

Mental Health Improvement: Evidence and Practice

Guide 5: Selecting scales to assess mental wellbeing in adults

evaluation guides

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Mental Health Improvement: Evidence and Practice Evaluation Guides

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- provided up-to-date copies of their scales (and in some cases, supporting evidence) for us to review
- gave their permission for a copy of their scale (or a selection of items) to be included in an appendix of the *Review of Scales of Positive Mental Health Validated for Use with Adults in the UK: Technical report*[1] (which accompanies this guide) for the benefit of users when selecting an appropriate measure.

[1] Available from http://www.healthscotland.com/understanding/population/mental-health-indicators.aspx

Contents

1 Introduction

1.1 What is the purpose of this guide?

This is the fifth in a series of Evaluation Guides[2], which aim to encourage, support and improve standards in the evaluation of mental health improvement initiatives. This guide is based upon a *Review of Scales of Positive Mental Health Validated for Use with Adults in the UK: Technical Report*. Parkinson, J (ed) (in press).

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 five 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 access the effectiveness of mental health improvement interventions? This guide covers the use of consultation to develop robust, valid and reliable indicators, examines the differences 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 and improvement.

[2] The Guides are available from http://www.healthscotland.com/mental-health-publications.aspx

- *Guide 5: Selecting scales to assess mental wellbeing in adults.* How do we decide which scale to use for the evaluation of an intervention with respect to its impact on mental wellbeing? This guide explores the selection and use of scales for assessing several elements of mental wellbeing (MWB); factors which influence MWB and the consequences of MWB (hereafter referred to as **aspects of mental wellbeing**) in adults (for example, emotional wellbeing, life satisfaction, optimism and hope). It provides a definition of the term 'scale', explores the use of scales in evaluations and how to select suitable scales. It also recommends various scales for each of the aspects of mental wellbeing addressed.

Each guide contains a glossary[3].

[3] Terms in bold appear in the glossary in Appendix A

The guides have been compiled as part of Health Scotland's work to support evidence and practice in mental health improvement (http://www.healthscotland.com/mental-health-research.aspx) on behalf of the National Programme for Improving Mental Health and Wellbeing (www.wellscotland.info) and complement other resources commissioned by Health Scotland and the Scottish Government:

- *Mental Health, Mental Wellbeing and Mental Health Improvement: What do they mean? A practical guide to terms and definitions* (Scottish Executive, 2004, www.wellscotland.info).
- *Mental Health Improvement: Evidence and Practice case studies* (Health Scotland, 2004). A selection of case studies of current mental health improvement practice in Scotland. This resource provides 22 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.healthscotland.com/documents/435.aspx.
- Mental Health and Wellbeing Indicators Project (http://www.healthscotland.com/understanding/population/mental-health-indicators.aspx). In support of the National Programme for Improving Mental Health and Wellbeing, 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 wellbeing 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.wellscotland.info/research-papers.html)
- 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 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 your 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 improvements, as well as pointers for practical application in designing and evaluating interventions. This 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 in *Guide 3: Getting results.*

1.3 What is the purpose of this guide?

This guide is intended to be a resource to inform policy makers and practitioners about the potential strengths and shortcomings of the different scales for assessing mental wellbeing in adults. It is hoped that this will facilitate the appropriate selection of scales for the evaluation of interventions in terms of their impact on mental wellbeing. The scale or scales that you choose will reflect information provided in this guide, but should also be heavily influenced by the programme of work that you are planning:

- which aspect of mental wellbeing fits best with what you hope to improve?
- in what setting are you evaluating mental wellbeing?

Please note, too, that the use of scales is just one ingredient of a good evaluation. Readers will need to look beyond this guide for information about how they can collect relevant **qualitative data** (perhaps through interviews and focus groups) with which to evaluate their intervention (see *Guide 3: Getting results*). Please also note that this guide does not include the following:

- issues relating to literacy
- issues relating to cultural diversity and minority ethnic groups
- the SF36 and some other commonly used scales – this is because these scales did not fit the criteria set for the review of scales[4].

[4] For further details on these scales see *Review of Scales of Positive Mental Health Validated for Use with Adults in the UK: Technical report*, available from http://www.healthscotland.com/understanding/population/mental-health-indicators.aspx.

1.4 What does this guide include?

This guide is about measuring **mental wellbeing**[5] (MWB) in adults (see Section 2). This fifth guide in the series was commissioned as part of a review of **scales** (see below) that measure selected aspects of MWB[6] (e.g. emotional wellbeing, life satisfaction, self-esteem, social functioning). A brief description of the review and how it was conducted (including the selection of aspects of MWB and scales) is provided in Appendix C[7]. The objectives of the review were to:

- identify the scales suitable for measuring the chosen aspects of mental wellbeing in the UK
- describe and critically appraise the scales
- recommend the most appropriate measures for assessing various aspects of mental wellbeing.

What is a scale?

Scale is the technical term for what most people call a questionnaire. Scale is defined here as a group or sequence of questions, statements or items designed to elicit information from a participant in a standardised format. The individual completes a scale using fixed choice **responses**, (rather than explaining things in their own words), and this means that scores for each question can then be combined to form sub-totals and totals which can then be compared against average scores for similar participants. For more information, see Section 3.

[5] Terms in bold are defined in the Glossary (see Appendix A)

[6] This guide is one of two written reports of the review, the other being a 'technical report', available from: http://www.healthscotland.com/understanding/population/mental-health-indicators.aspx. The technical report provides a full account of the background, methods, results and conclusions of the review. It also includes several appendices, which provide copies of scales (and information on how to obtain permission if this is required), as well as brief descriptions and copies of scales that were relevant to the review but excluded because they did not meet various criteria for inclusion.

[7] For full details of the methods used in the review, see *Review of Scales of Positive Mental Health Validated for Use with Adults in the UK: Technical report*, available from: http://www.healthscotland.com/understanding/population/mental-health-indicators.aspx.

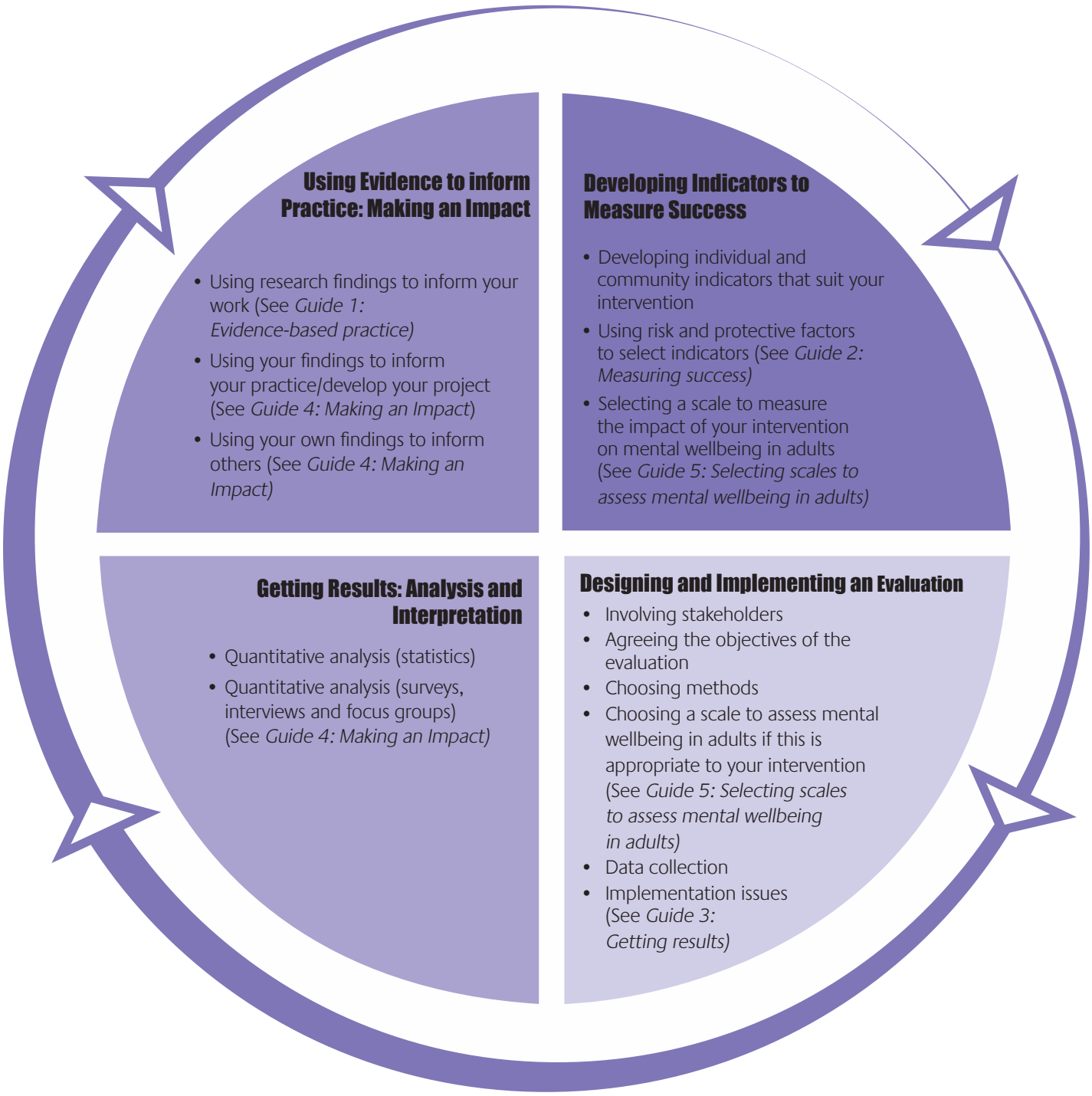
Guide 5: Selecting scales to assess mental wellbeing in adults

This guide considers how to go about selecting a scale for the purposes of evaluating the impact of interventions on mental wellbeing in adults. It is organised into two main sections:

- *How to select a scale:* general principles to guide your choice of scale (see Sections 3, 4 and 5)
- *The recommended scales:* information about specific scales that have been developed to measure various aspects of MWB in adults and that meet our inclusion criteria (see Sections 6 and 7).

This guide is intended to be of use to practitioners and those responsible for delivering and/or evaluating interventions in terms of their impact on adult MWB. Using the results of evaluation to inform policy and practice development is critical in strengthening the two-way link between evidence and practice, as indicated in *Guide 1: Evidence-based practice.*

1 The Evaluation Process



2 What is mental wellbeing?

The focus of this guide is on scales of mental wellbeing (often referred to as positive mental health[8]) and not on the **construct** itself. That is to say that this guide does not aim to provide a detailed review of mental wellbeing (MWB), or to consolidate the debate regarding terminology, definitions and relationships between aspects of MWB.

There are various ways of conceptualising MWB (Keyes, 2005; Ryff and Keyes, 1995). It is unlikely that any one model will meet with universal approval because the concept of MWB is so contentious. A distinction is often made between transient feelings of wellbeing and longer-term concepts such as 'good functioning' and 'personal growth'. The scales included in this guide measure either or both of these dimensions, so we have attempted to integrate these into one broad aspect of MWB, defined as:

> *more than the absence of mental illness or pathology. It implies 'completeness' and 'full functioning'. It includes such concepts as emotional wellbeing, satisfaction with life, optimism and hope, self-esteem, resilience and coping, spirituality, social functioning, and emotional intelligence.*

Our definition includes eight (often overlapping and interconnected) aspects of MWB, which we have defined loosely for the purposes of preparing this guide (see opposite). The aspects and their definitions are by no means exhaustive, nor are they universally accepted.

With these issues in mind, it is hoped that the reader will find this a useful guide to the appropriate selection and use of scales for the evaluation of the impact of interventions on adult MWB. For those who wish to build an understanding beyond the descriptions provided in this guide, please refer to Appendix D.

