

Mental Health Improvement: Evidence and Practice

Guide 1: Evidence-based practice
evaluation guides

Published by Health Scotland

Edinburgh office

Woodburn House, Canaan Lane, Edinburgh EH10 4SG

Glasgow office

Clifton House, Clifton Place, Glasgow G3 7LS

www.healthscotland.com

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ISBN: 1-84485-260-1

Designed by Tomahawk

Mental Health Improvement: Evidence and Practice Evaluation Guides

Guide 1: Evidence-based practice

March 2005

Acknowledgements

The Mental Health Improvement: Evidence and Practice Evaluation Guides series was commissioned by Health Scotland, with funding from the National Programme for Improving Mental Health and Well-being. This work was developed by Lynne Friedli, Allyson McCollam, Margaret Maxwell and Amy Woodhouse of the Scottish Development Centre for Mental Health.

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Health Scotland would like to thank all those who participated in the consultation process during the development of the Guides:

- Aberdeen Healthy Living Network
- Argyll and Bute LHCC
- CHEX
- Choose Life National Implementation Support Team
- Clydebank LHCC
- Communities Scotland
- Dundee Healthy Living Initiative
- Glasgow Caledonian University
- Grampian Employment Trust
- Health Promotion Fife
- Health Promotion Greater Glasgow
- Health Promotion Tayside
- Inverclyde Choose Life
- Mental Health Foundation
- Moving into Health, West Lothian
- National Resource Centre for Ethnic Minority Health
- NIMHE
- NIMHE West Midlands
- NHS Health Scotland
- Research Unit in Health, Behaviour and Change, University of Edinburgh
- Scottish Executive Effective Interventions Unit
- Scottish Executive Mental Health Research Team
- Throughcare Support Team, North Lanarkshire
- University of Aberdeen

Contents

	Page no
1 Introduction	1
2 Mental health improvement and public mental health	5
3 What is evidence-based practice?	7
4 Evidence from reviews	8
5 Evaluating mental health improvement: Key challenges	11
6 Bringing together evidence and practice	13
7 Changing attitudes to evaluation	19
8 References	21
Appendices	
Appendix A Glossary	23
Appendix B Other useful resources	25

1.1 What is the purpose of this guide?

This is the first in a series of **Evaluation Guides**, which aim to encourage, support and improve standards in the evaluation of mental health improvement initiatives.

The guides are intended to help colleagues design evaluations that build on what is known about what works to improve mental health and that take account of the challenges of assessing the effectiveness of mental health improvement interventions.

The first four guides in the series are:

- *Guide 1: Evidence-based practice.* How can we use what we currently know to inform the design and delivery of interventions. This guide explores current debates about evidence of effectiveness and why they matter for mental health improvement. It also considers how the evidence base on mental health improvement can be used to inform the design of interventions and their evaluation.
- *Guide 2: Measuring success.* How can we develop indicators to gauge progress and assess the effectiveness of mental health improvement interventions. This guide covers the use of consultation to develop robust, valid and reliable indicators, examines the difference between mental illness indicators and mental health indicators and provides a useful source of indicators.
- *Guide 3: Getting results.* How can we plan and implement an evaluation. This guide gives an overview of the stages involved in planning and implementing an evaluation, and outlines the key issues for consideration. It also indicates sources of further, more detailed information on evaluation.
- *Guide 4: Making an impact.* How do we analyse and interpret the results from an evaluation and communicate the findings to key audiences. This guide discusses how to use the data gathered. It explores how evaluation can be used to inform practice and how the publication of results can add to the evidence base for mental health improvement.

Each guide contains a glossary.¹

¹ Terms in bold also appear in the glossary

The guides have been compiled as part of NHS Health Scotland's work to support evidence and practice in mental health improvement (<http://www.hebs.com/researchcentre/specialist/mhevidprog.cfm>) on behalf of the National Programme for Improving Mental Health and Well-being (www.wellontheweb.net) and complement other resources commissioned by Health Scotland and the Scottish Executive:

- *Mental Health, Mental Well-being and Mental Health Improvement: What do they mean? A practical guide to terms and definitions* (Scottish Executive, 2004, www.wellontheweb.net)
- *Mental Health Improvement: Evidence and Practice case studies* (NHS Health Scotland, 2004). A selection of case studies of current mental health improvement practice in Scotland. This resource provides 22 case examples from a range of sectors and settings of work that is evidence-based, follows good practice guidelines and gives indications of effectiveness. The evaluation guides cross-refer to these case study examples, where appropriate, for illustrative purposes. (<http://www.hebs.com/researchcentre/pdf/FinalReport200304RE041.pdf>)
- *Mental Health and Well-being Indicators Project* (<http://www.phis.org.uk/info/mental.asp?p=bg>). In support of the National Programme for Improving Mental Health and Well-being, NHS Health Scotland is currently developing a set of public mental health indicators for Scotland. The indicators will provide a way of monitoring the state of mental health and well-being in Scotland at a national level. Although the indicators will be designed for use at a national level, some of them may be collected and applicable at a local level and will be helpful for those working locally in mental health improvement.



