
EXPLORING THE IMPACT OF THE WARWICK-EDINBURGH MENTAL WELL-BEING SCALES ON PUBLIC HEALTH RESEARCH AND PRACTICE

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ABSTRACT

Mental wellbeing is the positive aspect of mental health, a new but important concept for public mental health and health improvement more generally. This paper explores the impact the Warwick-Edinburgh Mental Well-being Scales (WEMWBS and the short version SWEMWBS) have had on research, practice, culture, and attitudes towards mental wellbeing in public health and policymaking.

Methods: Mixed methods including quantitative analysis of the (S)WEMWBS registry, and publications using (S)WEMWBS, and qualitative analysis of nine interviews with UK based public health practitioners and policymakers.

Results: Use of (S)WEMWBS has risen dramatically since 2012 reaching over 100 registrations and 15 publications a month in 2016. The scales have been used in many countries for the evaluation of diverse interventions in health and non-health settings and can discriminate between those that do and do not influence mental wellbeing. It is valued because of its intuitive relevance, because it captures benefits of importance to health not captured by traditional measures and because its positive framing supports asset-based approaches. (S)WEMWBS captures benefits that are not captured by the quality-adjusted life year (QALY) measure. SWEWMBS' popularity and validity make it an excellent candidate for the development of a Wellbeing Adjusted Life Year or WALY which would aid decision-making for policymakers and practitioners at local and national level. In the meanwhile it can be used as a common currency across different sectors for cost-utility analyses.

Conclusion: (S)WEMWBS is a well validated and popular tool for measuring important attributes of public health. In order to capitalise on its value as an indicator of health improvement across various disciplines and settings, (S)WEWMBS could be harnessed to develop a Wellbeing Adjusted Life Year to extend the evidence base for resource allocation .

INTRODUCTION

Mental wellbeing is of importance to public health because it protects against future mental and physical health problems and^{1, 2} increases longevity,³⁻⁵ likely mediated by enhanced cardiovascular and immune functioning, wound healing, telomere length, endocrine response to stress, health behaviours and social support.⁶ Whilst some consensus is emerging, both the nature and measurement of this relatively new concept is still subject to debate.⁷ The Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) was developed in 2007 to measure mental wellbeing in the context of public health.⁸ The conceptual framework underpinning this scale shows mental wellbeing as the positive aspect of the spectrum of mental health which, like mental illness, is characterised by two dimensions, feeling and functioning, that interact with each other. Hedonic or subjective wellbeing captures how people feel, whilst eudemonic or psychological wellbeing captures how people function, including how well they realise their potential and relate to other human beings.⁷

A short seven item version (SWEMWBS), with superior interval scaling properties, was generated through Rasch modelling in 2009⁹. WEMWBS and SWEWMWBS have since been translated into multiple European and Asian languages¹⁰⁻¹² and validated in several cultural and service settings¹³⁻¹⁵. They have been shown to be responsive to changes attributable to diverse interventions⁸. Both measures are now well established in the UK and included in the English Measuring National Mental Wellbeing Framework¹⁶, the Health Survey for England¹⁷, the large English panel study Understanding Society¹⁸ and the Scottish national census¹⁹ and the National Survey for Wales.²⁰

This paper documents the rapid spread of (S)WEMWBS and investigates the reasons why this has happened.

METHODS

A mixed methods approach was adopted:

- 1) Use of (S)WEMWBS is controlled by copyright. To gain permission to use the scale projects need to be registered digitally with the University of Warwick. This registry was analysed to understand how (S)WEMWBS is being used and in what contexts.
- 2) A Google Scholar search was carried out to identify publications based on (S)WEMWBS
- 3) A series of interviews were carried out with key public health professionals, researchers and policymakers to investigate their experience of (S)WEMWBS and the part it has played in policy and practice.

REGISTRY ANALYSIS

The (S)WEMWBS registry was established in October 2012. Data were extracted in December 2016. Before this, permission for use was granted on a case by case basis with records of use entered manually into an excel database. Information provided at registration was used to code type of use, type of intervention (if applicable), target group, organisational setting, and country. Codes were developed on the basis of frequency of occurrence and categories of interest from the first 200 registrations, with the final coding frame agreed by NS and SSB.