[8] The term positive mental health is used as an alternative to mental wellbeing in the technical report which supports this practical guide; Review of Scales of Positive Mental Health Validated for Use with Adults in the UK: Technical report (http://www.healthscotland,com/understanding/population/mental-health-indicators.aspx)

Aspects of mental wellbeing used in this guide	Working definition for this guide
Emotional wellbeing This includes, but is not confined to, scales addressing positive **affect**. Scales with a more general focus on overall MWB are also included here.	More than the absence of psychological morbidity (e.g. anxiety and depression); a more positive concept that includes happiness and vitality.
Life satisfaction	Overall assessment of one's life, or a comparison reflecting some perceived discrepancy between one's aspirations and achievement; includes optimistic outlook, perception of life as pleasurable.
Optimism and hope	Positive expectations of the future; a tendency to anticipate and plan for relatively favourable outcomes.
Self-esteem	A belief or evaluation that one is a person of value, accepting personal strengths and weaknesses; sense of self-worth. Related to emotional safety/security i.e. how one feels about self; confidence in and how good one feels in personal relationships (e.g. family, wider community).
Resilience and coping	Resistance to mental illness in the face of adversity; hardiness; learned resourcefulness; a sense of coherence i.e. confidence that internal and external events are predictable and that things will work out as can reasonably be expected; a cognitive evaluation of perceived resources to deal with perceived demands; personal control.

Aspects of mental wellbeing used in this guide	Working definition for this guide
Spirituality	Sense of purpose/meaning in life; a sense that there is something beyond the material world; attempts to harmonise life with a deeper motivation.
Social functioning	a) Personal relationships (interpersonal trust, respect and empathy) Overall assessment of the quality of personal relationships, social networks and social cohesion; the degree to which people function adequately as members of a community; includes role-related coping, social participation, family health, social functioning, sense of belonging; valuing oneself and others; perceiving fair treatment by others (with respect, without discrimination). b) Social support/social networks Interactive process in which emotional, instrumental or financial aid is received from one's social network; individual's belief that he/she is cared for, esteemed; mutual obligations; set of people with whom one maintains contacts and has some form of social bond; social reciprocity.
Emotional intelligence	The potential to feel, use, communicate, recognise, remember, learn from, manage and understand emotions (self and others).

3 Why use a scale?

Ensuring that the impact of an intervention on mental wellbeing (MWB) is evaluated consistently requires:

- agreement about terminology (see Sections 2 and 7)
- a systematic approach - to measuring aspects of mental wellbeing.

Scales enable researchers to ask the same questions of each participant and to obtain systematic responses to those questions. Scales provide the means to identify the need for a policy or intervention and/or to evaluate its effectiveness. Scales are just one of several ways in which information can be collected to answer a research question. They are an example of **quantitative** data collection i.e. using numerical data. By contrast, **qualitative** data is extremely varied and includes virtually any information that can be captured that is not numerical. Qualitative methods include observation, in-depth interviews, focus groups, and analysis of written documents (such as diaries). In order to evaluate an intervention thoroughly, it is often helpful to use a combination of methods (see *Guide 3: Getting results*).

3.1 Different types of questions

The scales included in this handbook are all '**self-report**', that is they involve the **subjective** judgements of the participant (rather than subjective judgements of the investigator who could use observation or interview to answer similar questions). Thus, there are no purely **objective** measures (i.e. diagnostic tests that involve no judgement) included in this guide. There are, however, some scales that include relatively 'objective' data. Both types of data have their advantages and their limitations (see below). This is another reason why a combined approach to evaluation is often helpful. Where objective measures exist, they should be considered for inclusion in the client's notes to supplement the impression given by the subjective self-report scales (see *Guide 3: Getting results*).

EXAMPLE Subjective v objective data

A question that often arises when planning the evaluation of an intervention is whether to collect subjective or objective data, or both. Most scales included in this guide include subjective questions only i.e. they require the participant to indicate how they think or feel. Though this may well provide valuable insights, such subjective data have the disadvantage that they cannot be corroborated and, therefore, we have to take the participant's answers at face value. Objective data have the advantage that they can be confirmed by a third party if necessary (i.e. an independent rater) so they can be considered more reliable but they have the disadvantage that they may not provide sufficient information and insights from which to draw helpful conclusions.

Some scales (particularly those concerned with social networks) include questions that might require seemingly more objective data from the participant e.g. a rating of the actual number of close friends he/she has (which could be corroborated by a third party observer such as a family member). Objective questions (e.g. number of friends) can provide useful indicators of MWB but the data need to be interpreted with caution. For example, can one really infer that someone has greater MWB on the basis that they have a large social network? Might it be more likely that they would have greater MWB if they had fewer but more helpful friendships? For this reason, objective data may be less useful than the participant's own perceptions of his/her social network.

3.2 Different types of response options

Most scales include several **items** i.e. individual statements or questions, to which an individual is invited to respond. The responses may be '**categorical**' (e.g. yes/no); alternatively, they may consist of a **rating scale**, and this may be either '**continuous**' or 'a **visual analogue scale**' (VAS) (see below).

EXAMPLE Response options

Questions can be answered using a range of response types:

I enjoy spending time with friends and family:

Yes / No	[known as categorical]
Very much (3) Sometimes (2) Rarely (1) Never (0)	[known as continuous]
10 9 8 7 6 5 4 3 2 1 Very much Not at all	[known as continuous]
X Very much Not at all	[known as a visual analogue scale (VAS)]

The type of response used in the scale will influence the level of **sensitivity** of the data. Using the example shown above, you can see that the continuous responses provide far more information than the **categorical** yes/no response. Moreover, the greater the number of points in the response scale, the more sensitive the question is likely to be at measuring changes (e.g. post- versus pre-intervention). The VAS has advantages where participants may have literacy difficulties that would distort their interpretation of questions. The disadvantage is that the researcher needs to interpret what the cross (marked at a particular point on the line) means for the participant. Moreover, a scoring grid is needed to place over the line to convert the cross into a number for analysis purposes.

3.3 Pros and cons of scales versus other methods of data collection

As there are several limitations to using scales (see below), it is often useful to use a combined approach when evaluating interventions in terms of mental wellbeing This is especially important when considering the main shortcoming of scales: *that they do not give participants the opportunity to raise new important issues that the researcher did not expect to be relevant.*

Advantages of using a scale	Disadvantages of using a scale
• Standardisation of questions allows comparisons to be made (e.g. between groups, or before and after an intervention), because everyone receives the same questions, in the same format, with the same response options. • Low-cost research (you can send out a large number of questionnaires with the time/money it takes to conduct a few interviews). • Generally, administering scales (unlike interviews) does not require expensive, time-consuming training. • Participants can remain anonymous. • Participants can complete the scale when and where it suits them. • There is no interviewer bias. • Analysis of scores is usually relatively straight-forward (developers often provide guidelines).	• Allows participants to answer only the fixed questions that the researcher believes are important. It may therefore miss important themes that were not anticipated and/or not capture the full experience of the participant. • Obtaining permission to use a scale can be time-consuming. • Some developers/copyright holders charge for using their scales. • Some scales require researchers to undergo training. • Some scales are poorly-worded and/or use unfamiliar and old-fashioned expressions/concepts. • Wording of questions and the type of response options can have a major effect on the scores. • Scales need to be brief and simple to use but are often more complex. • Shortcomings in the quality of data collected (e.g. missing responses because the participant, for some unknown reason, did not answer the question). • Misunderstandings by the participant can go undetected, resulting in scores that are misleading. • Low response rates are common, particularly to postal surveys. This could mean that those who return a completed scale are not sufficiently representative of the wider group. • Information is being obtained without independent observation or corroboration, so it may be highly misleading to the researcher.

By supplementing the use of scales with other methods, such as interviews, the practitioner is more likely to obtain a clearer picture of the ways in which an intervention has affected the community it attempted to serve. For more information, see *Guide 3: Getting results.*

3.4 Reasons not to design your own scale

Many people believe that designing a scale is easy, but it is a challenging, time consuming and complicated task. Almost any newspaper or magazine that you care to look in will include a questionnaire, supposedly designed to measure some aspect of your personality or life e.g. What does your home say about you? Are you a party bore? What kind of shopper are you?[9]

However, developing[10] scales that yield worthwhile data that are insightful, reliable and comparable, is more difficult. In particular, developing questions to measure abstract concepts, such as optimism or self-esteem, is a complex process (see box). Most well-known scales have been developed over several years with many revisions, when flaws in the earlier versions became apparent. This ensures they have been extensively tested and are valid and reliable. Thus, it is almost always better to use scales that have been thoroughly tried and tested. It is also very important not to use single questions or parts of a scale (unless the developer advises that this is possible) because this may invalidate the scale.

Some of the processes involved in developing a new scale

- A comprehensive literature review to understand the themes and issues relating to your subject of interest.
- A qualitative study (e.g. long interviews and focus groups) to investigate the important issues among your participants.
- Development of hypotheses about what you are measuring.
- Design (and refining) of the items and responses.
- A small pilot study (see box on p20) to test the clarity and practicality of your scale, followed by revision of items/responses to improve as needed.
- A large-scale quantitative survey using your new scale.
- Statistical analyses to check if your scale is working as expected (known as '**psychometric validation**').

[9] Real surveys available from www.tickle.com

[10] Development of a scale involves not only designing the items but also testing them to make sure that they are valid, reliable and responsive (for further details see Section 4.3 and Section 3 of *Review of Scales of Positive Mental Health Validated for Use with Adults in the UK: Technical report* (http://www.healthscotland,com/understanding/population/mental-health-indicators.aspx)

If you have compelling reasons to believe that existing scales do not suit your purpose, then you could be justified in developing your own scale. Just bear in mind that perhaps the greatest disadvantage in doing so would be the lost opportunity to make comparisons with the results of other studies i.e. it could be more difficult to prove your intervention was a success compared with other interventions. If you were to develop your own scale, it is important to include one or more existing scales in your data collection so that you can investigate how your new scale compares with other widely used scales. More information on the characteristics of good scales is provided in Section 4.3.

Points for reflection

When planning your intervention, consider the pros and cons of using scales versus other methods of data collection:

- scales provide information about the quantity of impact of your intervention i.e. they allow you to measure differences in scores between groups or before and after an intervention. Scales provide very limited information about the quality of impact of your intervention. Consider whether interviews and/or focus groups would be useful to explore the participants' experiences
- consider collecting **objective** data as well as **subjective** data
- be aware of the **sensitivity** of different types of response
- be aware of the advantages (e.g. comparable responses, low-cost) and disadvantages (e.g. missing data, misunderstandings due to poorly worded questions, low response rates) of using scales

Finally, be aware of the pitfalls of designing your own scale. It is much better to use a scale that has been well developed and tested elsewhere, as this adds to the **validity** of your results. There are many scales available to assess the impact of your intervention (see Section 7).

4 How to select a scale

The key steps to selecting and using scales are:

What are the aims and objectives of your intervention?

What does your intervention seek to improve?

What are the expected outcomes/indicators of success?

General mental wellbeing

Aspects of mental wellbeing

Emotional wellbeing
Self-esteem
Social functioning
Life satisfaction
Resilience & coping
Emotional intelligence
Optimism & hope
Spirituality

Would one or more scales be useful to measure these outcomes?

See Section 3: Why use a scale?

What issues need to be considered in choosing a scale?

See also Section 5: Some questions to ask before selecting a scale.

Select an appropriate general mental wellbeing scale

(pages 30-54)

Select an appropriate aspect of mental wellbeing scale

Emotional wellbeing *(page 30)*
Self-esteem *(page 39)*
Social functioning *(page 47)*
Life satisfaction *(page 35)*
Resilience & coping *(page 41)*
Emotional intelligence *(page 52)*
Optimism & Hope *(page 37)*
Spirituality *(page 44)*

Pilot scale(s) with target group

Administer scale(s) with target group

Use results to inform evaluation

4.1 Start by defining the questions you want to answer

The first priority when choosing a scale is to determine the extent to which it fits with the aims and objectives of your intervention (previous guides in this series provide useful advice on this). So, planning your evaluation is crucial. Evaluating an intervention is not only about proving its success (see *Guide 2: Measuring success* and *Guide 3: Getting results*). A good evaluation can also tell us about how and why an intervention worked, or did not work, which can be useful when developing a service or rolling out an intervention (see *Guide 4: Making an impact*).

People often mistakenly believe that it is important to collect as much information as possible, so that any question about the intervention can be answered. This is not the case. The most successful evaluations are those where the researcher has carefully considered the aims and objectives of the intervention and then constructed **hypotheses** (i.e. specific questions to test). Generating **hypotheses** about your intervention before you begin an intervention means you have a clear idea of what you need to measure. Thus, when it comes to choosing a scale, you need to understand how your intervention is expected to work and then select a scale that is suitable for demonstrating that (see below).