The guides are designed to strengthen evidence-based practice in mental health improvement and to support evidence from practice.

Strengthening evidence-based practice involves:

- increasing knowledge and awareness of the existing evidence base among practitioners and managers, i.e. what we know about what works in mental health improvement. A summary of some of the literature on evidence of effectiveness is available in *Mental Health Improvement: What works?* (Scottish Executive, 2003, www.hebs.com/topics/mentalhealth)
- involving practitioners in producing guidance on evidence of effectiveness in the context of local needs and priorities, to ensure local relevance
- disseminating guidance on evidence in ways that are accessible and relevant to practitioners and that acknowledge barriers to implementing evidence-based practice
- building capacity, confidence, knowledge and expertise in working with the evidence base, to ensure that the planning and delivery of interventions are informed by an understanding of what works.

Supporting evidence from practice involves:

- enabling practitioners to evaluate interventions in order to inform their own practice and to guide local service development
- supporting the publication of local evaluations in peer-reviewed journals to add to our collective understanding of effective mental health improvement interventions and strengthen the evidence base
- finding ways to bring together practitioner know-how and expertise drawn from their experience of ‘what works’ with findings from the research literature.

1.2 Who are the guides for?

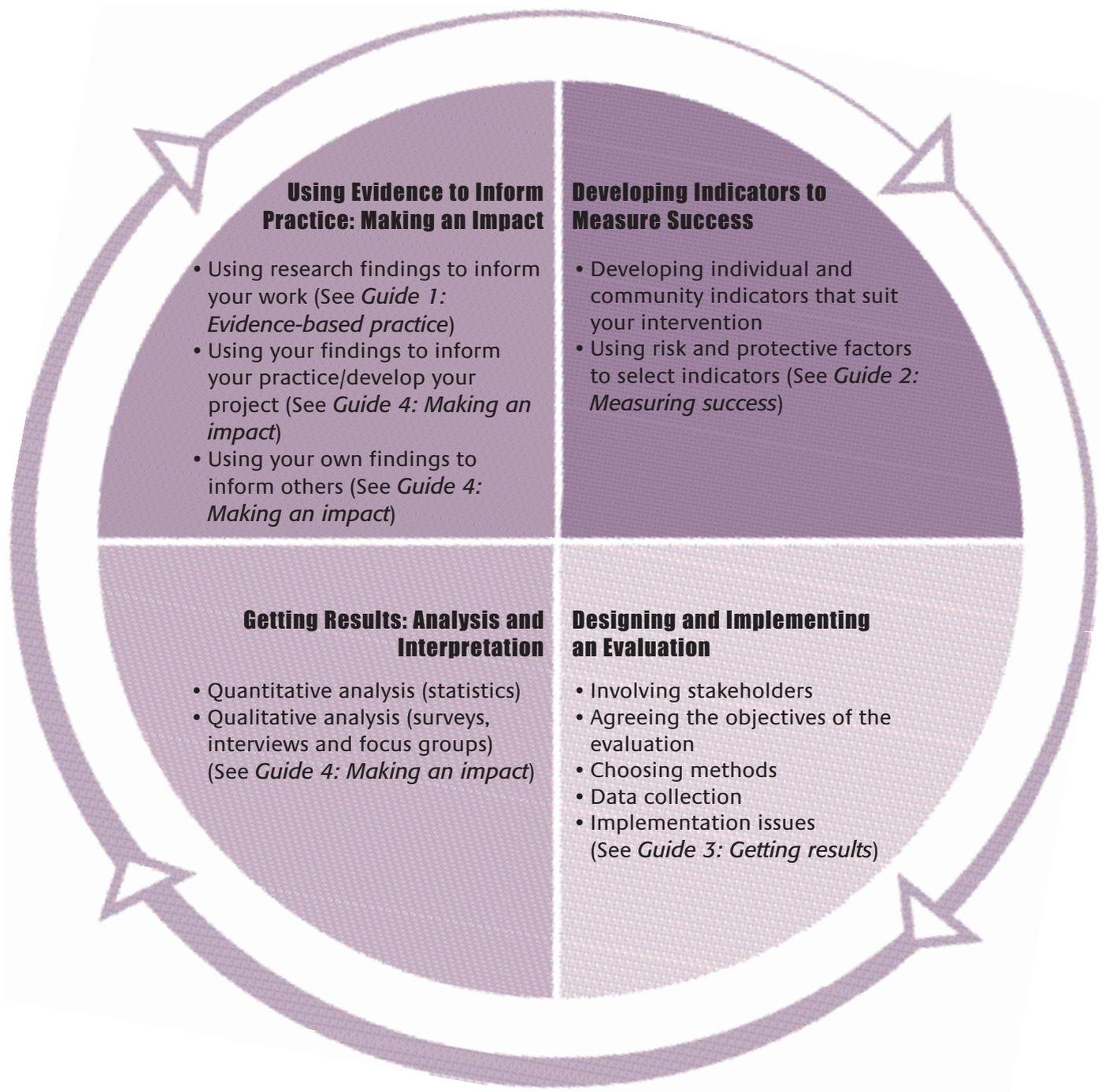
The guides are intended as a resource for colleagues across all sectors and settings. It is anticipated that they will be relevant to those working in a wide range of disciplines and services, both those with an explicit remit for mental health improvement and those for whom mental health improvement is an integral but implicit aspect of their work. The guides relate to areas of activity that are central to the responsibilities and interests of Community Planning Partnerships, Community Health Partnerships and multi-agency service planning groups for children and young people and for adults of all ages.