GOOGLE SCHOLAR REVIEW

A Google scholar search was adopted on the basis of this search engine's cross-disciplinary and grey literature coverage. The search engine was accessed on 21st March 2017 using the

terms 'WEMWBS' or 'SWEMWBS', from 2006 onwards with no language restrictions. Articles were coded into categories of interest using the codes developed for the registry analysis, but adding categories to 'study type', 'settings' and 'types of intervention'. Descriptive analysis was undertaken. An in-depth examination of published randomised controlled (RCTs) and controlled (CCTs) trials using (S)WEMWBS as an outcome was carried out.

QUALITATIVE DATA COLLECTION AND ANALYSIS

Nine interviews were carried out with UK public health practitioners, researchers and policymakers between 2013 and 2016. Sampling was purposive, interviewing people with experience in using (S)WEMWBS across a range of sectors, locally and nationally. In order to mitigate bias towards known champions of WEMWBS, seven invites were sent to registry entrants, not previously known to the research team, and to people known to have mixed or critical views of the scale; one of these responded and was interviewed. The final list of interviewees included individuals working in Public Health England (PHE), clinical commissioning groups (CCGs), local authorities (LAs), general practice (GP), the English civil service, community and voluntary sector organisations, and academic institutions, together with an independent mental health specialist.

Semi-structured interviews were carried out by two researchers using the same topic guide asking about the spread and role of (S)WEMWBS in practice, policy-making and research. Specific questions were asked to elicit concerns about (S)WEMWBS designed to limit bias related to sampling strategy. Interviews were audio-recorded and verbatim transcripts produced from recordings with the exception of one interview, which was not recorded but transcribed immediately after the interview from memory and sent back to the interviewee for confirmation of accuracy.

Transcripts were analysed using a thematic, inductive process with the assistance of NVivo 10 software²¹. A sample of transcripts was coded independently by NS and RJ and themes mutually agreed²¹; the transcripts were then coded according to this identified framework. Codes were subsequently fragmented to identify links and emerging themes for the final stage of analysis.

MIXED METHODS SYNTHESIS

A convergent design²² was employed for mixing methods, where quantitative and qualitative results were obtained separately then merged in the final analysis of results and study discussion²³.

RESULTS

REGISTRATIONS AND PUBLICATIONS

TREND IN USE

The registry contained 2849 entries between October 2012 and December 2016. Numbers of Registrations have risen annually from 2012 onwards with 1328 registrations in 2016 (Figure 1).

The Google Scholar search identified 999 publications. Of these, 87 were excluded because they referred to but did not use (S)WEMWBS; 85 were duplicates, 8 were removed because they reported the original validation studies or were user guides produced by the research team; and 29 were citations. For 34 entries, access to full papers was not possible. This left a remainder of 756 papers. The first publication was dated January 2008 but numbers remained low until 2010 from when there has been a year on year increase to 215 in 2016