EXAMPLE Matching your scale to the objectives of your intervention

If your intervention is designed to improve self-esteem, you would definitely want to include a measure of self-esteem in your evaluation. But what else might you want to include? If you believe that increasing self-esteem improves mental wellbeing, you will also need to test this idea. To do this, you would need to include a scale capable of measuring overall MWB. By doing all of this, you will then be able to determine:

(a) the extent to which *self-esteem* has improved following your intervention
(b) the extent to which *overall MWB* has improved following your intervention, and
(c) the extent to which any improvement in MWB is due to the improvement in self-esteem.

Some people may then choose to include other scales in the hope that they find some other interesting or useful results. This is commonly known as a 'fishing' exercise. However, this is not necessary or beneficial. Most importantly, the more scales you include in your evaluation, the greater the burden on your participant's time and enthusiasm. This increases the chance of participants missing out data or not responding at all. It can also be considered unethical to ask for data when you have no clear plan for analysing it. However, if you have the **hypothesis** (i.e. a testable theory), for example, that 'social functioning' is the mediating factor between self-esteem and MWB (i.e. that higher levels of self-esteem lead to more positive relations with others, which then increases MWB), then it would be necessary and justifiable to include a social functioning scale in order to test that theory.

4.2 Why can it be difficult to select a scale?

In Section 7, you will see that there are several scales from which to choose within any single aspect of MWB. Selecting the most appropriate one for your purposes will require careful consideration.

This guide will help you to think about what is relevant when trying to make your choice of scale – but for a more detailed description of the key issues in the appropriate selection of scales, see *Review of Scales of Positive Mental Health Validated for Use with Adults in the UK: Technical report*[11].

We have grouped the characteristics (or properties) of the scales under three major headings (essential, desirable and practical properties) see Section 4.3. Before discussing these properties there are three issues to consider that are extremely important when selecting a scale:

- *Can you take a scale from one country/population and use it in another?*
  While it may be unlikely that you will find a scale that was developed in another language and want to translate it for use in the UK, you may well find a scale that was developed in another English-speaking country (e.g. USA, Australia) and want to use that in your evaluation. It is important to realise that a scale developed in one country/culture is unlikely to be suitable for use in another without first undergoing some adaptation. This process is called **linguistic validation**.

  Following this adaptation, the scale will need to be tested statistically (known as **psychometric validation**) to make sure that it still works in the way that was originally intended. Both linguistic and psychometric validation are complex processes, requiring specific expertise. They are also very time-consuming, so it is recommended that you use only those measures that have been developed in the UK or have already been subjected to this testing. The scales included in this guide have been developed and/or tested in this way and are suitable for use in the UK[12].
- *How easy is the scale to read?*
  Many of the scales have been developed using student samples. Thus, although these scales are designed for use with the general population, the selection and wording of items (e.g. trust of others and use of social support) is likely to have been influenced by student perceptions, which may vary greatly from the general population. When choosing a scale, you therefore need to consider carefully the item wording to ensure that it is appropriate for your population.

[11] Available from: http://www.healthscotland.com/understanding/population/mental-health-indicators.aspx

[12] It should be noted, however, that even where research has been conducted in the UK, the extent of the validation was rarely evident. For example, where a US scale was used for the first time in the UK, almost no publications mentioned cross-cultural linguistic validation of the scale and few provided full psychometric validation. In view of these issues, for scales that were developed in countries other than the UK the term 'UK validation' has been used in the technical review to mean that evidence of reliability and validity (including scale structure) has been established using a UK dataset.

Readability is rarely assessed formally or documented. It is highly likely that your target population will include some people who have difficulty reading written English (either because of low literacy levels or because English is not their first language). Some scales are more difficult to read than others, with long words and complex sentence structures. The only way to make sure that the scale you select is appropriate for your target population is for you to assess the readability/suitability of the scale (see below). If you find problems with the scale you have chosen, e.g. some questions are poorly worded and/or irrelevant, you would be well-advised to consider choosing another scale.

If there are no other more suitable scales, then you may want to contact the scale developer to discuss the possibility of modifying some of the items. It is important to contact the developer at this point because they will know how and why the questions have been worded in that particular way. It is likely that the scale developer will be able to advise you what to do in this situation.

- *Will the questions you ask cause distress to your participants?*
  Some questions (e.g. issues concerning friendship networks or emotional relationships) may cause the participant to question aspects of their lives in ways that may distress them. Before you select a scale (particularly if it will be completed by the participant with no follow-up support), please consider the potential issues that certain scales may raise. This is not to suggest that all MWB scales will have adverse effects, but just that you need to think about the impact of asking certain types of questions. Ethics committees are aware of these issues and you will need to have considered them prior to seeking approval.

Pilot testing your scale

You will learn a great deal by completing the scale yourself, and then asking a few people from your target population (i.e. the sort of people among whom you intend to use the scale) to complete it. Then answer (and ask your participants to answer) the following questions:

- how long did it take to complete the scale?
- did each of the questions make sense to you?
- were there any questions (or particular words) that were difficult to understand?
- did any questions cause you distress?
- did the response options fit well with the questions asked?
- were all the questions relevant to what the scale is supposed to measure?
- what, if anything, is missing from the scale that you think is important? Consider whether another scale might be more suitable, or if an additional scale might be required to fill the gaps.
- and finally, did the task of completing the scale feel like an engaging, worthwhile and satisfying experience (by contrast, perhaps, to being irritating, boring, or over-demanding).

4.3 Properties of scales

To identify the most appropriate scale it is important to have an understanding of what makes a good scale. The following properties have been used to appraise the scales included in this guide (see Section 7) and an explanation of each is provided here. The properties have been categorised as essential, desirable and practical (see below). For further information on the appropriate selection of scales, see *Review of Scales of Positive Mental Health Validated for Use with Adults in the UK: Technical report*[13].

Use the traffic lights

Essential properties must be satisfactory before you start.

Desirable properties are helpful but not always necessary or available.

Practical properties are important but can only be judged by you, the individual practitioner, in terms of the extent to which they fit with your requirements.

Essential properties

- Content validity
  Does the scale measure what it claims to measure? This is a subjective judgement of the extent to which the items in the scale adequately cover the **construct** being assessed (e.g. whether it measures self-esteem or optimism or trust). This judgement is not based on statistical analysis but draws on the researcher's understanding of the underlying construct and, if possible, the views of your target group should also be obtained. Ideally, this work will have been done by the scale developer and documented in a published paper but many scales are published without this information. Therefore, it is important that you make an assessment for yourself of the extent to which the items (i.e. questions) in the scale appear to match with what you want to measure.
- Structure
  Do the items fit together? To justify the summing of individual scores into one total or composite score, the scale's structure must be explored using statistical analysis to ensure that all items group together as expected. This is known as **factor analysis**.
- Reliability
  Does the scale produce similar results under similar conditions? This is assessed as **test-retest reliability** (i.e. the **correlation** between scale scores obtained from the same people on two separate occasions). Another form of reliability is **internal consistency** (i.e. a statistical procedure that indicates the extent to which items are homogenous).

[13] Available from: http://www.healthscotland.com/understanding/population/mental-health-indicators.aspx.

Desirable properties

- Construct validity
  *Does the scale relate to other **variables** in a meaningful way?* This is usually assessed by including additional scales in your study that you expect either to relate well to your scale because they are intended to measure similar constructs (e.g. two scales designed to measure optimism) or to be completely unrelated to your scale (e.g. optimism and IQ).
- Responsiveness[14]
  Does the scale detect changes following an intervention? This can be assessed in a number of ways, though it is typically (if not ideally) reported as a statistically significant difference between pre- and post-intervention scores, thus indicating that some change has occurred.
- Normative data
  How does the general population score on this scale? In practice, this information is available for very few scales of MWB because it requires very large sample sizes (which unfortunately are rare in the social sciences). However, if available, this information can be useful in determining the extent to which your sample is similar to the general population.

Practical properties

- *How many items are included in the scale?* It would be counter-productive to administer a scale that includes 40 items if you know that your participants have short attention spans or if you are also including several other scales in your evaluation. Participant fatigue or boredom will probably result in ill-considered answers, missing data and/or low response rates.
- *How much time do participants take to complete the scale?* In addition to the number of items, the complexity and wording of items can greatly influence how long it takes a participant to complete the scale, or even whether or not he/she completes it at all.
- *How easy is it to access a copy of the scale?* While many scales are freely available on the internet or directly from the scale developer/copyright holder, there are many others that require the user to sign an agreement relating to its use. There are several benefits to accessing a legitimate copy directly from the copyright holder (see overleaf), but it is worth finding out early on how long the process of setting up an agreement will take.
- *How much does the scale cost?* While many scales are free of charge (and many more are free to those working on non-commercially funded projects), there are some that require a fee to be paid. This can be as a one-time payment for use in a given study or programme of research or it can be a cost per participant, which may limit the number of people you can afford to include in your evaluation.

[14] Responsiveness is often used interchangeable with sensitivity to change, but the latter term does not imply the change is clinically meaningful

COPYRIGHT The benefits of obtaining a legitimate copy

Copies of most scales included in this guide are available in the accompanying Technical report. The copyright of published scales is usually owned by the developer of the scale or by the publishers. Readers are asked to respect any conditions of use stipulated by the developer and/or copyright holder. In many cases, users will need to obtain a licence to use the scale from the developer or copyright holder. The good news is, for many non-commercial purposes, scales are frequently obtainable free of charge, and permission to use the scale may be easily sought through a simple e-mail or letter. Sometimes, however, users will be required to pay a license or administrative fee for use and/or be willing to provide the developer with access to their data. The advantages of obtaining permission to use a scale (aside from the most obvious, i.e. not breaking copyright laws), include:

- ensuring that you are using the latest version (earlier versions may have been superseded and may no longer be recommended)
- avoiding errors that are common in pirate copies (i.e. introduced when scales are copy typed), which may affect the validity of data collected
- accessing the latest 'scoring guidance' so you can do a proper job of it
- providing feedback to the developer and contributing to the validation of the scale.

Please note: Unless indicated otherwise, scales may not be copied or used without express permission of the copyright holder. Do not let this put you off using a particular scale as permission may be easily obtained.

Points for reflection

When planning an intervention, you need to define the questions you want your evaluation to answer, make sure that the scale you choose is capable of providing the data you need and think about the practicalities involved:

- consider the objectives of your intervention and make sure you choose scales that match them
- ensure that the scale you have chosen is suitable for use in your country/culture
- check whether or not the participants in your intervention will be able to understand the questions in the scale you have chosen. Are there any language barriers? Is the wording overly complex or otherwise unsuitable?
- will the questions you ask cause your participants any distress?
- consider pilot-testing your chosen scale(s)
- do the questions in the scale you have chosen actually measure what the developers say it will measure (i.e. is it valid)?
- does the scale you have chosen produce similar results under similar conditions (i.e. is it reliable)?
- consider the burden on your participants and avoid asking them to answer more questions than you need
- are there any conditions of use that you need to consider, e.g. obtaining permission from the copyright holder or paying a license fee?

5 Some questions to ask before you select a scale

The previous section provided some useful information about what to look for when selecting a scale. What follows is a checklist for those about to embark on the evaluation of mental health. When selecting a scale to measure mental wellbeing (MWB), you may find it useful to consider the following questions. Some issues may not be relevant to your purposes and/or you might find that when considering some of the issues, you then think of other issues that are very specific to your evaluation but not mentioned here. Thus, this checklist is intended to serve as a catalyst for considering some of the general issues that arise when planning an evaluation. The checklist is not exhaustive because all evaluations are different.

- ☐ Are you conducting an intervention, or do you just want to measure some aspect of MWB, perhaps comparing two groups at a particular point in time?
- ☐ If you are conducting an intervention, what exactly do you want to know as a result of the evaluation?
- ☐ Does the scale you are considering fit with your project aims (and your specific hypotheses, see Section 4.1)?
- ☐ In addition to your selected scale(s), have you considered other ways you might gather important information, such as interviews or observation (see *Guide 3: Getting results*)?
- ☐ If you are conducting an intervention, which aspects of MWB (see Section 2) fit best with what you are hoping to improve?
- ☐ If the particular aspect of MWB that you hope to improve does, indeed, show benefit, will this necessarily mean that overall mental wellbeing has improved? If not, have you considered selecting a more general scale (see Section 7.1) as well as the one that measures the particular MWB aspect of interest?
- ☐ From whom will you collect the data, and why that particular group? Will you be administering your scale to participants, or participants' families, carers or perhaps health professionals?
- ☐ When is the information needed? What resources (e.g. time, money, and staff) do you have available for collecting the information?
- ☐ Is the scale 'attractive' to participants (e.g. layout, appearance, font size)?
- ☐ Have you made arrangements to pilot the scale to make sure that the scale is easily understood and easy to complete? Are your participants likely to have limited literacy skills which might interfere with completing the items?

