

## Chapter 7

# The Warwick-Edinburgh Mental Well-Being Scale (WEMWBS): Performance in Different Cultural and Geographical Groups

Sarah Stewart-Brown

Public health policy and practice has traditionally focused on the causes of disease rather than the determinants of well-being and has concerned itself more with physical than mental disease. In the United Kingdom and in Europe, this situation is now beginning to change, as evidenced by the publication of the World Health Organization's Action Plan for Europe (2005), the European Commission's European Pact for Mental Health and Well-being (2008), and the mental health and well-being strategies of both Scottish and English governments (Scottish Government 2009; Department of Health 2011). In England at least, the general public and National Health Service patients have played a part in bringing about this change. It seems that they have a clearer concept of the holistic nature of health and of the importance of mental well-being in this context. And with the advent of policy relating to patient and public voices, they now have a greater chance of having their views heard (HM Government 2006). The change has also been supported by a growing body of research which suggests that mental well-being predicts future physical health and longevity (Chida and Steptoe 2008; Pressman and Cohen 2005), with studies providing the evidence for possible neurological and neuroendocrine mechanisms that underpin these observations (Davidson 2004) and with an emerging understanding of the role of mental health and well-being in the management of the increasing burden of chronic disease (DiMatteo et al. 2000).

The concept of mental well-being has been debated within the context of the UK public health (Freidli 2006; Huppert and Whittington 2004; Huppert 2008), as it has elsewhere. In the context of policy making in the UK, it is now conceived eclectically (Parkinson 2007; HM Government 2009), encompassing both subjective and psychological well-being (Keyes et al. 2002; Ryan and Deci 2001). There has been debate in the UK, as well as internationally, over the relationship of mental well-

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S. Stewart-Brown (✉)  
Warwick Medical School, University of Warwick,  
Coventry, UK  
e-mail: Sarah.Stewart-Brown@warwick.ac.uk

being to mental illness (Tudor 1996; Keyes 2007). Most now see this relationship as more complicated than a single continuum, and the term mental health has come to cover the range of continua envisaged within the field. This is different from the past, in which the term *mental health* was used almost exclusively to cover mental illness and mental illness services, and almost all epidemiologically accepted measures of mental health aimed to measure levels of mental illness.

## **The Development of the Warwick-Edinburgh Mental Well-Being Scale (WEMWBS)**

In this evidence-based day and age, policies need outcomes and outcomes need to be measurable. Interventions and approaches developed to implement these policies need to be evaluated. The lack of measures of mental well-being was, therefore, seen to be a problem (Stewart-Brown 2002). It was with these needs in mind that the Warwick-Edinburgh Mental Well-Being Scale (WEMWBS) was developed (Tennant et al. 2007a) on funding provided by the Scottish Government as part of the development of their new mental health policies. Working with colleagues from many different disciplines while developing this scale, the aim was to provide a short instrument which was easily understood, accepted by the public as a measure of mental health, practical, and inexpensive, to be included in large-scale health surveys. The central tenet of development was that the instrument would focus both on positive aspects of mental health and the key attributes of mental well-being discussed in the literature. It aimed to combine both eudemonic and hedonic principles and aspects of both psychological and subjective well-being (Ryff and Keyes 1995; Diener et al. 1985).

The final instrument includes 14 items, all of which are positively worded and all of which cover positive aspects of mental health. The instrument has five levels of response to be assessed over a 2-week period, from none of the time to all of the time. Close scrutiny of the items evokes an echo of familiar and very well-established mental health scales, such as the General Health Questionnaire (Goldberg and Williams 1988). Indeed, the only difference between some of the items is in the negative: “I’ve been losing confidence in myself” in contrast to the positive “I’ve been feeling confident.” While this could beg the question of what WEMWBS adds to the current knowledge, those working in mental health promotion and public mental health more generally perceive there to be an important difference. Practitioners in the UK say that they used to feel very ambivalent about evaluating their mental-health-promoting projects and programs with existing scales, with items focused on, for example, feeling “down in the dumps.” WEMWBS proclaims the purpose of the project with the implicit statement: “This is what we want for you.” Such practitioners have intuitively recognized that which the discipline of positive psychology has demonstrated (Linley and Joseph 2004), that is, what you pay attention to is what you get more of, and that when promoting the positive, it is essential to focus on the positive. At some level, the use of positive scales like WEMWBS, in both surveys and evaluations, has thus become a mental-health-promoting intervention in its own right. Since the