They have been developed in response to a clearly identified need among practitioners and service managers and programme managers for information and guidance on the evaluation of mental health improvement interventions. The guides therefore bring together information on evaluation theory and practice and a discussion of current debates and challenges in the field of mental health improvement, as well as pointers for practical application in designing and evaluating interventions. The series is not intended to be an evaluation manual – more detailed advice on evaluation for those who require it can be obtained from the resources listed in Appendix B to this guide and in *Guide 3: Getting results*.

1.3 What does this guide cover?

This guide explores current debates about evidence of effectiveness and why they matter for mental health improvement. It also considers how the evidence base on mental health improvement can be used to inform the design of interventions and their evaluation.

The Evaluation Process



Mental health improvement and public mental health

Mental health improvement (sometimes called mental health promotion) is any action taken to increase mental health among populations and individuals. Mental health improvement is an umbrella term that may include action to promote mental well-being, to prevent mental health problems and to improve quality of life for people with a mental illness diagnosis:

mental health promotion is both any action to enhance the mental well-being of individuals, families, organisations and communities, and a set of principles which recognise that how people feel is not an abstract and elusive concept, but a significant influence on health. (Friedli, 2000, p16)

Mental health improvement is essentially concerned with:

- how individuals, families, organisations and communities think and feel
- the factors which influence how we think and feel, individually and collectively
- the impact that this has on overall health and well-being (Friedli, 2000).

Mental health improvement works at three levels. At each level, mental health improvement interventions are relevant to the whole population, individuals at risk, vulnerable groups and people with mental health problems:

- strengthening individuals – by increasing emotional resilience through interventions designed to promote self-esteem, life and coping skills, e.g. communicating, negotiating, relationship and parenting skills
- strengthening communities – by increasing social support, social inclusion and participation, improving community safety, neighbourhood environments, promoting childcare and self-help networks, developing health and social services which support mental health, improving mental health within schools and workplaces, e.g. through anti-bullying strategies and mental health strategies
- reducing structural barriers to mental health – through initiatives to reduce discrimination and inequalities and to promote access to education, meaningful employment, housing, services and support for those who are vulnerable (Department of Health, 2001).

Mental health improvement therefore falls within the remit of many different services and agencies and can be influenced by their activities. The work of local government (for example education, community services, transport, community safety) and of other public services such as the police, the activities of the community and voluntary sector, the role of private sector employers as well as the work of the NHS can all contribute to the mental health and well-being of local people.

Public health is concerned with improving the health of the population, rather than treating the diseases of individual patients. Key themes in public health include addressing the root causes of illness, tackling the inequalities that are at the heart of large variations in health and promoting public participation.

Public mental health takes a population-wide approach to understanding and addressing risk and protective factors for mental health:

public mental health, (of which mental health promotion is one element), provides a strategic and analytical framework for addressing the wider determinants of mental health, reducing the enduring inequalities in the distribution of mental distress and improving the mental health of the whole population. (Friedli, 2004, p2)

What is evidence-based practice?

The evidence on its own does not provide a complete recipe for success.

Evidence-based practice is a structured and systematic approach to using research-based knowledge of effectiveness to inform practice. Knowledge includes formal information derived from research, for example from published **trials** and **reviews**. It also encompasses the informal knowledge and wisdom of practitioners, sometimes called tacit knowledge. This informal knowledge can include, in addition, the expertise of those who receive an intervention, whether that is medication, talking therapies or attending a parenting skills group.

Evidence of **effectiveness** is of crucial importance to all aspects of health and social policy and practice, the allocation of resources and the delivery of services. Drawing together, analysing and synthesising evidence from research is a central principle of evidence-based practice.

At the heart of the debate about evidence-based practice are three critical issues:

- how to integrate the published research literature on evidence with practitioner expertise and experience and with the expertise and experience of those who use services
- how to combine different types of evidence from different methodological traditions, including data from practice
- how to ensure that the focus on evidence-based practice takes full account of the need to promote diversity and equality, to be able to answer the question ‘whose evidence?’. (There is a fuller discussion in *Guide 2: Measuring success* on the selection of indicators that are relevant to the wide range of those who have a stake in an intervention).

Evidence from reviews

4.1 What systematic reviews tell us

The evidence base for a particular field, e.g. mental health improvement or smoking cessation, is drawn from evaluations of interventions, usually published in peer-reviewed journals. These in turn appear in **systematic reviews**, **meta analyses** or other review-level interpretations of a wide range of studies that meet specific criteria.

Broadly, reviews attempt to analyse, systematically, interventions with a common aim, e.g. interventions aiming to reduce excessive alcohol consumption, to increase physical activity or to improve maternal mental health. The goal of the review is to identify what kinds of interventions are most effective in achieving these aims and any limitations, for example:

evidence from systematic reviews suggests that brief advice from a doctor is effective in improving physical activity levels in the short term (6–12 weeks) but is unlikely to be effective in producing longer term changes.