- ☐ Have you considered 'respondent burden' (i.e. the difficulty and number of questions you are expecting the participant to complete)? Are you planning on including additional scales or other questions (such as age, race, gender, education, employment and physical health history), which may add to the respondent burden?
- ☐ Does the scale developer provide any guidance about scoring the items? This should include what to do about missing data.
- ☐ Will you need to repeat your data collection (e.g. before and after the intervention)? If so, what would be an appropriate follow-up period (e.g. three, six or 12 months)?
- ☐ Will participants complete the scale while you are present or some time later, perhaps at home, returning it by post? What implications could such arrangements have for the quality of the data you get back?
- ☐ Have you considered whether the scale, and/or the setting for completing it, may have any potential adverse effects? Is it possible that some questions might upset some participants (e.g. questions about the number of people they are emotionally close to). If so, is an appropriately qualified professional going to be available to deal with any distress caused?

6 Measuring mental wellbeing

One of the greatest challenges for demonstrating improvements in mental health is to identify **indicators** of mental wellbeing (MWB) as opposed to indicators of mental illness. This is further discussed in *Guide 2: Measuring success*.

6.1 Why not use scales that measure mental health problems?

Reducing mental illness is important for improving mental health. When researching mental illness or mental health problems, a typical strategy has been to use scales that are problem-focused (e.g. measures of anxiety and depression). In the general population, where only a minority will be clinically anxious or depressed, such scales often display ceiling or **floor effects**. This means that such scales are unable to detect improvements in people without mental health problems, because the participant's score cannot be improved upon at follow-up. So the scales provide little if any information about whether MWB has increased (Stewart-Brown, 2002).

During the 1980s, as a result of the increasing focus on health promotion, the search for indicators of positive health intensified (Bowling, 2005). There is now a wealth of scales that measure **subjective indicators** of MWB. These include scales about life satisfaction, self-esteem, social support, resilience and other distinctly positive aspects. But with such choice, how does the researcher/practitioner choose between them? Section 7 provides brief details and an appraisal of various scales that measure eight selected aspects of MWB in adults. These scales were selected for inclusion according to the criteria described in Section 6.2 (see also Appendix C).

6.2 Caveats regarding the scales recommended in this guide

At this point, a few words of caution. This guide is primarily aimed at practitioners and researchers in Scotland and the rest of the UK[15]. Readers (especially those outside the UK) are advised to consider the limitations of the inclusion criteria[16] when using this guide, which necessitated inclusion of only those scales that:

- **measure the chosen aspects of MWB**. The selection of eight aspects was developed largely from the work of Health Scotland's Mental Health Indicators Project Advisory Group[17]. These aspects of MWB are not definitive and nor are they universally agreed. There was a pragmatic need for the aspects to be compatible with this extensive programme of work, and this meant some compromises were made regarding the choice and naming of aspects
- **focus on mental wellbeing** i.e. the balance of items is in favour of mental wellbeing rather than mental health problems. This priority objective has meant that some well-known measures of mental distress (e.g. General Health Questionnaire) or health status (e.g. SF-36) were excluded

[15] The review (which has informed this Guide) served the specific purposes of Health Scotland.

[16] See *Review of Scales of Positive Mental Health Validated for Use with Adults in the UK: Technical report*, available from: http://www.healthscotland.com/understanding/population/mental-health-indicators.aspx

[17] See Parkinson J (2006) *Indicators of Mental Health and Wellbeing – Constructs consultation paper* (http://www.healthscotland.com/documents/1465.aspx)

- **are suitable for use with the general adult population.** This review excludes scales designed specifically for other age groups (e.g. children, adolescents), sub-sections of the adult population (e.g. elderly people) or target populations (e.g. specific diseases or conditions, health-related behaviours, hospital or occupational settings)
- **have been validated for use in the UK.** This review excludes many scales that have been used widely in other countries (most frequently the USA), but for which no evidence could be found of UK validation
- **do not require the user to undergo specialist training or have qualifications in psychometric testing.** This was a practical issue taking account of the fact that practitioners would be unlikely to be qualified in psychometric testing or have the resources available to facilitate specialist training
- **have been psychometrically validated.** The scales have undergone statistical testing to demonstrate the properties described in Section 3. In the course of this review, some newly designed scales were identified that have not yet undergone this level of validation.

To exclude those scales that did not meet our inclusion criteria entirely would be to do a disservice both to the scales (many of which have been used widely outside the UK and/or for purposes other than assessing MWB) and to future researchers, who may be interested in conducting the necessary validation. Therefore, further details about the excluded scales is included in the *Technical report*[18] (including copies where permission to reproduce was obtained).

With these caveats in mind, it is hoped that you will find the description and appraisal of scales (see Section 7) useful when planning your evaluation.

6.3 How will you know if overall mental wellbeing has improved?

This guide has been structured to provide advice on measuring specific aspects of MWB e.g. life satisfaction, social functioning, and spirituality (see Section 7). Whilst scales measuring specific aspects of MWB may well be useful for evaluating specific interventions, they will not be able to indicate whether or not overall MWB has improved (see Section 4.1). If you want to find out whether overall MWB has improved as a result of your intervention, you are most likely to find a suitable scale in Section 7.1. In particular the Affectometer 2 (Kammann & Flett, 1983; Stewart-Brown, 2006) has been highlighted as a useful scale for this purpose[19].

[18] Available from: http://www.healthscotland.com/understanding/population/mental-health-indicators.aspx

[19] Since completion of the review, further work on the validation of Affectometer 2 has been undertaken for Health Scotland This indicated that the Affectometer 2 could be improved upon. A new and superior scale the Warwick-Edinburgh Mental Wellbeing Scales (WEMWBS) has subsequently been developed from Affectometer 2. For information on all this work see www.healthscotland.com/understanding/population/mental-health-indicators.aspx

7 Scales of mental wellbeing

Each of the scales has been appraised by the authors of this guide according to the following criteria (see Section 4.3 for more information):

Essential properties

- Content validity (or *does the scale measure what it claims to measure?*)
- Structure (or *do the items fit together?*)
- Reliability (or *does the scale produce similar results under similar conditions?*)

Desirable properties

- Construct validity (or *does the scale relate to other variables in a meaningful way?*)
- Responsiveness (or *does the scale detect changes following an intervention?*)
- Normative data (or *how does the general population score on this scale?*)

The ratings for the essential and desirable properties have then been averaged into one overall rating, to provide a general indicator of the relative merits of each scale. Please note that this overall rating is a subjective assessment, so it is important that you consider the properties of each scale in respect of your particular requirements, and that you bear in mind the practicalities of each scale (see below) in relation to your situation, when choosing between scales with similar ratings. For instance, do you need a particularly brief scale and/or one that is free to use?

Practical properties

- How many items are included in the scale?
- How much time do participants take to complete the scale?
- How much does the scale cost?
- How easy is it to access a copy of the scale?

Further details about the scales (e.g. content, psychometric evidence, conditions of use) can be found in the accompanying *Technical report*[20].

7.1 Emotional wellbeing

7.1.1 Description of scales

Several scales of emotional wellbeing exist and these differ substantially in terms of their focus and length. Self-report measures of emotional wellbeing usually require the participant to indicate how frequently they experience

[20] Available from: http://www.healthscotland.com/understanding/population/mental-health-indicators.aspx

various emotional states. Please note that the psychological term **affect** means '*emotional feeling* or *emotional experience*'. Timeframe is perhaps the most important feature of these scales. With shorter timeframes (e.g. referring to right now, today, at the current time), the scale is more likely to capture an emotional response, whilst with longer timeframes (e.g. the past week, past few weeks, past month), the scale is more likely to capture mood or personality traits. Practitioners are advised to consider which aspect of emotional wellbeing they wish to evaluate, and to select a scale that fits their needs.
The following scales of emotional wellbeing are recommended:

- **Affect Balance Scale** (ABS) (Bradburn, 1969) measures the concept of emotional wellbeing, seen as a function of two independent dimensions – positive and negative affect meaning pleasurable and unpleasurable experience
- **Affectometer 2** (Affect 2) (Kammann and Flett, 1983) measures MWB using a balance of positive and negative feelings and thoughts
- **Depression-Happiness Scale** (DHS) (McGreal and Joseph, 1993) measures positive and negative affect, in terms of positive and negative thoughts, feelings and bodily experiences. Note that the DHS remains unique in its dual measurement of depression and happiness as opposite ends of a single continuum
- **Oxford Happiness Questionnaire** (OHQ) (Hills and Argyle, 2002) provides a broad measure of happiness in three domains (life satisfaction, positive affect and negative affect)
- **Oxford Happiness Questionnaire - Short-Form** (OHQ-SF) (Hills and Argyle, 2002) is a brief (8-item) version of the above OHQ
- **Positive And Negative Affect Schedule** (PANAS) (Watson *et al*, 1988) measures positive and negative affect, identified in research as the dominant dimensions of emotional experience. Consists of single word items describing various feelings and emotions
- **Psychological General Wellbeing Index** (PGWBI) (Dupuy, 1984) provides a detailed assessment of positive wellbeing, self-control and vitality as well as aspects of mental health problems
- **Short Depression-Happiness Scale** (SDHS) (Joseph *et al*, 2004) is a brief (6-item) version of the above DHS
- **Wellbeing Questionnaire 12** (WBQ12) (Bradley, 1994; 2000) provides a brief (12-item) measure of positive wellbeing, energy and negative wellbeing (avoiding the use of **somatic** items, so as to be particularly suitable for use in patient populations).

Most scales included here measure positive affect (with or without a measure of negative affect). They typically include several statements (or single words) to describe a range of emotional states. There appears to be little attempt with the current instruments to measure in detail the different types of positive affect i.e. happiness, elation, calmness, momentary satisfaction. Rather, it is the case that items can generally be summed (or otherwise aggregated) to form a scale that measures 'positive affect' or 'positive wellbeing' rather than more specific elements of the construct.

The Affectometer 2 take a much broader perspective of MWB, including not only **hedonic** (i.e. pleasure) but also **eudaimonic** (i.e. function) dimensions. The Wellbeing Questionnaire (W-BQ12) and the Psychological General Wellbeing Index (PGWBI) both provide measures of positive wellbeing but they also include measures of energy/vitality.

7.1.2 Appraisal of the above scales

If researchers are looking for a scale to measure overall MWB, they are most likely to find a useful instrument amongst this selection. With the exception of the Affectometer 2, none of these scales includes the **eudaimonic** dimension of MWB (which is generally accepted by most specialists to be important for MWB). That said, the scales included in this section are most likely to provide an indicator of what most lay people would mean by MWB (i.e. feeling good).

Thus, if an overall scale of MWB is required, the Affectometer 2 appears to be a very promising instrument. Despite being first published more than twenty years ago, there has been surprisingly little use of the Affectometer 2 (particularly in the UK). However, it has recently undergone substantial psychometric development, and the preliminary evidence indicates that it is a valid, reliable, acceptable and brief measure of MWB[21].

The PANAS is a valid and reliable, detailed measure of positive and negative affect, for which **normative data** are available (i.e. information on how a general population tends to score on it), but there is comparatively little evidence of its responsiveness (i.e. how sensitively it can measure change in MWB). The PANAS may well be useful for use in national surveys.

The WBQ12 is also valid and reliable, providing a brief overview of positive wellbeing, negative wellbeing, and energy. Whilst no normative data are available and it has not been used widely in the general population, there is strong evidence for its **responsiveness**, which makes it a strong contender for the purposes of evaluating interventions.

If a particularly brief measure of emotional wellbeing is required, the Short Depression-Happiness Scale (6 items) offers good content validity, reliability and structural evidence (i.e. its different elements appear to be consistent with each other), though its responsiveness has yet to be fully established.