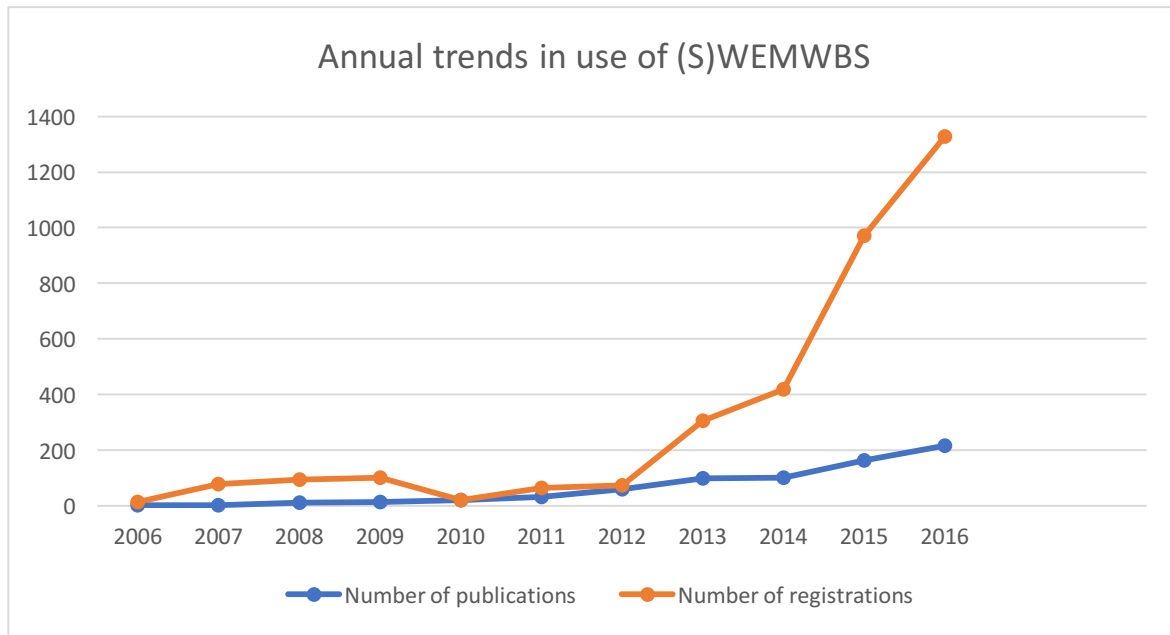


Figure 1: Time trends in use of (S)WEMWBS

GEOGRAPHICAL SPREAD

Registry analysis indicated international use across 52 countries. The majority (87%) of registrations were for use in the UK, USA, Australia, India, and Pakistan. (S)WEMWBS has been translated or validated in 24 different countries including Spain, France, Germany, Iceland, Norway, Sweden Denmark, India, Pakistan, China, Korea, Brazil, and Chile.

TYPE OF STUDY

A sample of 1192 registrations between the period of June 2015 and June 2016 was examined further together with the 756 publications to examine characteristics.

In both datasets, quasi-experimental (44.7% registrations cf 17.6% publications) and observational (cohort, case-control and cross-sectional; 24.0% cf 35.1%) studies accounted for large proportions of registrations and publications. Controlled trials accounted for 10.6% of publications, but only 4% of registrations. The most frequent type of published studies (30.6%) were cross-sectional surveys.

Even though early advice in (S)WEMWBS user guides²⁴ and website²⁵ specifically mention that (S)WEMWBS had not been validated for use at the individual level, 16.1% of registrations were for monitoring individual progress, typically in a clinical or other service setting.

Publications included coverage of (S)WEMWBS in opinion pieces and policy papers and use of (S)WEMWBS to validate other scales as varied as a children's wellbeing scale²⁶, a citywide measure of wellbeing²⁷, a measure of guilt in people with dementia²⁸ and a recovery measure in psychiatric settings²⁹. (S)WEMWBS was included in 21 systematic reviews; three of these were reviews of scales designed to measure wellbeing³⁰⁻³²; others examined wellbeing amongst specific groups such as parents³³ or women experiencing menopause³⁴.

ORGANISATIONAL SETTING

Healthcare (17.9%) and education (10.7%) were the most common settings, with similar distributions for registrations. Few publications (3.2%) covered workplace interventions, which was not captured in database coding. 22.0% of registrations, but only 8.3% of publications, covered use in the community and voluntary sector. 5.3% of publications were linked to a national or international body, whilst a public sector focus was more frequent than a private sector focus. Many publications (36.4%) and registrations (18.8%) could not be linked with use in a particular setting.