At one level, information from reviews can be extremely useful. In this example, it suggests that people can change their levels of physical activity but that sustaining this change is difficult. This provides a basis for designing an intervention that might successfully overcome the problem of longer term change. What a systematic review cannot provide is information on why advice from a doctor does not result in long-term behaviour change. Nor does it indicate the particular patients for whom advice alone is not effective.

The findings from systematic reviews generally form the mainstay of the accepted evidence base for a particular field. However, the reliance on systematic reviews to define what counts as effective has been strongly challenged:

- firstly, because of the types of evidence that are not included (see Section 4.2. What's left out?)
- secondly, because systematic reviews tell us very little about the context in which interventions are delivered and in which they work or do not work.

4.2 What's left out?

Systematic reviews usually focus on interventions which have been subject to a **randomised controlled trial** (RCT). This means that a large range of studies do not fit the criteria for systematic reviews, for example:

- practice studies
- research studies, e.g. action research, non-controlled studies
- local data and project evaluations
- expert and practitioner opinion
- client opinion and experience.

4.3 Evidence in context

Mental health improvement interventions, in particular, tend to be complex. How they work and the impact they have are often strongly influenced by the specific context in which they are delivered.

The effectiveness of a particular approach, for example an initiative to promote emotional health and self-esteem of young people at school through a peer education initiative, may be significantly influenced by factors like age, gender, school culture, parental involvement in the school, as well as by local beliefs, traditions and role models.

Understanding what makes an intervention work well and what stops it working well in a particular context is essential information not only for those with responsibility for that particular initiative but also for anyone interested in replicating it elsewhere.

New approaches to thinking about evidence of effectiveness, for example Theory of Change and Realistic Evaluation, aim to address some of the weaknesses of systematic reviews by placing a strong emphasis on context. These approaches seek to answer more specific questions: what works, for whom, in which circumstances? This is an attempt to link the problem, the activities and interventions planned to address the problem and the outcomes intended (Pawson and Tilley, 1997).

This is crucial in enabling us to address a key methodological issue in evaluating interventions, to distinguish between:

- failure of the intervention concept or theory; for example, the intervention might be designed on the assumption that informing people about risks and remedies will produce behaviour change
- bad delivery arising from a failure of implementation; for example, producing a leaflet that is inaccessible or unappealing to the target group.

If there are flaws in the rationale behind the intervention – in this case the misguided belief that the provision of information leads to behaviour change in most people – then high-quality implementation will not solve the problem.

Many mental health improvement interventions are not sufficiently explicit about the rationale and theories that underlie both the analysis of the problem to be tackled and the planned intervention. This issue emerged in selection of the case study examples of mental health improvement work in Scotland (NHS Health Scotland, 2004). Projects tend to state broad aims, such as ‘to raise awareness’, ‘to reduce stigma’, ‘to increase self-esteem’ or ‘to promote social inclusion’. These aims need to be developed further to give a detailed account of the nature of the problem and of the circumstances in which it occurs, informed by evidence from a number of sources. For example:

- What is the evidence that the target group is excluded?
- What are they excluded from?
- What do we know about the factors that might account for their exclusion?
- What do we know about interventions that can address these factors effectively?

EXAMPLE Using evidence in context

Public sector employment of people with mental health problems

Many employers (including public sector organisations) are extremely reluctant to employ people with a history of using psychiatric services. In this context, interventions which focus on improving the skills and confidence of service users may be less effective than those which aim to increase compliance with the Disability Discrimination Act or which actively encourage public sector employers to provide opportunities for return to work and for supported employment.

Access to learning opportunities

In one study on the uptake of learning opportunities by people with mental health problems, it was found that many of the barriers lay with those who provided adult education. Addressing self-esteem, motivation and practical issues like transport, finance and childcare were not sufficient in the absence of interventions to change the way in which education services were provided (James, 2001).

Evaluating mental health improvement: Key challenges

Colleagues in mental health improvement are not alone in facing difficulties in evaluating local programmes, but mental health improvement evaluation does present some particular challenges (NIMHE West Midlands, 2004). These challenges may relate to practical issues, for example lack of resources or appropriate expertise. Or there may be conceptual and methodological challenges, for example limited timescales for the evaluation or difficulties in identifying valid indicators. The following summary of common challenges encountered in evaluating mental health improvement interventions may help in drawing attention to and seeking to address these issues at an early stage, even if they cannot always be resolved fully.