[21] A short and substantially revised form of the Affectometer 2 (the Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS)) is currently under development. Validation on WEMWBS to date is favourable see http://www.healthscotland.com/understanding/population/mental-health-indicators.aspx for information

Appraisal of scales of emotional wellbeing

Scale[a]	Essential properties			Desirable properties			Overall rating	Practicalities[b]		
	Content validity	Structure	Reliability	Construct validity	Responsiveness	Normative data		Items (time)	Permission needed	Fee to use scale
Affect Balance Scale	*	**	*	* (*)	*	*	*	10 items (5 mins)	Yes	Fee
Affectometer 2	***	****	****	***	*	*	***	40 items (5 mins)	No	No fee
Depression-Happiness Scale	**	*** (*)	****	** (*)	*	*	** (*)	25 items (5–10 mins)	No	No fee
Oxford Happiness Questionnaire	*	** (*)	*** (*)	***	*	*	**	29 items (Unknown)	Unknown	Unknown
Oxford Happiness Questionnaire – Short form	*	* (*)	** (*)	* (*)	*	*	* (*)	8 items (5 mins)	Unknown	Unknown
Positive and Negative Affect Schedule	**	****	****	*** (*)	*	*** (*)	***	20 items (5–10 mins)	Yes	No fee[c]
Psychological General Wellbeing Index	**	***	***	** (*)	** (*)	*	** (*)	22 items (10–15 mins)	Yes	No fee[c]
Short Depression-Happiness Scale	**	*** (*)	*** (*)	***	*	*	** (*)	6 items (<5 mins)	No	No fee
Wellbeing Questionnaire-12	***	****	****	*** (*)	*** (*)	*	*** (*)	12 items (5–10 mins)	Yes	No fee[c]

[a] Summaries of each scale as well as copies (and details of how to obtain permission to use, where necessary) can be found in the *Review of Scales of Positive Mental Health Validated for Use with Adults in the UK: Technical report* (http://www.healthscotland.com/understanding/population/mental-health-indicators.aspx for information) which accompanies this guide.

[b] Further information about obtaining permission to use scales and details of license fees are provided in the summary reports for each scale, which can be found in the *Review of Scales of Positive Mental Health Validated for Use with Adults in the UK: Technical report* . Where information is 'unknown', contact the developer and/or copyright holder (contact information provided in the Technical report). It should be noted, however, that the authors of this guide have made every effort to obtain as much information as possible.

[c] Free for non-commercial use

Scales are given a maximum 5-star rating for each of the six psychometric properties reflecting both quantity and quality of evidence, where: ***** = excellent evidence, **** = very good evidence, *** = good evidence, ** = moderate evidence, * = lack of evidence.

Overall rating = mean score of the essential and desirable properties (e.g. 24 stars / 6 properties = *****).

7.2 Life satisfaction

7.2.1 Description of scales

Several scales of life satisfaction exist, which differ in terms of their length and, therefore, the level of detail measured. The following scales of life satisfaction are recommended for use:

- **The Delighted-Terrible Scale** (DTS) (Andrews and Withey, 1976) measures satisfaction with life in general, or satisfaction with more specific topics such as health
- **The Global Quality of Life Scale** (GQOL) (Hyland and Sodergren, 1996) provides a measure of a participant's overall judgement of their quality of life/ life satisfaction
- **Satisfaction with Life Scale** (SWLS) (Diener *et al*, 1985) designed to assess a person's global judgement of life satisfaction
- **World Health Organisation Quality of Life – Bref** (WHOQOL-BREF) (The WHOQOL Group, 1998) provides a brief measure of quality of life in terms of various dimensions (e.g. physical health, social relationships, environment) and is valid for cross-cultural assessments.

7.2.2 Appraisal of scales

Life satisfaction is one of the few constructs that has been reliably measured on a single rating scale (e.g. How satisfied are you with your life?) with a number of possible answers to choose from on 5-, 7- or 10-point response scales. Note that the greater the number of points in the response scale, the more sensitive the question is likely to be at measuring changes (see Section 3.2). Where an extremely brief scale is required, the single-item measures show equivalence, with the DTS having greater reliability whereas the GQOL shows greater responsiveness. When response burden is a major concern, the single-item scales may well provide a useful measure of life satisfaction.

The Satisfaction With Life Scale (SWLS) is also brief, with five items designed to assess various perspectives on life satisfaction. However, it has much better psychometric properties than single-item scales and is the favoured choice, with the added benefit of normative data being available.

The WHOQOL-BREF has similar psychometric properties to the SWLS and can be recommended where a more detailed scale is required or where completion time/ respondent burden is not an issue. It has a much more general focus than other scales and may be suitable for those interested in assessing wide-ranging factors that could influence life satisfaction. It also includes a global item (*How would you rate your quality of life?*) rated on a 5-point response scale.

Appraisal of scales of life satisfaction

Scale[a]	Essential properties			Desirable properties			Overall rating	Practicalities[b]		
	Content validity	Structure	Reliability	Construct validity	Responsiveness	Normative data		Items (time)	Permission needed	Fee to use scale
Delighted-Terrible Scale	**	N/A	**	**	*	*	**	1 items (< 5 mins)	Yes	Unknown
Global Quality of Life	**	N/A	*	**	**	*	**	1 items (< 5 mins)	No	No fee
Satisfaction With Life Scale	***	*****	*****	***	***	****	****	5 items (5 mins)	No	No fee
World Health Organisation Quality of Life – BREF	***	*****	*****	***	***	*	***	26 items (15–20 mins)	Yes	No fee[c]

[a] Summaries of each scale as well as copies (and details of how to obtain permission to use, where necessary) can be found in the *Review of Scales of Positive Mental Health Validated for Use with Adults in the UK: Technical report* (http://www.healthscotland.com/understanding/population/mental-health-indicators.aspx for information) which accompanies this guide.

[b] Further information about obtaining permission to use scales and details of license fees are provided in the summary reports for each scale, which can be found in the *Review of Scales of Positive Mental Health Validated for Use with Adults in the UK: Technical report*. Where information is 'unknown', contact the developer and/or copyright holder (contact information provided in the *Technical report*). It should be noted, however, that the authors of this guide have made every effort to obtain as much information as possible.

[c] Free for non-commercial use

Scales are given a maximum 5-star rating for each of the six psychometric properties reflecting both quantity and quality of evidence, where: ***** = excellent evidence, **** = very good evidence, *** = good evidence, ** = moderate evidence, * = lack of evidence.

Overall rating = mean score of the essential and desirable properties (e.g. 24 stars / 6 properties = *****).

7.3 Optimism and hope

7.3.1 Description of scales

Various scales exist that are designed to assess an individual's outlook on life. The scales differ in their emphasis but, generally-speaking, share the same underlying concept. The following scales of optimism and hope are recommended for use:

- **Generalised Expectancy Scale for Success – Revised** (GESS-R) (Hale *et al*, 1992) assesses optimism by presenting participants with particular situations and evaluating their expectations of success in those situations
- **Life Orientation Test (LOT)** (Scheier and Carver, 1985) assesses dispositional optimism (or generalised expectancies) for positive versus negative outcomes
- **Life Orientation Test – Revised (LOT-R)** (Scheier *et al*, 1994) is a brief (ten item) version of the LOT (above)
- **Positive and Negative Expectancy Questionnaire (PANEQ)** (Olason and Roger, 2001) measures optimism, pessimism and 'fighting spirit'
- **Trait (Dispositional) Hope Scale** (T(D)HS) (Snyder *et al*, 1991) measures the degree to which an individual has the perceived motivation to move towards his or her goals (agency) and the perceived ability to generate workable routes to goals (pathways).

7.3.2 Appraisal of scales

When selecting scales of optimism and hope, it is important to consider the population to be studied, and the cultural context. Scales differ in how difficult they are for participants to complete, which means that you need to consider the characteristics of your population and whether one scale rather than another would be more suitable (e.g. as regards reading age, life stage). In particular, while optimism and hope are universal constructs, their meanings and the value placed on them differs widely from culture to culture. Thus, when selecting a scale for use, readers are advised to consider carefully the aspect of optimism and hope that they wish to assess, the psychometric properties and, importantly, the practicalities of each scale.

Given the similarities in overall ratings between the scales, it is difficult to recommend one scale over another. However, where a very brief measure is required, the LOT-R appears to be a good choice.

Appraisal of scales of optimism and hope

Scale[a]	Essential properties			Desirable properties			Overall rating	Practicalities[b]		
	Content validity	Structure	Reliability	Construct validity	Responsiveness	Normative data		Items (time)	Permission needed	Fee to use scale
Generalised Expectancy Scale for Success	**	*	****	** (*)	*	*	**	25 items (5–10 mins)	Yes	No fee
Life Orientation Test	*	* (*)	** (*)	*** (*)	*	*	**	12 items (5–10 mins)	Yes	No fee[c]
Life Orientation Test–Revised	***	****	****	*** (*)	*	*	***	10 items (5 mins)	Yes	No fee[c]
Positive and Negative Expectancy Questionnaire	**	***	****	***	*	*	** (*)	48 items (5–10 mins)	Yes	NZ$1
Trait (Dispositional) Hope Scale	**	**	****	***	**	*	** (*)	(12 items) (<5 mins)	No	No fee

[a] Summaries of each scale as well as copies (and details of how to obtain permission to use, where necessary) can be found in the *Review of Scales of Positive Mental Health Validated for Use with Adults in the UK: Technical report* (http://www.healthscotland.com/understanding/population/mental-health-indicators.aspx for information) which accompanies this guide.

[b] Further information about obtaining permission to use scales and details of license fees are provided in the summary reports for each scale, which can be found in the *Review of Scales of Positive Mental Health Validated for Use with Adults in the UK: Technical report.* Where information is 'unknown', contact the developer and/or copyright holder (contact information provided in the *Technical report*). It should be noted, however, that the authors of this guide have made every effort to obtain as much information as possible.

[c] Free for non-commercial use

Scales are given a maximum 5-star rating for each of the six psychometric properties reflecting both quantity and quality of evidence, where: ***** = excellent evidence, **** = very good evidence, *** = good evidence, ** = moderate evidence, * = lack of evidence.

Overall rating = mean score of the essential and desirable properties (e.g. 24 stars / 6 properties = *****).

7.4 Scales of Self-esteem

7.4.1 Description of scales

Several scales of self-esteem exist and these differ in terms of their complexity and length. The following scales of self-esteem are recommended for use:

- **Basic Self-Esteem Scale** (BSES) (Forsman and Johnson, 1996) is designed to assess the person's fundamental 'self-love'
- **Coopersmith Self-Esteem Inventory** (CSEI) (Coopersmith, 1981; original work published in 1967) assesses personal judgement of worthiness that is expressed in the attitudes the individual holds towards him/herself
- **Robson Self-Concept Questionnaire** (RSCQ) (Robson, 1989) assesses the sense of contentment/self-acceptance that results from a person's appraisal of self-worth, significance, attractiveness, competence and ability to satisfy aspirations
- **Rosenberg Self-Esteem Scale** (RSES) (Rosenberg, 1965) provides a measure of global attitudes about the self. Self-esteem is a positive or negative orientation towards oneself, and an overall evaluation of one's worth or value. High self-esteem indicates positive self-regard, not egotism
- **Visual Analogue Self-Esteem Scale** (VASES) (Brumfitt and Sheeran, 1999) is a non-verbal measure of self-esteem, which includes ten pictorial items depicting various aspects of self-esteem, i.e. cheerful, trapped, optimistic, confident, frustrated, confused, misunderstood, outgoing, intelligent, angry.

7.4.2 Appraisal of scales

The most widely used, and arguably the best measure of general self-esteem, is Rosenberg's Self-Esteem Scale (RSES), which has been in use for over 40 years. It is a relatively brief measure, which includes 10 short and simple statements about a person's feelings towards him/herself.

For a more detailed assessment, there is good evidence for Robson's Self-Concept Questionnaire (RSCQ). It has 30 items but can still be completed by most respondents in 5–10 minutes.

More recently, the Visual Analogue Self-Esteem Scale (VASES) has been developed which includes pictures instead of items. Although it has not been used widely, there is good preliminary evidence for the VASES and it has the added benefit of being particularly suitable for use with language-impaired people or those people suffering from with what we might call 'questionnaire fatigue'.