TYPE OF INTERVENTION

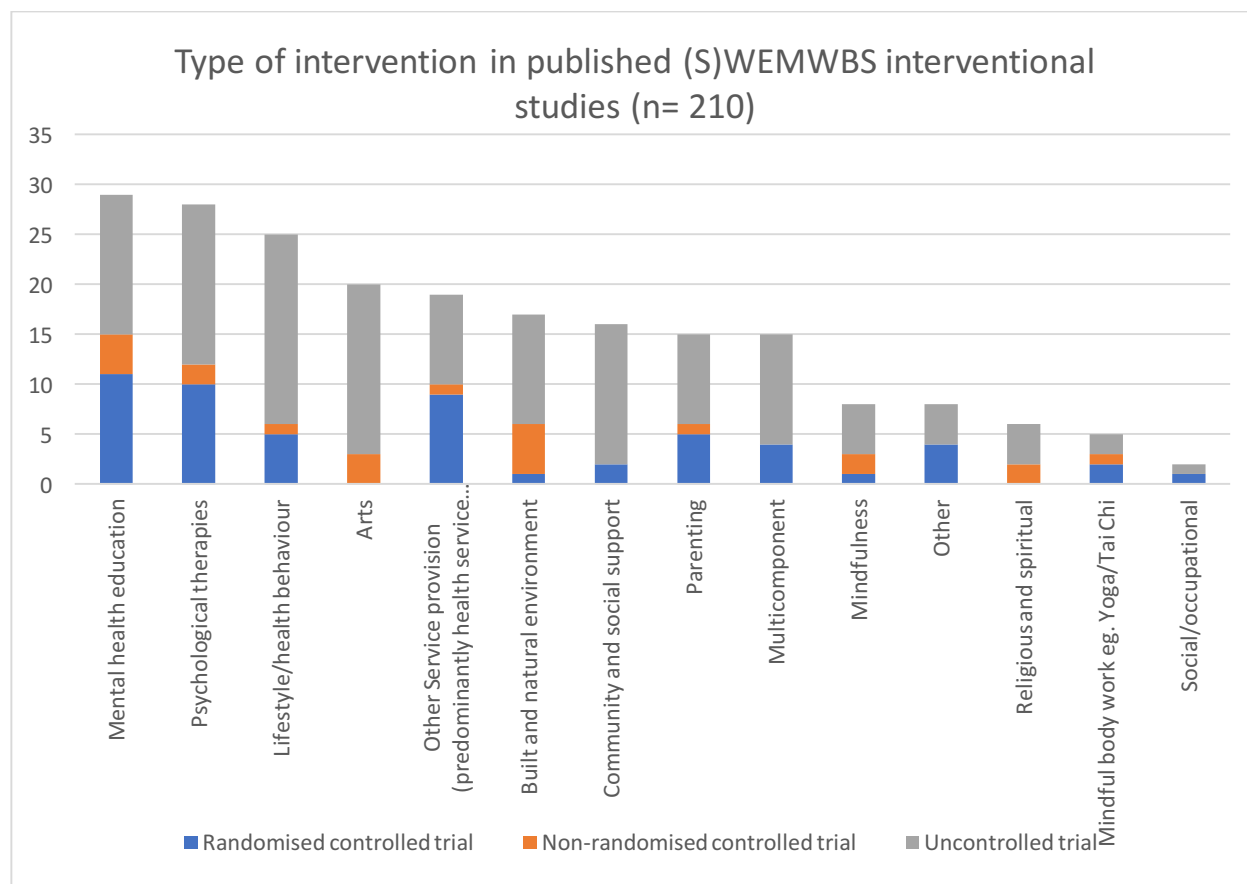


FIGURE 2: TYPE OF INTERVENTION IN PUBLISHED STUDIES

(S)WEMWBS has been used to evaluate a variety of interventions (see figure 2). Mental health education (13.8%) and psychological therapies (13.3%) were the most common. Studies investigating lifestyle, arts, community and social support interventions, as well as other service provision that do not fit into these categories, were also common. The main discrepancies between trends in published data and registrations were that other service-based interventions were slightly overrepresented in registrations compared to publications (15.2% cf 9.0%). Lifestyle interventions were overrepresented in publications compared to registrations (19.0% cf 13.9%), and built and natural environment interventions were overrepresented in publications compared to registrations (8.1% cf 3.0%).

STUDY POPULATIONS

Similar distributions were observed in publications and registrations relating to adults (28.0% cf 18.4%), children and young people (13.9% cf 15.0%), older people (5.8% cf 1.9%) and groups

with mental health problems (18.3% cf 19.6%). Employees were overrepresented in registrations (19.4%) compared to publications (9.2%).