Practical issues

- Resources – good-quality evaluation needs to be included in the budget at the proposal stage (see *Guide 3: Getting results*).
- Expertise – evaluation skills and expertise should be identified and costed at the beginning and should inform the design of the project. Projects have to make difficult judgements about the balance between internal and external independent evaluation and the relative costs and advantages of each (see *Guide 3: Getting results*). *Mental Health Improvement: Evidence and Practice case studies* (NHS Health Scotland, 2004) provides examples of different ways that this can be addressed.
- Policy and organisational barriers – evaluation needs an environment that supports monitoring, feedback, dissemination and learning from both success and failure. Evaluation also needs to be supported by all stakeholders/partners involved in the intervention. As the case study examples in *Mental Health Improvement: Evidence and Practice case studies* (NHS Health Scotland, 2004) illustrate, many mental health improvement interventions are delivered through partnerships and the design and implementation of the evaluation needs to be undertaken within that context.
- Consultation and engagement – evaluations are more likely to be robust and meaningful if they are designed in consultation with key stakeholders, those who will deliver the intervention and the target audience. People are more likely to stay involved and make use of the evaluation if they have opportunity to receive feedback on interim and final results and to participate in planning how the findings can be used in practice. Consultation is a theme running through each of the Guides in this series.

Methodological issues

- Distinguishing between theory and implementation – when planning an evaluation and interpreting the results, it is very important to be able to make the distinction between the rationale behind the intervention being evaluated and the delivery of the intervention. As noted earlier there is a crucial difference between ‘doing the right thing’ and ‘doing things right’. A project (e.g. an awareness-raising event in schools) may be well delivered, but the theory or concept may be flawed (e.g. there is little evidence that raising awareness of mental illness in schools changes behaviour).
- Establishing clear pathways – a clear pathway needs to be established between the definition of the problems, the choice of interventions to address them and the goals, targets and indicators set to measure achievement.
- Timescales – these may be too limited to show any meaningful impact on key dimensions of mental well-being, e.g. self-esteem, self-efficacy, hopefulness, trust, problem solving.
- Using qualitative data – finding a framework to capture and take account of people’s subjective experiences and interpretations, which are of fundamental importance in tracking improvements in mental health.
- Measurement of success – developing indicators of mental health as opposed to mental illness (see *Guide 2: Measuring success*).
- Causes and influences – interventions are often designed to address known risk and protective factors for mental health (see Section 6.3). For some of these factors, the association with improved mental health is indirect, not causal.

Edwards and colleagues in the West Midlands have developed a helpful framework to address some of these issues, using the following questions:

- What is your idea?
- Is it a clear idea?
- Is it a good idea?
- Can it be done?
- Can it be evaluated?
- What needs to be measured or collected to evaluate rigorously?
(Edwards *et al*, 2003).

6.1 Assessing evidence to inform practice

Essentially, there are two key issues here: the nature of the evidence base itself and getting evidence into practice. In practice, mental health improvement is far from alone in finding traditional approaches to assessing and bringing together evidence of different types of limited value (Kelly *et al*, 2004).

An interesting example of a promising approach to overcome this is proposed by Oliver and colleagues. They set out to draw together findings from different types of studies (e.g. surveys and qualitative studies) concerned with the factors that act as barriers and those which are helpful in relation to health and related behaviour among young people (Oliver *et al*, 2003; Thomas *et al*, 2004). The method they used deserves to be much more widely known and is a helpful example of a systematic approach that goes beyond questions of ‘effectiveness’, to consider need, intervention design and development, acceptability and feasibility.

To address the question, ‘what factors are associated with mental health, healthy eating and physical activity’, among young people, these researchers used a range of different types of studies, including **surveys**, **cohort** or **case-control studies** and **qualitative studies**. **Controlled trials** were used to establish which interventions were effective.

Young people’s views were used to assess interventions drawn from the research literature as follows:

- to what extent have interventions addressed the barriers identified by young people?
- to what extent have interventions built on the factors identified as helpful by young people?

Using ‘constant comparison’ across the results of each synthesis, the review team looked for interventions that diminished identified barriers and that built upon identified helpful factors. In other words, the bringing together of the evidence was centred on young people’s views and was matched against what young people themselves considered to be the influences that affected their health and behaviour.

This approach has several distinguishing features which lend it wider applicability:

- it provides a systematic account of young people’s views, drawn from the literature, and integrates them with findings from **experimental studies** (controlled trials)
- it then invites young people to engage in the process of assessing evidence of effectiveness in the light of their own knowledge about factors that help and that hinder

- it is based on the understanding that interventions are more likely to be effective if they are multifaceted and target barriers and helpful factors on three levels:
 - the individual (knowledge, attitudes, self-esteem)
 - the community (family and social support networks)
 - wider society (social class, access to resources and services).

Qualitative studies provide important insights into the subjective experiences and meanings of health and well-being and of illness, in their particular socio-cultural context. The views and experiences of the target group for an intervention cannot be demonstrated experimentally, but are nonetheless crucial in planning, implementing and evaluating effective interventions. Incorporating an understanding of the perspectives of the target group is important in drawing attention to the influence of cultural factors that shape people's experiences and aspirations. Many mental health improvement interventions are targeted at excluded or marginalised groups whose voices and experiences need to be heard.

6.2 Grading evidence of effectiveness

The strength or robustness of the evidence drawn from evaluation studies is traditionally graded using the Bandolier system. The Bandolier system grades evaluations in a hierarchy according to study design. For example, randomised controlled trials are considered better than **observational studies** or **qualitative data** from users and carers.