Appraisal of scales of self-esteem

Scale[a]	Essential properties			Desirable properties			Overall rating	Practicalities[b]		
	Content validity	Structure	Reliability	Construct validity	Responsiveness	Normative data		Items (time)	Permission needed	Fee to use scale
Basic Self-Esteem Scale	**	* (*)	***	** (*)	*	*	**	20 items (unknown)	Unknown	Unknown
Coopersmith Self-Esteem Inventory	**	* (*)	**	**	*	** (*)	**	25 items (5–10 mins)	Yes	Fee
Robson Self-Concept Questionnaire	**	* (*)	***	****	****	*	** (*)	30 items (5–10 mins)	No	No fee
Rosenberg Self-Esteem Scale	****	****	****	****	**	****	****	10 items (5 mins)	No	No fee
Visual Analogue Self-Esteem Scale	***	***	****	*** (*)	**	*	***	(10 items) (Unknown)	Unknown	Unknown

[a] Summaries of each scale as well as copies (and details of how to obtain permission to use, where necessary) can be found in the *Review of Scales of Positive Mental Health Validated for Use with Adults in the UK: Technical report* (http://www.healthscotland.com/understanding/population/mental-health-indicators.aspx for information) which accompanies this guide.

[b] Further information about obtaining permission to use scales and details of license fees are provided in the summary reports for each scale, which can be found in the *Review of Scales of Positive Mental Health Validated for Use with Adults in the UK: Technical report.* Where information is 'unknown', contact the developer and/or copyright holder (contact information provided in the *Technical report*). It should be noted, however, that the authors of this guide have made every effort to obtain as much information as possible.

Scales are given a maximum 5-star rating for each of the six psychometric properties reflecting both quantity and quality of evidence, where: ***** = excellent evidence, **** = very good evidence, *** = good evidence, ** = moderate evidence, * = lack of evidence.

Overall rating = mean score of the essential and desirable properties (e.g. 24 stars / 6 properties = *****).

7.5 Resilience and coping

7.5.1 Description of scales

Several scales of resilience and coping exist and the following are recommended for use:

- **Attributional Style Questionnaire** (ASQ) (Peterson *et al*, 1982; Seligman *et al*, 1979) measures explanatory style for good and bad events using three causal dimensions: internal versus external, stable versus unstable, and global versus specific causes
- **Brief COPE Scale** (BCOPE) (Carver, 1997) is a 28-item short-form of the original COPE scale (see below), designed to assess 14 conceptually distinct methods of coping (e.g. active, positive reframing, denial, acceptance, humour, self-blame)
- **The COPE** (Carver *et al*, 1989) is a 60-item multidimensional coping scale designed to assess 15 conceptually distinct methods of coping (e.g. active, positive reinterpretation and growth, denial, seeking of social support for emotional reasons)
- **Coping Styles Questionnaire** (CSQ) (Roger *et al*, 1993) measures four styles of coping. Rational coping and detached coping are considered to be adaptive styles, while emotional coping and avoidance coping are considered maladaptive
- **Functional Dimensions of Coping** (FDC) (Ferguson and Cox, 1997) measures what an individual believes a coping style (or styles) will achieve for them psychologically, e.g. an individual may cry (style of emotional release) believing that this will alleviate emotional distress (function)
- **General Self-Efficacy Scale** (GSE) (Schwarzer and Jerusalem, 1995) assesses a general sense of perceived self-efficacy with the aim of predicting coping with daily hassles as well as adaptation after experiencing all kinds of stressful life events
- **Sense of Coherence Scale** (SOC) (Antonovsky, 1987a; Antonovsky, 1987b) measures one's general orientation to life. A core element in the concept is that SOC is a global orientation, a way of looking at the world, a dispositional orientation rather than a response to a specific situation
- **Ways of Coping** (WAYS) (Folkman and Lazarus, 1985) measures coping as a process taking place within a particular context, rather than coping as a disposition or style. WAYS can assess and identify thoughts and actions that individuals use to cope with the stressful encounters of everyday living.

The scales can be categorised broadly into two measurement approaches:

- **Resilience** Scales in this category (i.e. GSE, SOC) focus on the *capacity* of the individual to cope in times of stress, that is, his/her sense of self-efficacy or self perception of his/her ability to cope (in a demanding situation)
- **Coping style** Scales in this category (i.e. BCOPE, COPE, CSQ, WAYS) assess the *strategy* that individuals use to deal with stressful/demanding situations. Related to this, the Attributional Style Questionnaire assesses how an individual explains good and bad events (which provides a quasi-measure of the way in which they cope with negative events). Finally, the FDC goes one step further to assess what the individual expects a coping style (e.g. crying) will achieve for them (e.g. relieve of emotional distress).

7.5.2 Appraisal of scales

For scales that provide a measure of resilience (or capacity for coping), the General Self-Efficacy Scale (GSE) and the Sense of Coherence Scale (SOC) can be distinguished more in terms of their approach to measurement, with each having equivalent and reasonable evidence for their psychometric properties. The construct of perceived self-efficacy reflects an optimistic self-belief that one can cope with adversity or perform novel or difficult tasks. With only ten items (and reportedly taking less than five minutes to complete), the GSE is a brief and widely used scale. The SOC, on the other hand, offers a similar approach in its domain of 'manageability', i.e. the extent to which the individual feels able to cope with demands, but also offers domains that assess 'comprehensibility', i.e. the extent to which events make sense to the individual, and 'meaningfulness', i.e. the feeling that life is challenging and has purpose. However, with 29 items, the SOC is likely to take longer to complete and may be more burdensome for the respondent.

For scales of coping style, it is difficult to differentiate between the scales available with respect to psychometric properties. In order to assess several different styles of coping reliably (which requires several items for each style), most scales include 40-70 items and even the Brief COPE includes 28 items. The ASQ includes only 12 items but has been criticised for the use of hypothetical scenarios.

Appraisal of scales of resilience and coping

Scale[a]	Essential properties			Desirable properties			Overall rating	Practicalities[b]		
	Content validity	Structure	Reliability	Construct validity	Responsiveness	Normative data		Items (time)	Permission needed	Fee to use scale
Attributional Style Questionnaire	* (*)	* (*)	**	**	*	*	* (*)	12 items (20 mins)	Yes	$20 US
Brief COPE Scale	**	**	**	** (*)	*	*	**	28 items (Unknown)	No	No fee
COPE Scale	**	**	** (*)	** (*)	*	*	**	60 items (Unknown)	No	No fee
Coping Styles Questionnaire	***	** (*)	*** (*)	**	*	*	**	48 items (Unknown)	Yes	$1NZ
Functional Dimensions of Coping	** (*)	** (*)	*** (*)	***	*	*	**	16 items (Unknown)	No	No fee
General Self-Efficacy Scale	** (*)	****	****	***	*	***	***	10 items (<5 mins)	No[c]	No fee
Sense of Coherence Scale	*** (*)	** (*)	*** (*)	***	*	* (*)	** (*)	29 items (10–15 mins)	Yes	Unknown
Ways of Coping	**	** (*)	**	** (*)	*	*	**	66 items (Unknown)	No	No fee

[a] Summaries of each scale as well as copies (and details of how to obtain permission to use, where necessary) can be found in the *Review of Scales of Positive Mental Health Validated for Use with Adults in the UK: Technical report* (http://www.healthscotland.com/understanding/population/mental-health-indicators.aspx for information) which accompanies this guide.

[b] Further information about obtaining permission to use scales and details of license fees are provided in the summary reports for each scale, which can be found in the *Review of Scales of Positive Mental Health Validated for Use with Adults in the UK: Technical report.* Where information is 'unknown', contact the developer and/or copyright holder (contact information provided in the *Technical report*). It should be noted, however, that the authors of this guide have made every effort to obtain as much information as possible.

[c] Permission required for commercial use.

Scales are given a maximum 5-star rating for each of the six psychometric properties reflecting both quantity and quality of evidence, where: ***** = excellent evidence, **** = very good evidence, *** = good evidence, ** = moderate evidence, * = lack of evidence.

Overall rating = mean score of the essential and desirable properties (e.g. 24 stars / 6 properties = *****).

7.6 Spirituality

7.6.1 Description of scales

Several scales of spirituality exist and these differ substantially in terms of their focus and length. The following scales of spirituality are recommended for use:

- **Life Attitude Profile Revised** (LAP-R) (Reker, 1992) measures discovered meaning, purpose in life, and the motivation to find meaning and purpose in life. It includes several subscales, which measure purpose, coherence, death acceptance, choice/responsibleness, existential vacuum and goal-seeking. From these, composite scores (Personal Meaning Index and Existential Transcendence) can be obtained
- **Meaning in Life Questionnaire** (MLQ) (Steger *et al*, 2006) measures the presence of and search for meaning in life, defined in the scale as '*the sense made of and significance felt regarding the nature of one's being and existence*'
- **Purpose in Life Test** (PIL) (Crumbaugh & Maholick, 1964) measures the extent to which meaning in life has already been found, as opposed to the self-motivation to find purpose in life
- **Spiritual Wellbeing Scale** (SWBS) (Paloutzian and Ellison, 1982) provides an overall measure of the perception of spiritual quality of life, as well as subscale scores for 'religious wellbeing' (self-assessment of one's relationship with God) and 'existential wellbeing' (self-assessment of one's sense of life purpose and life satisfaction).

7.6.2 Appraisal of scales

The selection of a scale of spirituality will require a decision about the relative importance of detail versus brevity.

The LAP-R is a lengthy measure (at 48 items) which includes several subscales designed to measure various aspects of spirituality. The 16-item Personal Meaning Index (derived by summing the Purpose and Coherence subscales) has been used most widely. The LAP-R has reasonable psychometric properties and offers the advantage of providing detailed measurement of spirituality.

The Purpose in Life Test (PIL) and the Spiritual Wellbeing Scale (SWBS) are both 20-item measures of spirituality but differ slightly in completion times, due to the PIL's unorthodox response scale. Each item of the PIL uses different anchors for

the response scale, so it takes a little more time to complete and may be more confusing to participants than a similar measure that uses the same response scale throughout. A further concern with the PIL is that its content is somewhat confounded with depression (e.g. If I could choose, I would: prefer never to have been born – live nine more lives just like this one). This is likely to artificially increase correlations with other aspects of mental health.

The SWBS is a relatively brief measure of spirituality, which focuses on spiritual wellbeing, both religious (i.e. relationship with God) and existential (i.e. one's sense of life purpose and life satisfaction). Thus, it offers a slightly different focus from other scales reviewed here. The SWBS has been reported to be prone to **ceiling effects** in some religious samples, which may limit its usefulness for some purposes. However, for use in the general population, this criticism may not be relevant and the scale has been found to be particularly useful for identifying those experiencing spiritual distress or lack of wellbeing.

With only 10 items (five of which concern the presence of purpose and five of which concern the *search* for purpose), the Meaning in Life Questionnaire (MLQ) offers the most concise measure of spirituality. As it takes less than 10 minutes to complete and is available free of charge for non-commercial use, the MLQ offers distinct practical advantages over the other scales included here. The MLQ also offers good content validity, as well as superior evidence for its scale structure and reliability. As the MLQ has been developed very recently, the lack of evidence regarding responsiveness and normative data is not a major concern.

Appraisal of scales of spirituality

Scale[a]	Essential properties			Desirable properties			Overall rating	Practicalities[b]		
	Content validity	Structure	Reliability	Construct validity	Responsiveness	Normative data		Items (time)	Permission needed	Fee to use scale
Life Attitude Profile – Revised	**	**	***	***	*	*	**	48 items (15 mins)	Yes	$40 US
Meaning in Life Questionnaire	***	****	****	***	*	*	***	10 items (5–10 mins)	Yes	No fee[c]
Purpose In Life Test	*	* (*)	***	** (*)	*	** (*)	**	20 items (15 mins)	Unknown	Unknown
Spiritual Wellbeing Scale	***	** (*)	*** (*)	***	*	**	** (*)	20 items (10–15 mins)	Yes	$20 US

[a] Summaries of each scale as well as copies (and details of how to obtain permission to use, where necessary) can be found in the *Review of Scales of Positive Mental Health Validated for Use with Adults in the UK: Technical report* (http://www.healthscotland.com/understanding/population/mental-health-indicators.aspx for information) which accompanies this guide.

[b] Further information about obtaining permission to use scales and details of license fees are provided in the summary reports for each scale, which can be found in the *Review of Scales of Positive Mental Health Validated for Use with Adults in the UK: Technical report*. Where information is 'unknown', contact the developer and/or copyright holder (contact information provided in the *Technical report*). It should be noted, however, that the authors of this guide have made every effort to obtain as much information as possible.