RESPONSIVENESS TO CHANGE IN CONTROLLED STUDIES

(S)WEMWBS was defined as the primary outcome in 44.0 % of 75 controlled trials described in published papers and a secondary outcome in 52.0%. 34.7 % of the 75 trials did not have accessible results, mostly because they were still in progress. Out of the 49 studies where results were available, 12 reported statistically significant positive effects on (S)WEMWBS; a further 10 reported positive findings but were unable to confirm statistical significance. Of the remainder, all but 2 reported results that were positive but not statistically significant. Examples of these trials include an internet-based cognitive behavioural therapy (CBT) intervention³⁵ where a positive outcome was reported for WEMWBS but not the EuroQol EQ-5D. In a second trial of the Incredible Years parenting programme³⁶, positive outcomes were reported for parental WEMWBS before changes were detected in parental depression, sense of competence or stress. A third trial³⁷ reported positive outcomes with WEMWBS, which mirrored results for clinical indicators in an intervention to reduce negative cognitions in people with psychosis.

QUALITATIVE INTERVIEWS

Interviews ranged between 30 minutes and 1 hour 15 minutes. Thematic analysis identified four key themes: (S)WEMWBS filled a gap in existing measures; facilitated understanding of the concept of mental wellbeing, giving credence to its value for research and practice; provided a common currency to evaluate interventions across diverse sectors and settings; and was well validated and widely respected.

FILLING A GAP

(S)WEMWBS' most important contribution was seen as filling a gap in existing measures:

'[(S)WEMWBS] can fill that space between measures which are about quality of life and ... measures which are purely about anxiety and depression and I think that's really where it has its strength'
(civil servant)

The gap was characterised in terms of enabling:

- measurement of the positive:

'We were just desperate for a measure that recognised positive mental health and wellbeing'
(Independent mental health specialist)

- asset-based approaches which focused on:

'positive and protective factors' [...] rather than seeing a load of people that needed help [.....they] saw loads of good things [...] and could work on and encourage more (PHE Employee 1)

- changes in mental health to be captured alongside biomedical outcomes. For example, in a weight management programme, including evaluation of how participants felt holistically:

'you've lost 10lb or 20lb - and how do you feel physically? how do you feel mentally? what's that done for you and your confidence?' (CCG/LA employee)

- better alignment with participants' frame of reference:

'undoing some of the damage done by their experience of being measured by clinicians in terms that they don't understand, not because they're stupid but because the frame of reference doesn't have meaning for them.' (Community and voluntary sector employee.)

ENABLING UNDERSTANDING AND CREDIBILITY OF MENTAL WELLBEING

Participants recognised that mental wellbeing was still a contested area for some of their colleagues.

'they just didn't see the relevance of it for them... there was a kind of bewilderment, I suppose' (PHE employee 2)

"wellbeing can be interpreted as a kind of fluffy nonsensical thing" (researcher)

In this context, they believed (S)WEMWBS to have made:

"a huge contribution to that shift in understanding and accepting that mental wellbeing is something tangible that can be measured and therefore we can do something about it" (PHE employee 1).

And facilitated a change in emphasis in practice:

"[we were] asking GPs [...to] signpost them onto improving their resilience and wellbeing [...] that wouldn't have happened in my opinion if we hadn't had the (S)WEMWBS, (GP)

-not by requiring change, but by enabling practitioners and researchers to find out for themselves:

'... repeated exposure and people being able to measure it and do it for themselves, do it in their own practice in their own time, can develop their own ideas about how helpful or not it is' (researcher)

The act of using (S)WEMWBS seemed to open up discussions around mental wellbeing and its importance, at politico-organisational, community and individual levels. The measurement of mental wellbeing was said to enhance both the credibility of interventions and that of the practitioner or researcher using it:

"before WEMWBS it was easier to dismiss us as woolly ... it's given us some credence." (Independent mental health specialist)

PROVIDING A COMMON CURRENCY

Another important contribution covered by many participants was that (S)WEMWBS provided a currency which could enable comparison across a wide range of activities offered by non-government organisations (NGOs) as well as public services and in different settings and sectors.