Hierarchy of evidence: Bandolier system

- I systematic review, including one RCT
- II at least one RCT
- III at least one well-designed intervention
- IV at least one well-designed observational study
- V expert opinion, including users/carers

However, each type of design has its particular strengths and weaknesses. For mental health improvement and other public health interventions, study design alone is an inadequate marker of quality (Rychetnik *et al*, 2002), and quality is not confined to experimental methods. Reeves *et al* (2001), for example, found that observational studies of high quality yielded similar evidence to that produced by RCTs.

Whatever design is selected for an evaluation, it is important to ensure that the methods employed are systematic and rigorous to ensure that the results can be interpreted in a balanced way. This is explored further in *Guide 3: Getting results*.

6.3 Using the evidence to plan and design mental health improvement interventions

The rationale for mental health improvement interventions should be drawn from the evidence on risk and protective factors. In other words, mental health improvement interventions aim to:

- modify or remove factors that are known to impact adversely on mental health for a particular target group or setting

Case study 2 see *Mental Health Improvement: Evidence and Practice case studies* (NHS Health Scotland, 2004) includes specific interventions to tackle the financial disadvantage experienced by families.

Case study 18 see *Mental Health Improvement: Evidence and Practice case studies* (NHS Health Scotland, 2004) sets out to reduce the negative impact of bereavement on young people and their families.

- strengthen protective factors that are associated with enhanced mental well-being and/or with reducing the likelihood of experiencing mental health problems

Case study 20 see *Mental Health Improvement: Evidence and Practice case studies* (NHS Health Scotland, 2004) aims to promote safety in the home and social support for vulnerable older people.

Case study 17 see *Mental Health Improvement: Evidence and Practice case studies* (NHS Health Scotland, 2004) sets out to enhance the coping and communication skills of girls of secondary school age.

Further examples of risk and protective factors are included in *Guide 2: Measuring success*.

However, one must exercise caution in the use of risk and protective factors. The strength of evidence on risk and protective factors varies considerably. Large-scale studies are needed to identify the relative contribution of different factors, for example socio-economic status, housing, gender, age, education, family conflict, bereavement, unemployment and health behaviours. Statistical models are used to control for different factors, in an attempt to identify how different risk factors contribute to variations in health.

EXAMPLE Identifying key risk factors

The Whitehall II study examined the health status of white collar workers in the civil service. Although the entire sample was employed, with reasonable job security and levels of affluence, the study identified significant differences in health. These variations persisted over time, after controlling for health behaviour and previous health history. However, mapping the inequalities in health against job grade and status revealed a clear link between position in the hierarchy and health. The poorer health status of those lower down the hierarchy was subsequently attributed to low job control. This finding has now been replicated in a wide range of workplace studies (Stansfeld *et al*, 2000).

It is often difficult to attribute the direction of causality, i.e. whether a specific risk causes a problem or whether the problem is a cause of the risk. For example, **cross-sectional studies** (a snapshot of people at a point in time) show that children who have been bullied are more likely to have anxiety, depression and low self-esteem. Such studies reveal an association between mental health and bullying, but cannot identify whether having a mental health problem, e.g. being anxious or depressed, makes it more likely that a child will be bullied, or whether anxiety and depression are a consequence of being bullied.

To establish causality, **longitudinal studies**, which observe the same **cohorts** over time, are needed.

EXAMPLE Establishing causal connections

To examine whether bullying is more likely to be a cause or a consequence of emotional problems, Bond *et al* (2001) conducted a **prospective study**, which followed young teenagers through the school for some years. They found that previous recurrent emotional problems were not significantly related to the likelihood of being bullied. Their data also showed that a history of being bullied predicted the onset of anxiety and depression, especially in adolescent girls.

This indicates that mental health problems are a consequence of being bullied.

6.4 Designed to work?

When you are designing an intervention, the evidence on risk and protective factors can tell you what the problem is; evidence of effectiveness tells you what kind of interventions help. In both cases, the research evidence needs to be supplemented by qualitative local data to assess needs, views, perceptions, priorities and values of both key local partners and the target group.

A significant proportion of interventions are implemented without any meaningful consultation with those who will be at the receiving end and whose response to, or involvement in, the intervention will play a large part in determining its impact. More information on consultation and planning an evaluation is given in *Guide 3: Getting results*.

Effectiveness is the extent to which an intervention does people more good than harm in real-life circumstances. For this reason, both quantitative and qualitative local data are essential in building a picture of the 'real-life circumstances' in which an intervention will be delivered in a particular school, neighbourhood or community.

A health needs assessment (HNA) is one framework for gathering this data, usually at health board or local authority level. HNAs review the health issues facing a given population, e.g. in a specific locality; within a setting, e.g. school or prison; by shared experience, e.g. age, ethnicity, or by having a particular condition, e.g. mental health problem, diabetes. A health needs assessment determines the health needs and assets of that population. It may include local health data, professional and community views and/or community surveys.

EXAMPLE Designing a mental health improvement intervention and its evaluation

The intervention

Aim of the intervention:

- to reduce anti-social behaviour in an area that has been subjected to high levels of vandalism over the years.