[c] Free for non-commercial use, may not be used in commercial research.

Scales are given a maximum 5-star rating for each of the six psychometric properties reflecting both quantity and quality of evidence, where: ***** = excellent evidence, **** = very good evidence, *** = good evidence, ** = moderate evidence, * = lack of evidence.

Overall rating = mean score of the essential and desirable properties (e.g. 24 stars / 6 properties = *****).

7.7 Social functioning

7.7.1 Description of scales

Numerous scales of social functioning exist and these differ substantially in terms of their approach to measurement and length (see Section 7.7.2). The following scales of social functioning are recommended for use:

- **Duke-UNC Functional Social Support Questionnaire** (DUFSS) (Broadhead *et al*, 1988) measures the amount of social support an individual believes they receive from and give to others
- **Interpersonal Support Evaluation List** (ISEL) (Cohen *et al*, 1985) measures the perceived availability of social resources, in terms of obtaining material aid (tangible), social support (appraisal), perceived positive comparison of self with others (self-esteem), and perceived availability of other people one can do things with (belonging)
- **Interpersonal Trust Questionnaire** (ITQ) (Forbes and Roger, 1999) assesses the ability to use social support by estimating the capacity to self-disclose and express emotion in an adaptive manner in the context of social support
- **Interpersonal Trust Scale** (ITS) (Rotter, 1967) measures the trust a person has for a variety of individuals in society (such as parents, teachers, doctors, politicians, friends, etc) and measures the general level of optimism the person has for society
- **Inventory of Socially Supportive Behaviours** (ISSB) (Barrera Jr *et al*, 1981) measures how often assistance (e.g. sharing tasks, giving advice, teaching skills, providing material aid) was received from others in the past four weeks
- **MOS Social Support Survey** (MOS-SSS) (Sherbourne and Stewart, 1991) measures perceived availability of functional social support (if needed), in terms of received affection, emotional/informational support, tangible (practical) support, and positive social interactions
- **Multidimensional Scale of Perceived Social Support** (MSPSS) (Zimet *et al*, 1988) measures the perceived level of support an individual receives from three sources: family, friends and a significant other (i.e. a partner or spouse)
- **Oslo 3-item Social Support Scale** (03SS) (Dalgard, 1996) provides a brief overall assessment of social support as a function of the number of people the participant reports being close to, interest and concern shown by others, and ease of obtaining social practical help

- **Perceived Social Support from Family and Friends** (PSSFF) (Procidano and Heller, 1983) measures the extent to which an individual perceives that his/her needs for support, information and feedback are fulfilled by friends (PSS-Fr) and by family (PSS-Fa)
- **Social Support Questionnaire** (SSQ) (Sarason *et al*, 1983) measures the perceived availability of social support, i.e. the number of people likely to provide support (number) and satisfaction with the support received (satisfaction)
- **Social Support Questionnaire – Brief** (SSQ-B) (Sarason *et al*, 1987) a brief measure of perceived availability of (Number) and Satisfaction with social support.

The scales can be categorised (broadly) into four approaches to the measurement of social functioning:

- **Interpersonal trust Scales in this category** (i.e. ITQ, ITS) focus on the capacity or willingness of the individual to engage in social interaction, e.g. '*the expectancy held by an individual or a group that the word, promise, verbal or written statement of another individual or group can be relied upon*' (Rotter, 1967, pp 651) or '*the ability to self-disclose and express emotion in an adaptive manner in the context of social support*' (Forbes and Roger, 1999, pp168)
- **Perceived sources of social support** Scales in this category include the MSPSS and the PSSFF. Like the scales of functional social support (below), they focus on perceptions of the availability of social support (rather than objective assessment). Where they differ from functional measures is in their emphasis on the importance of the source of social support, e.g. friends, family or significant other. The importance of this focus is based on the notion that different populations may rely on or benefit from friend or family support to different extents (and at different times in their lives)
- **Functional social support** Scales in this category include the DUFSS, ISEL, ISSB, MOS-SSS and 03SS. They include subscales that measure '*the degree to which interpersonal relationships serve particular functions*' (Sherbourne and Stewart, 1991, pp705) (e.g. emotion/information sharing for problem-solving, practical assistance, companionship)
- **Social networks** i.e. the number of people an individual can turn to for help (sometimes referred to as 'objective' measurement of social support). Scales that include some objective measurement include: 03SS, SSQ, SSQ-B. The SSQ and SSQ-B also include an assessment of the individual's satisfaction with the support received. It should be noted, however, that most researchers have found functional or perceived social support and satisfaction with social support to be a better predictor of mental health than objectively measured social support (Barrera Jr *et al*, 1981; Cohen *et al*, 1985; Sarason *et al*, 1987; Sarason *et al*, 1983; Zimet *et al*, 1988).

7.7.2 Appraisal of scales

Practitioners wishing to evaluate social functioning will need to bear in mind the various approaches taken in each of the above measures.

Interpersonal trust

If researchers are looking for a scale to measure interpersonal trust i.e. the extent to which an individual has the capacity or willingness to engage in their community or society, then the ITQ is recommended because it has reasonable psychometric properties and provides general measures of trust (labeled fear of disclosure), the extent to which an individual turns to others when he/she has a problem (social coping), and is prepared to express emotions (social intimacy). On the other hand, the evidence for the ITS is less strong and it focuses on trust in *specific* individuals in society e.g. parents, doctors, politicians. However, at more than 40 items each, both are lengthy scales and researchers need to consider the practicalities of using them.

Perceived sources of social support

If a scale is needed to measure perceived sources of social support, there is greater evidence in support of the MSPSS. With 12 items, it is a relatively brief measure, reported to take less than five minutes to complete. It includes an assessment of support received from family, friends and significant others. The PSS-FF measures the support received from family (20 items) and friends (20 items). Each scale can be used in isolation if the research and/or time available warrant a specific focus.

Functional social support

If a scale to measure functional social support is required, two scales (i.e. MOS-SSS and ISEL) are adequate for the task and indistinguishable in terms of psychometric properties. Thus, decisions about which scale to use need to be made on the basis of content/focus (including content validity) and practicalities. The MOS-SSS appears to be marginally better than others in this respect, largely because it has been used more widely and, thus, the evidence for its psychometric properties is quite strong. With fewer than 20 items, it is relatively short and is reported to take 5–7 minutes to complete. The ISEL is a more lengthy measure (at 40 items), with 10 each measuring tangible support, social support, self-esteem and belonging. Thus, the ISEL provides a well-balanced scale and is arguably more carefully designed than the MOS-SSS.

Social networks

The SSQ and its short-form (SSQ-B) both provide 'objective' measures of the availability of social support (in terms of numbers of people) as well as satisfaction with that support. Thus, if a scale is required that includes both objective and subjective assessment of social support, then the long-form can be recommended for a detailed assessment and the brief-form can be recommended if respondent burden or time is an issue.

Finally, if a particularly brief measure of social functioning is required, the O3SS includes just three items, which are designed to provide an 'objective' measure of the number of people the respondent feels close to, as well as interest and concern shown by others and ease of obtaining practical help. Unfortunately, the structure and reliability of the O3SS have not been well-documented despite widespread use in several European countries. The O3SS is the only scale for which normative data (i.e. scores from the general population) from several countries are available. In future, the brevity of this scale and the availability of normative data with may well be influential in decisions regarding which scale of social functioning to choose.

Guide 5: Selecting scales to assess mental wellbeing in adults

Appraisal of scales of social functioning

Scale[a]	Essential properties			Desirable properties			Overall rating	Practicalities[b]		
	Content validity	Structure	Reliability	Construct validity	Responsiveness	Normative data		Items (time)	Permission needed	Fee to use scale
Duke-UNC Functional Social Support	***	**	**	** (*)	*	*	**	8 items (Unknown)	Unknown	Unknown
Interpersonal Support Evaluation List	***	** (*)	*** (*)	***	*	*	** (*)	40 items (Unknown)	No[d]	No fee[c]
Interpersonal Trust Questionnaire	***	****	*** (*)	** (*)	*	*	** (*)	48 items (15 mins)	Yes	No fee[c]
Interpersonal Trust Scale	**	*	** (*)	** (*)	*	*	* (*)	40 items (15–20mins)	Yes	No fee
Inventory of Socially Supportive Behaviours	**	*	** (*)	**	*	*	* (*)	40 items (10 mins)	No	No fee
MOS Social Support Survey	**** (*)	**** (*)	** (*)	***	*	*	***	19 items (5–7 mins)	No	No fee
Multidimensional Scale of Perceived Social Support	** (*)	**** (*)	**** (*)	** (*)	*(*)	*	***	12 items (<5 mins)	No	No Fee
Oslo 3-item Social Support Scale	* (*)	*	*	* (*)	*	*** (*)	* (*)	3 items (<1 mins)	No	No fee
Perceived Social Support from Family and Friends	** (*)	*	** (*)	**	*	*	* (*)	40 items (Unknown)	Yes	No fee
Social Support Questionnaire	****	***	***	*** (*)	*	*	** (*)	27 items (15-20 mins)	No	No fee
Social Support Questionnaire - Brief	****	****	** (*)	*** (*)	*	*	** (*)	12 items (10-12 mins)	No	No fee

[a] Summaries of each scale as well as copies (and details of how to obtain permission to use, where necessary) can be found in the *Review of Scales of Positive Mental Health Validated for Use with Adults in the UK: Technical report* (http://www.healthscotland.com/understanding/population/mental-health-indicators.aspx for information) which accompanies this guide.

[b] Further information about obtaining permission to use scales and details of license fees are provided in the summary reports for each scale, which can be found in the *Review of Scales of Positive Mental Health Validated for Use with Adults in the UK: Technical report*. Where information is 'unknown', contact the developer and/or copyright holder (contact information provided in the *Technical report*). It should be noted, however, that the authors of this guide have made every effort to obtain as much information as possible.

[c] Free for non-commercial use

[d] Permission for commercial use

Scales are given a maximum 5-star rating for each of the six psychometric properties reflecting both quantity and quality of evidence, where: ***** = excellent evidence, **** = very good evidence, *** = good evidence, ** = moderate evidence, * = lack of evidence.

Overall rating = mean score of the essential and desirable properties (e.g. 24 stars / 6 properties = *****).

7.8 Emotional intelligence

7.8.1 Description of scales

The validity of the construct of emotional intelligence (EI) is fiercely debated and this, perhaps, is the most controversial of the eight components of mental *wellbeing* described in this review. It is described by some as an *ability* (Salovey *et al*, 2005; Schutte *et al*, 1998), while others view it as a personality *trait* (Furnham & Petrides, 2003; Petrides & Furnham, 2000; Petrides and Furnham, 2001). Several scales of emotional intelligence exist and the following are recommended for use:

- **Emotional Intelligence Scale** (EIS) (Schutte *et al*, 1998) draws on the *ability* model, conceptualising emotional intelligence in terms of potential for intellectual and emotional growth. Thus, the EIS assesses the ability to process information about one's own and others' emotions
- **Trait Emotional Intelligence Questionnaire** (TEIQue) (Petrides and Furnham, 2003) measures trait emotional intelligence (or emotional self-efficacy), defined as self-perceptions concerning one's general tendencies. It includes 144 items measuring assertiveness, emotion perception, empathy, impulsiveness, optimism, relationship skills, self-motivation, and stress management
- **Trait Emotional Intelligence Questionnaire – Short Form** (TEIQue-SF) (Petrides and Furnham, 2006) is a shorter (30-item) version of the TEIQue, intended to measure global trait intelligence only, i.e. the TEIQue-SF produces a scale score only rather than the numerous subscale scores of the parent scale.

7.8.2 Appraisal of scales

Despite the distinctions made between *trait* EI and *ability* EI, the scales recommended here do not differ substantially in content. It is argued that *ability* EI is measured more appropriately using a series of practical tests rather than by self-report, in which the respondent can indicate only how they *usually* behave, thus drawing on traits rather than actual ability (Davey, 2005).

Of the three recommended scales, each can be considered adequate for the task of assessing emotional intelligence. However, none of the scales is particularly strong in terms of psychometric properties and they cannot really be distinguished in this way, except perhaps that the TEIQue-SF appears to be less reliable than its long form or the EIS. Thus, decisions about which scale to use need to be made on the basis of content/focus (including content validity) and practicalities.