"often when they [smaller organisations] do define impact it's in lots of different currencies... and the power of {mental} wellbeing really is that you can have it as a common currency of social impact across so many diverse forms of activity, and I think that's the power behind it really." (civil servant)

Examples were cited of successful bids for new projects based upon (S)WEMWBS outcome data, and the way it could contribute to policy development, giving credibility to low cost, non-clinical interventions. Examples of projects included a peer support and self-management intervention, a wellbeing pledge programme, parenting interventions, knitting and art therapy.

'it has been used [..] in evaluations to measure the impact of policies; [...that] helps to make the case next time around on either scaling or broadening the intervention' (civil servant)

WELL-VALIDATED RESPECTED AND WIDELY RECOGNISED

Although participants were aware that there was still some uncertainty about the validity of the evidence:

"I still come across pockets of academia that say 'the science behind it isn't there', 'but that's not based on anything, that's just people's opinions when you speak to them'" (CCG/LA employee)

-they recognised both the quality of the validation studies:

'we know that it's got the scientific backing, the evidence backing so we've just kind of said this is what we're using, this is the tool we're using' (CCG/LA employee).

-and widespread recognition of the measures:

'It's no longer an interesting distraction from work, it's an integral part of what we do now.' (GP)

'[(S)WEMWBS] seems to be the measurement tool [that is] nationally recognised' (CCG/LA employee).

Participants suggested that the rapid dissemination of (S)WEMWBS had occurred through a mix of bottom up and top down approaches. Use was perceived to have spread by word of mouth and electronic searching rather than in evaluation guidelines, in order to strengthen business cases, convince decision-makers and secure funding. Both in clinical services and in community organisations use of (S)WEMWBS was often a pragmatic response to an external mandate to evaluate from funding sources. This was accompanied by wellbeing champions pushing for use at local and national levels and through the requirements of commissioners to evaluate programmes to support performance management.

INTEGRATION OF QUANTITATIVE AND QUALITATIVE FINDINGS-

PREDOMINANCE OF USE IN COMMUNITY SETTINGS AND NGO SECTOR

Investigation of requests for use of (S)WEMWBS gathered when projects are registered for copyright purposes suggests a rapid spread of the scales since 2012 particularly, but not exclusively, in the community and voluntary sector where non-government organisations (NGOs) provide a variety of interventions, for example to increase social support and participation in arts. Interviewees suggested reasons why this might have happened referring to the increased requirement for evaluation to justify even small amounts of funding, and (S)WEMWBS enabling evaluation because of its positive focus, its alignment with participants' frame of reference and its capacity to provide a common currency across NGOs and public sector approaches. The sense of a pre-existing need amounting to desperation for a measure which filled this purpose, as expressed by some interviewees, goes a long way to explain the rapid increase in registrations in this sector. The discrepancy between the registry analyses where NGO/community projects were common and publication analysis where they were rare is consistent with use for evaluation rather than research in this sector.

ENABLING MENTAL WELLBEING TO BE ADDRESSED IN POLICY AND STRATEGY

Registration data showed evidence of (S)WEMWBS becoming embedded into strategy enabling mental wellbeing to become a goal of policy at regional, national and international

levels. Interviewees elaborated on the specific as well as general reason where this was happening, including policy relating to loneliness, youth resilience, and workplace resilience. They described examples of (S)WEMWBS being part of health and wellbeing strategies and were clear that (S)WEMWBS was instrumental in enabling inclusion of mental wellbeing in both policy and strategy by making something that could be seen as 'fluffy', tangible and measurable.

The act of using (S)WEMWBS seemed to be opening up discussions around mental wellbeing and its importance, at politico-organisational, community and individual levels. Some also expressed the view that working with (S)WEMWBS helped consolidate understanding of mental wellbeing.

MEETING MENTAL HEALTH SERVICE USERS PREFERENCE FOR MEASUREMENT FOCUSING ON MENTAL WELLBEING.

The registry and publication analysis showed many examples of (S)WEMWBS being used to evaluate provision in mental health services; interviewees cited examples of (S)WEMWBS being used for monitoring and evaluation in this context. They provided reasons why service users might prefer measurement of mental wellbeing, which captured the positive aspects of mental health over traditional mental illness measures that focus on deficits. They suggested that this counteracted illness-based thinking and reductionist frameworks, potentially eliminating stigma and promoting recovery concepts.