Objectives:

- to involve young people in their own patch (on the streets) to enable young people to develop new skills in a contemporary medium (digital video and music)
- to increase feelings of belonging and ownership among young people in the community.

Rationale:

- lack of meaningful activity, social exclusion and disengagement are associated with high levels of anti-social behaviour, including vandalism.

The evaluation would need to answer the following questions:

- were young people involved?
- did young people develop new skills?
- were feelings of belonging and ownership increased?
- was there a reduction in acts of vandalism?

To answer these questions, an evaluation must start with establishing a baseline to describe the target group or setting before the intervention starts. Baseline data is essential in order to establish whether any change has occurred. Baseline data for this project might be drawn from the following sources:

- survey of young people in the neighbourhood
- interviews with local schools, community groups, housing associations, youth workers, youth justice
- police records/crime reports.

The evaluation will need to distinguish between inputs, processes, outputs and outcomes:

- inputs refer to the resources needed to provide an intervention, e.g. video equipment, sound systems, camcorders, video artist, engineer, youth worker, musician
- processes describe how the intervention is delivered
- outputs are the activities involved in delivering the intervention, e.g. the number of young people who turned up, the percentage who took part in making a video, the percentage who returned each week
- outcomes are the results of the intervention. What is defined as an outcome depends on the aims and objectives. In this example, an outcome could be a reduction in vandalism in the neighbourhood. Outcomes are sometimes defined as 'soft', e.g. subjective, self-reported increases in confidence or self-esteem vs. 'hard', e.g. objectively measurable reductions in anti-social behaviour.

Emerging evidence on mental health improvement provides an important challenge to fixed distinctions between soft and hard outcomes because of growing evidence of the link between how people feel and health outcomes. The inclusion of indicators to measure both objective and subjective factors is explored further in *Guide 2: Measuring success*.

A more critical issue is how outcome data is collected and the robustness of the methodology. Many evaluations rely on feedback from participants in the intervention which is collected by those delivering it. As with all methods of data collection it is important to be alert to factors which can colour the results. In this case, the views that participants provide may be influenced by their relationship with the service providers or by concern that the intervention may be in jeopardy if they give the 'wrong' answers. Therefore it is important in planning the evaluation to build in safeguards against such bias.

Changing attitudes to evaluation

These guides are being published at a time of passionate debate about what constitutes good evidence, who defines effectiveness and the most appropriate methodology for evaluating interventions. These issues are of special importance to mental health improvement, which is a relatively new field with an evidence base that is still emerging.

In Scotland, there has been an unprecedented level of mental health improvement activity in recent years, notably since the launch of the National Programme for Improving Mental Health and Well-being in 2001 (www.wellontheweb.net). These developments have generated a strong demand for a greater focus on, and investment in, the evaluation of local mental health improvement initiatives, as well as an interest in disseminating the evidence base for mental health improvement more widely. These are important priorities. However, it is also important to recognise other issues which impact on evidence in practice:

- to determine whether an intervention, even one well founded on the evidence, is likely to be successful, requires an understanding of local contexts and circumstances (Kelly *et al*, 2004)
- evidence of effectiveness is only one element in a range of factors that influence both commissioning and day-to-day practice. There are also cultural, organisational, professional, policy and economic barriers to implementing evidence-based practice
- the evidence base provides a framework, rather than a prescription for detailed action at a local level (Scottish Executive, 2004).

The traditional view of mental health improvement is that there is very little robust evidence of its effectiveness. A key problem has been that randomised controlled trials (the gold standard for assessing evidence of effectiveness) are of limited use in evaluating mental health improvement interventions. However, it is now much more widely accepted that different methods and different criteria for measuring success are required across all areas of health improvement activity as well as health service delivery.

Factors that have influenced this shift include a growing emphasis on:

- the impact of psycho-social factors on health, e.g. social capital, social inclusion and quality of life
- public/patient/community involvement and the need to take account of their views in deciding what success looks like
- user-led research, drawing on people's own expertise in living and coping with mental health problems.

The demand for evidence-based practice is likely to remain fundamental, but questions about what counts as evidence are growing louder:

In thinking about evidence of effectiveness, there are only two questions: who defines success and what measures are they using? (Mentality, 2003).

Central to this debate is the view that measures of success (health outcomes) need to be expanded to include the goals of those at the receiving end of interventions. The POEMs (patient-oriented evidence that matters) now regularly featured in the *British Medical Journal* are an example of this trend. The defining feature of a POEM is that it addresses a question that is important to patients; in other words, relevance is more important than validity (Smith, 2002).

The view that measures of success (health outcomes) need to be expanded to include the goals of those at the receiving end of interventions has been particularly central to debates about the quality of mental health treatment and services and has led to a growing emphasis on outcomes valued by users, for example employment, independence, friendships and quality of life. A key challenge for mental health improvement is finding both the measures and methodologies that can capture a wider range of domains than symptoms, and a wider range of stakeholder perspectives.

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Appendix A Glossary

Action research aims to produce knowledge and to generate solutions to problems that have direct relevance to those involved in the research. Action research uses a variety of methods but is characterised by collaboration between researchers and practitioners/ community members.