The EIS has arguably more evidence for its content and construct validity than the TEIQue or its short-form. With only 33 items (compared with 144 for the TEIQue), it is likely to take less time for respondents to complete and can offer a global assessment of emotional intelligence.

If researchers are interested in assessing specific components of emotional intelligence (e.g. assertiveness, social competence, emotion regulation), then the TEIQue is the only scale (in this selection) that offers a multi-dimensional assessment. However, at 144 items, and a reported completion time of 15-20 minutes, it will not be suitable for those with low literacy skills or where respondent burden is an issue.

Appraisal of scales of emotional intelligence

Scale[a]	Essential properties			Desirable properties			Overall rating	Practicalities[b]		
	Content validity	Structure	Reliability	Construct validity	Responsiveness	Normative data		Items (time)	Permission needed	Fee to use scale
Emotional Intelligence Scale	** (*)	**	** (*)	** (*)	*	*	**	33 items (Unknown)	No	No fee[c]
Trait Emotional Intelligence Questionnaire	**	*	** (*)	* (*)	*	*	* (*)	114 items v1 153 items v1.5 (15–20 mins)	No[d]	No fee[c]
Trait Emotional Intelligence Questionnaire – Short Form	*(*)	**	*	**	*	*	* (*)	30 items (5–10 mins)	No[d]	No fee[c]

[a] Summaries of each scale as well as copies (and details of how to obtain permission to use, where necessary) can be found in the *Review of Scales of Positive Mental Health Validated for Use with Adults in the UK: Technical report* (http://www.healthscotland.com/understanding/population/mental-health-indicators.aspx for information) which accompanies this guide.

[b] Further information about obtaining permission to use scales and details of license fees are provided in the summary reports for each scale, which can be found in the *Review of Scales of Positive Mental Health Validated for Use with Adults in the UK: Technical report*. Where information is 'unknown', contact the developer and/or copyright holder (contact information provided in the *Technical report*). It should be noted, however, that the authors of this guide have made every effort to obtain as much information as possible.

[c] Free for non-commercial use

[d] Permission needed if research not by University staff or students

Scales are given a maximum 5-star rating for each of the six psychometric properties reflecting both quantity and quality of evidence, where: ***** = excellent evidence, **** = very good evidence, *** = good evidence, ** = moderate evidence, * = lack of evidence.

Overall rating = mean score of the essential and desirable properties (e.g. 24 stars / 6 properties = *****).

8 Concluding comments

We hope that this guide to selecting scales for evaluating the mental health of adults in the UK will encourage you to do so in your day-to-day work, whether in a community project, an inpatient or outpatient clinic or a whole range of other settings.

Although we have tried to make our explanations straightforward, we appreciate that this can be a difficult area for practitioners who are not familiar with research and/or the concept of mental wellbeing. Many of the issues covered in this guide are discussed in greater detail in other guides in the series or in the accompanying technical report: *Review of Scales of Positive Mental Health Validated for Use with Adults in the UK: Technical report* (http://www.healthscotland.com/understanding/population/mental-health-indicators aspx).

Our intention has been to create a guide that will be a useful resource, enabling you to make informed decisions about which scales of mental wellbeing to use to demonstrate:

- the needs of the adults you are working with, and
- the effectiveness of your activities, by collecting data about mental wellbeing both before and after your service or other intervention has been provided.

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Appendix A Glossary

Affect	Emotional feeling or emotional experience.
Aspect of mental wellbeing	The term used in the report to cover elements of mental wellbeing; factors which influence mental wellbeing and the consequences of mental wellbeing.
Categorical data	Data at the nominal level of measurement (e.g. religious denomination, or *yes* or *no* responses).
Ceiling effect	Occurs where item wording restricts the possibility of respondents indicating a higher level of response. If there is a ceiling effect at baseline (i.e. the initial pre-intervention measurement) a scale may not be able to detect improvements following an intervention.
Construct	A theoretical or hypothetical entity (e.g. optimism, self-esteem, depression) that cannot be directly observed.
Construct validity	An indication that there is evidence that supports the existence of a hypothetical **construct** that a scale purports to be measuring but which cannot be directly observed.
Content validity	An indication of the degree to which a construct is measured by items in a scale. It is a judgement by both experts and members of the target population for which a scale has been developed.
Continuous data	Data measured on scales where values change smoothly rather than in steps, e.g. a *visual analogue* scale (see box on p14).
Correlation	The relationship between two variables.
Eudaimonic	Eudaimonic components of mental wellbeing relate to functioning and growth, at both a personal and a social level (e.g. self-esteem, resilience).
Factor analysis	Factor analysis is a statistical method used to simplify complex sets of data in order to identify ways in which items cluster together.
Floor effect	Occurs where the wording of an item (and/or response scale) restricts the possibility of respondents indicating a lower level of response. Thus, if there is a floor effect pre-intervention, the scale may not be able to detect worsening in a variable following an intervention.

Hedonic	Hedonic elements of mental wellbeing are characterised by a sense of pleasure (e.g. life satisfaction, positive affect).
Hypothesis	A prediction based on theory i.e. prediction of what should or should not be the case if a theory is true.
Indicator	Something that helps us to understand where we are, where we are going and how far we are from the goal.
Internal consistency	Internal consistency is an indicator of the reliability or the homogeneity of items within the scale i.e. the degree to which scores on each item correlate with the scores on all the other items in its scale. The internal consistency reliability is the average of the correlations among all the scale items.
Item	A statement or question on a scale to which an individual is invited to respond.
Linguistic validation	Linguistic validation is a multi-stage process to ensure that the translated version of a scale is equivalent to the original version, and is clear and easy to understand. It includes forward translations into the new target language, back translations into the original language with comparison of the two versions, and finally checking the translation is acceptable to respondents.
Mental wellbeing	Mental wellbeing implies 'completeness' and 'full functioning'. It is defined in this guide as covering both hedonic and eudaimonic dimensions. It is more than the absence of mental illness or pathology. The term mental wellbeing is often used interchangeably with positive mental health.
Normative data	Data that characterise what is usual (the norm) in a defined population (e.g. general UK population), at a specific point or period of time.
Objective	Not influenced by one's own perceptions or emotions and thus the same data can be gathered by all observers.
Psychometric validation	A scale undergoes psychometric validation (or evaluation) when respondent data are collected in one or more studies, and analyses conducted to ascertain that the scale's reliability and validity are at acceptable levels.

Qualitative data	Includes virtually any information that can be captured that is not numerical in nature, e.g. interviews, focus groups, observation, and written materials such as diaries.
Quantitative data	Any data that is numerical in nature, typically collected using a questionnaire/scale and analysed using statistics.
Rating scale	Multiple (three or more) response options for an item on a scale. A visual analogue scale would also constitute a rating scale.
Reliability	Indicates whether a scale is measuring an attribute in a way that is reproducible and consistent.
Response options	The way in which the response to an item is worded and the number of options available.
Responsiveness	Indicates whether a scale can detect changes that matter to respondents across time. The terms responsiveness and sensitivity to change are often used interchangeably.
Scale	A series of self-report questions, ratings or items used to measure a concept. The response categories of the items are all in the same format so that they can be summed, and they may be weighted.
Self-report	Subjective judgements by participants as the basis of responses to items (rather than assessments by investigators).
Sensitivity (to change)	Indicates whether a scale can detect expected differences (e.g. between groups, or changes post-intervention). The terms responsiveness and sensitivity to change are often used interchangeably, though responsiveness is usually confined to changes within participants over time.
Somatic	Refers to the body e.g. physical symptoms.
Structure	Structure can be determined by factor analysis, a statistical procedure that shows whether items fit or cluster together in the expected pattern. For example, in a scale measuring wellbeing, whether items measuring positive wellbeing cluster together on a different factor from those measuring negative wellbeing. If so, this would indicate two subscales: one of positive and one of negative wellbeing.

Subjective	Existing in one's own consciousness or mind and therefore not perceived by other people.
Test-retest reliability	Indicates whether a scale yields similar results on two or more administrations, assuming that there has been no actual change in participants on the attribute being measured during the intervening period.
Validity	The extent to which a scale accurately reflects the concept that it is intended to measure.
Variable	A characteristic or factor that is liable to change or vary between individuals (e.g. ethnicity) or within individuals over time (e.g. age).
Visual analogue scale	A rating scale in the form of a single straight line, usually 10 cm long, with descriptive anchors at each end (e.g. *very satisfied – very dissatisfied*). Participants mark a cross on the line to indicate their response.

Appendix B Abbreviations of scale names

ABS	Affect Balance Scale
Affect-2	Affectometer 2
ASQ	Attributional Style Questionnaire
BCOPE	Brief COPE
BSES	Basic Self-Esteem Scale
COPE	COPE Scale
CSEI	Coopersmith Self-Esteem Inventory
CSQ	Coping Styles Questionnaire
DHS	Depression–Happiness Scale
D-T Scale	Delighted–Terrible Scale
DUFFS	Duke-UNC Functional Social Support Questionnaire
EIS	Emotional Intelligence Scale (33-item)
FDC	Functional Dimensions of Coping Scale
GESS-R	Generalized Expectancy for Success Scale – Revised
GQOL	Global Quality of Life Scale
GSE	General Self-Efficacy Scale
ISEL	Interpersonal Support Evaluation List
ISSB	Inventory of Socially Supportive Behaviors
ITQ	Interpersonal Trust Questionnaire
ITS	Interpersonal Trust Scale
LAP-R	Life Attitude Profile – Revised
LOT	Life Orientation Test
LOT-R	Life Orientation Test – Revised
MLQ	Meaning in Life Questionnaire
MOS-SSS	MOS Social Support Survey
MSPSS	Multidimensional Scale of Perceived Social Support

O3SS	Oslo 3-item Social Support Scale
OHQ	Oxford Happiness Questionnaire
OHQ-SF	Oxford Happiness Questionnaire – Short Form
PANAS	Positive And Negative Affect Schedule
PANEQ	Positive And Negative Expectancy Questionnaire
PGWBI	Psychological General Wellbeing Index
PIL Test	Purpose in Life Test
PSSFF	Perceived Social Support from Family and Friends
RSCQ	Robson Self Concept Questionnaire
RSES	Rosenberg Self-Esteem Scales
SDHS	Short Depression–Happiness Scale
SOC	Sense of Coherence Scale
SSQ	Social Support Questionnaire
SSQ-B	Social Support Questionnaire - Brief
SWB	Spiritual Wellbeing Scale
SWLS	Satisfaction With Life Scale
T(D)HS	Trait (Dispositional) Hope Scale
TEIQue	Trait Emotional Intelligence Questionnaire
TEIQue-SF	Trait Emotional Intelligence Questionnaire – Short Form
VASES	Visual Analogue Self-Esteem Scale
WAYS	Ways of Coping
W-BQ12	Wellbeing Questionnaire – 12
WHOQoL-BREF	World Health Organisation Quality of Life – BREF

Appendix C How this review of scales was conducted

The purpose of this review was to inform decisions to be made by Health Scotland regarding which scales are the most appropriate to capture data either (a) in national surveys to inform the mental health indicator set, or (b) by practitioners to assess the impact on mental health of local interventions.

A targeted, structured review of the published literature was conducted to identify relevant scales for key aspects of mental wellbeing, and assess their properties. The criteria for selection of scales were that they:

- measure one or more key aspects of mental wellbeing (see Section 2)
- focussed more on mental wellbeing than mental ill-health
- are suitable for use with the general adult population
- have been formally tested for use in the UK
- do not require the user to undergo specialist training.

In addition, the team consulted with 18 specialists in the field of mental wellbeing. Interviews included discussion of the selected aspects as well as specialists' views on various scales. Twenty-three experts and practitioners, including five of the initial interviewees, later reviewed and commented on drafts of the technical report.

Forty-nine scales were selected as suitable for inclusion in the review: emotional wellbeing (9), life satisfaction (4, including one generic quality of life measure), optimism and hope (5), self-esteem (5), resilience and coping (8), spirituality (4), social functioning (11), and emotional intelligence (3).

For a full account of the review methods (including search terms, databases, inclusion criteria) and details of the expert consultation (including interview schedules), see Review of Scales of *Positive Mental Health Validated for Use with Adults in the UK: Technical report*[22].

[22] Available from http://www.healthscotland.com/understanding/population/mental-health-indicators.aspx

Appendix D Further reading

Selecting and using scales

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