

The evidence summarised in this report demonstrates a very strong general case for mental health promotion, broadly defined to include the prevention of mental illness and the promotion of positive mental health and well-being.

On any reckoning the costs of mental ill-health - and hence the potential benefits of prevention - are extremely high, partly because of the widespread occurrence of mental illness, partly because of its typically early manifestation and persistence over the lifespan and partly because of the multi-dimensional nature of its consequences. The treatment of many clinically diagnosed mental disorders is of limited effectiveness.

Although they are more difficult to quantify at this stage, the benefits of positive mental health are also likely to be considerable. These include improved physical health, reductions in health damaging behaviour, greater educational achievement, greater productivity, reduced crime and higher levels of 'pro-social' behaviour or participation in community life. The growing interest in well-being indicators and the use of scales that measure different elements of well-being will make it easier to assess the relationship between positive mental health and improvements in these domains. In the long-term, these will also help to clarify the relative contribution of social, economic and environmental determinants of mental health and better inform decisions about interventions.

Many things affect mental health and better mental health has many potential benefits. A concern for mental health should therefore be everybody's business, supporting the development of mentally healthy families, mentally healthy schools, mentally healthy workplaces and mentally healthy communities, as well as policies (notably economic, fiscal and environmental) that support mental health

and well-being at all levels. A key role for health promotion and public health should be to foster this wider perspective and to encourage the mainstreaming of mental health in as wide a range of settings and organisations as possible.

In terms of priorities there is a compelling case for putting support for parents and childhood interventions at the forefront. Other items on our provisional list of 'best buys' include:

- Supporting children and young people: health promoting schools and continuing education
- Improving working lives: employment/workplace
- Positive steps for mental health: lifestyle (diet, exercise, sensible drinking and social support)
- Supporting communities: environmental improvements

Together, these interventions have considerable potential to deliver both exchequer benefits and improved quality of life for the whole population of Northern Ireland.



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# Mental Health Promotion: Building an Economic Case