Case-control studies A case control study is a descriptive research method which involves comparing the characteristics of a group of interest, the cases (e.g. those exposed to a particular risk factor or with a specific problem), with a comparison group without the characteristics of interest, the controls. This comparison aims to identify factors which occur more or less often in the cases compared with the controls, in order to indicate the factors which increase or reduce the risk factors for a given condition. A case control study therefore aims to investigate cause and effect. A case control study can be **prospective** or **retrospective**.

Cohort study involves two similar groups (**cohorts**), one which is exposed and one which is not, to a risk factor or intervention. These cohorts are followed up over time and the incidence of the outcome in one group is compared with the incidence in the other. In a matched cohort study, the cohort groups have characteristics (e.g. age, gender, social class, disease severity) that are as similar as possible. A cohort study is an **observational study**, and it can be **prospective** or **retrospective**.

Controlled trial An assessment of an intervention which has not included randomising participants (see also **Randomised controlled trial**).

Cross-sectional study This is essentially taking a snapshot of a group of people at one point in time and may determine the point **prevalence** of diseases, behaviours, etc., in that population. Cross-sectional surveys, for example, can show whether there are different patterns of depression or smoking among different age groups or ethnic communities. If repeated, cross-sectional studies can enable trends to be tracked over time to indicate increases/decreases in the problem behaviour (related category: **longitudinal study**).

Effectiveness The extent to which an intervention does people more good than harm. An effective treatment or intervention is effective in real life circumstances, not just an ideal situation. Effectiveness asks: are the intended impacts being achieved? Do the outcomes indicate that resources and inputs are being used to good effect?

Experimental study see **Randomised controlled trial**.

Longitudinal study Longitudinal or 'panel' studies ask the same questions of the same group or sample of people over time. They can therefore analyse causal factors and the process of change, e.g. the British Household Panel Survey, which has interviewed the same 5000 households annually since 1991.

Meta analysis A quantitative overview which summarises the results of several studies into a single estimate and gives more weight to the results from studies with larger samples.

Observational study A study in which the investigators do not randomise participants to treatment and control groups, but only observe those who are (and sometimes those who are not) exposed to the intervention, and interpret the outcomes. Observational studies are often used to interpret research with pre-school children, and others whose experiences cannot readily be communicated using writing or talking.

Prospective study One in which the investigators design the study in advance. People are then recruited and studied according to the study's criteria. A **randomised controlled trial**, for example, is always prospective, while a **case-control study** is commonly retrospective ('after the event'). In a prospective study, investigators do not know what the outcomes will be when they undertake the study (contrast with **retrospective study**).

Qualitative studies A systematic, subjective approach used to describe life's experiences and give them meaning, conducted to describe and promote understanding of those experiences.

Qualitative data Data that describe objectively measurable patterns and trends.

Quantitative research Systematic collection and analysis of numerical data to describe patterns and trends.

Randomised controlled trial A trial of a treatment or intervention in which participants are randomly (i.e. by chance) assigned to two groups. One group receives the intervention being tested (the experimental group) and one receives no treatment, 'usual' or 'standard' treatment or a placebo (the control or comparison group). Both groups are followed up to see what effect, if any, the intervention has produced. **Non-randomised trials** are when allocation is not by chance, e.g. using date of birth.

Retrospective study A study in which investigators select groups of patients that have already been treated and analyse data 'after the event'. They are considered less reliable than prospective studies (contrast with **prospective study**).

Review Any summary of the literature.

Systematic reviews A review in which evidence on a topic has been systematically identified, appraised and summarised according to predetermined criteria.

Surveys A methodology to collect data systematically from an identified sample of the target population. Survey data can be collected through written questionnaires or by interview (phone or face-to-face). Large-scale surveys tend to use structured questionnaires with fixed response categories to allow for quantitative analysis of the data collected. Semi-structured questionnaires can use a combination of closed questions (which require a 'yes/no' type of response) and open questions which ask for a fuller response.

Trial A trial of a treatment or intervention which does not include either a control/ comparison element or any randomisation of participants.

Appendix B Other useful resources

Forward Scotland

http://www.forward-scotland.org.uk/projects/case_studies.cfm

National Centre for Social Research (2003). Cabinet Office, London. *Quality in Qualitative Evaluation: A framework for assessing research evidence*

http://www.number-10.gov.uk/su/qual/downloads/qqe_rep.pdf

Scottish Executive: Mainstreaming Equality website

<http://www.scotland.gov.uk/mainstreaming/?pageid=403>

Scottish Executive Effective Interventions Unit: Evaluation guides for evaluating services for drug users

<http://www.drugmisuse.isdscotland.org/goodpractice/EIU>

Scottish Executive National Programme for Improving Mental Health and Well-being

www.wellontheweb.net

Scottish Centre for Regeneration website

http://www.pp.scr.communitiesscotland.gov.uk/stellent/intradoc-cgi/idc_cgi_isapi.dll?IdcService=GET_DOC_PAGE&Action=GetTemplatePage&Page=SCR_HOME_PAGE

WHO website providing access to sources of evidence including case studies for public health

www.who.dk/eprise/main/WHO/Progs/HEN/Home