RESEARCHING DETERMINANTS OF MENTAL WELLBEING

The preponderance of cross-sectional surveys in both registration data and in publications is consistent with interviewees' view that (S)WEMWBS was meeting a need to deepen understanding of mental wellbeing and its relationship to other constructs and/or factors. (S)WEMWBS was seen as enabling research to highlight factors detrimental to wellbeing as well as protective factors, enabling an asset-based approach.

DISCUSSION

This study describes the spread of an outcome measure that captures the relatively new concept of mental wellbeing. It shows (S)WEMWBS to have become increasingly popular and established, in the UK and internationally, for use in mental health improvement at the population level, in targeted groups and clinical services. Key contributions of the measure are shown to be in evaluating non-traditional interventions offered, often by NGOs, in community settings and in investigating determinants and protective factors for mental wellbeing. The robust psychometric performance of the measures now demonstrated in multiple studies^{38,39}, the brevity of the scales, their responsiveness to change⁴⁰, unidimensionality⁴¹ and simple scoring are the essential qualities that support this aspect of use.

FACE VALIDITY

At the same time, through qualitative interviewing, the study brings to light subtler contributions that are arguably as important and partly explain the measures' popularity and spread. What interviewees said was that (S)WEMWBS makes concrete and understandable something which was intuitively recognised as a benefit by some practitioners, researchers and policymakers but not others. The coverage of items and their positive focus allows this intuitive benefit to be described and expressed in terms that others could recognise and value. As attested in part by the many published opinion pieces and policy papers on mental health and wellbeing that mention the measures (S)WEMWBS has facilitated the emergence of understanding that mental wellbeing as important to public health. In this way, it has framed the breadth of the new discipline of public mental health.⁴² The key attribute which has enabled this effect is its face validity.

CONCEPTUAL FRAMEWORK

The conceptual framework underpinning (S)WEMWBS is, it seems, one that appeals implicitly to those working on mental health improvement in a wide variety of disciplines. The appeal of the measures to study participants because of their more appropriate frame of reference was a contributory factor. This applied to general population studies as much as to those targeted at populations with mental health problems of varied levels of severity, consistent with previous findings⁴³.

In terms of face validity, WEMWBS differs from SWEMWBS in offering a fuller picture of mental wellbeing and including more items relating to feeling. Some of the debate about the nature of mental wellbeing relates to the perspectives of different disciplines with social scientists' relating primarily to feelings (happiness, satisfaction) and psychologists to functioning or psychological wellbeing. The distinction between these two facets of mental wellbeing can in practice be difficult to define; confidence and optimism, for example, are both feelings but the capacity to feel confident or optimistic is a teachable skill and therefore an aspect of functioning. The conceptual framework for (S)WEMWBS requires that the two are combined into a single construct and to this extent, WEMWBS is closer to the framework than SWEMWBS. It is arguably important that this framework mirrors the framework for mental illness where the two are always combined.

The spread of (S)WEMWBS beyond the borders of the UK, across Europe but also to widely different cultural settings, in Asia in particular, suggests that the conceptual framework has face validity with practitioners and researchers in other cultures. This is important for a measure which is to be used in increasingly multicultural settings in the UK and other parts of the Western world.

LIMITATIONS OF THE STUDY

The research methods include several limitations, which need to be taken into account when drawing conclusions.

The assumption has been made that registration for use means that the measure has been used. This is unlikely to be true in all cases and may affect the picture presented showing where the measure is being most widely used, as well as the overall numbers. On the other hand, anecdotal evidence suggests that the measure is being used for projects where it has not been registered. In particular, before the automated registration system was set up and guidelines published, the need to, and procedures for gaining consent were not well recognised. Because there were those in health improvement sector who were, in the words of two interviewees, 'desperate' for a measure like (S)WEMWBS, use spread by word of mouth. By this same token, number of early users calculated from manual registrations is likely to be an underestimate affecting the picture we have presented of trends. Registration figures are unlikely to greatly overestimate actual use but they may underestimate it.

Many subject-specific databases exist to search for publications and these are likely to be more robustly monitored and maintained than Google Scholar, the search engine we used to identify published papers. It is unlikely we have identified all publications. However, the need to search across disciplines and sectors and to search non-peer reviewed grey literature for community project evaluations and policy discussion papers made Google Scholar the engine of choice.

Although attempts were made to identify and interview participants who viewed (S)WEMWBS negatively, only one consented to interview. It is important to view the interview data as coming from a group of people in various settings who valued (S)WEMWBS and its contribution. Their views on how and why the measure was valued and why and how it had spread are valid, but not representative of the academic policy or practice community.

COMPARATOR MEASURES

(S)WEMWBS is not the only validated and robust measure of mental wellbeing. Internationally the WHO-5⁴⁴ measure is proving very popular. This captures aspects of physical as well as mental health wellbeing and presents a somewhat narrower picture of mental wellbeing than (S)WEMWBS. In the US, the Mental Health Continuum Short -Form⁴⁵, also containing 14 items, is very popular. It covers aspects of social functioning not covered by (S)WEMWBS. Both of these measures like (S)WEMWBS include only positive items, something that has been debated in the psychometric literature. Some have argued that a mixture of items is important from a psychometric perspective to prevent yay-saying, yet the positivity of items in (S)WEMWBS was one of the aspects most frequently praised. There is likely to be a trade-off between face validity and psychometric reliability in this regard.

In the UK, a single item measure of Life Satisfaction⁴⁶ is currently being proposed by some as most appropriate common currency to research mental wellbeing. This measure is valued because it is admirably brief and because it is included in many large datasets which enable the study of mental wellbeing. It is one of a set of four single items questions now included by the Office of National Statistics⁴⁷ in routine data collection in the UK, with information available down to local authority level. The other questions cover happiness, anxiety, and feeling that life is worthwhile. Because this data is available at local level these items are important in support of mental wellbeing policies and programmes. They have not been as

rigorously evaluated from a psychometric perspective, are not as well tested as outcome measures in intervention studies, and in many settings lack the face validity of (S)WEMWBS.

COMMON CURRENCY

One great strength of (S)WEMWBS, reported by many interviewees and demonstrated in the registry and publication analysis, is its capacity to act as a common currency, enabling comparison of efficacy across a wide range of approaches to health improvement. Given the increasing relevance of non-healthcare settings to tackling inequalities and wider social determinants of health, (S)WEMWBS offers a universally applicable outcome measure to aid evidence based decision-making across sectors.

It has been argued that *'if we know the value people attach to the health improvement they receive from different interventions, it could help to determine how to provide most efficiently more of the outcomes that people desire and fewer that they do not.'*⁴⁸ If a community centre knitting group can effectively protect against depression, with other cross-cutting benefits such as reducing loneliness and social isolation, there is a real opportunity to improve health outcomes within the current climate of financial constraint and increasing demand for healthcare⁴⁹.

Cost-utility analysis using the quality-adjusted life year (QALY) metric has been a great asset to evidence based policy and decision-making in healthcare since its introduction in the 1980s and subsequent adoption by the National Institute for Health and Care Excellence in England and Wales for technology assessments⁵⁰. What is becoming clear⁵¹⁻⁵³ is that (S)WEMWBS captures something that is valued by the public and increasingly recognised as health improving by policymakers and commissioners, that is not captured by health-related quality of life indices (eg. EuroQol-5D) used in QALY development. In order to support cost-effectiveness based decision making in health improvement, a Wellbeing Adjusted Life Year (WALY) is needed⁵⁴. The widespread use and popularity of this now well established and validated measure supports the relevance and candidacy of (S)WEMWBS for this choice as the basis for the development of the WALY.

CONCLUSION

(S)WEMWBS is being widely used across sectors and settings in the UK and internationally because it provides for measurement of a concept recognised to be important for health, but

not captured by traditional illness related measures of health. The measure's popularity and validity make it an excellent candidate for the development of a Wellbeing Adjusted Life Year or WALY which could aid decision-making for policymakers and practitioners at local and national levels.

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