*The Warwick-Edinburgh Mental Well-Being Scale (WEMWBS)*, Below are some statements about feelings and thoughts

Please tick the box that best describes your experience of each over the last 2 weeks	Statements	None of the time	Rarely	Some of the time	Often	All of the time
I've been feeling optimistic about the future		1	2	3	4	5
I've been feeling useful		1	2	3	4	5
I've been feeling relaxed		1	2	3	4	5
I've been feeling interested in other people		1	2	3	4	5
I've had energy to spare		1	2	3	4	5
I've been dealing with problems well		1	2	3	4	5
I've been thinking clearly		1	2	3	4	5
I've been feeling good about myself		1	2	3	4	5
I've been feeling close to other people		1	2	3	4	5
I've been feeling confident		1	2	3	4	5
I've been able to make up my own mind about things		1	2	3	4	5
I've been feeling loved		1	2	3	4	5
I've been interested in new things		1	2	3	4	5
I've been feeling cheerful		1	2	3	4	5

Warwick-Edinburgh Mental Well-Being Scale (WEMWBS)

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publication of the validation of this instrument, it has been incorporated into key national health surveys in Scotland and England as well as into a host of other large surveys and cohort studies. In Scotland, a reduction in WEMWBS score is now one of seven health targets for the Scottish Government and in England WEMWBS is recommended for monitoring mental well-being at national level as part of the new Public Health Outcomes Framework (Department of Health 2012)

The original validation of WEMWBS was undertaken in a large representative population in Scotland, with a group of students at Scottish and English universities and with focus groups in both countries (Tennant et al. 2007a). While the student sample, in particular, and Scottish and English populations more generally are multicultural, white British responses were predominant in the validation. Culture is self-evidently important to the interpretation of concepts of well-being, and while concepts dating back to ancient Greece have informed current thinking, the latter has arisen predominantly in modern, western capitalist societies (Christopher and Hickinbottom 2008). In order for WEMWBS to be used to monitor positive mental health at the national level, and in order to discriminate and investigate social inequalities in health (which may be culturally determined), it is critically important to know that the instrument works for all sectors of the population.

## **Cross-Cultural Validation of WEMWBS**

The National Institutes for Mental Health in England provided a small grant to begin to embark on the process of cross-cultural validation of WEMWBS in England. After deliberation, we chose to focus on two distinct cultural groups: Muslims from Pakistan and the Chinese. We were influenced in this decision by a recent report from Scotland in which a review of the literature relating to concepts of mental well-being had been undertaken, focusing on these two groups (Newbigging et al. 2008) which allowed our limited resources to be devoted to data gathering and analysis. At the same time, we recognized that both groups represented relatively distinct cultures, influenced by specific spiritual and philosophical traditions, which were therefore likely to reveal diversity in the conceptualization of mental well-being. However, neither group is homogeneous. While both have been established in the UK for many decades, they include recent and long-term immigrants who live in a variety of socio-economic circumstances, university students, young people who have been born and educated in the UK, and elderly who socialize almost exclusively within their own community. The Chinese community in the UK includes a high proportion of students and encompasses Chinese from both Hong Kong and mainland China. While we were limited by the resources available for the project, to working with members of these minority groups who spoke English to complete the WEMWBS in English (the group most relevant from the point of view of large-scale population surveys with English questionnaires), We worked with two community workers who were able to translate for participants when this was requested or seemed appropriate.

Measures of positive mental health are in demand from diverse parts of the world. We have now given permission for WEMWBS to be used in Australia, Canada, the United States, Italy, Spain, Germany, France, the Netherlands, Belgium, Iceland, India, Pakistan, Malaysia, and South Africa. So far, two of these research groups have completed formal quantitative evaluations of WEMWBS. Both Paola Gremigni in Italy and Marie Wissing in South Africa (with the Setswana community) have given permission for their results to be included in this chapter. These studies add much to the current topic due to their valuable translations of WEMWBS into other languages and therefore begin to provide a picture of how the instrument might work with black African cultures.

## **Methods Involved in Validating WEMWBS with Pakistani and Chinese Communities in the UK**

We undertook both quantitative and qualitative investigations of WEMWBS in two minority ethnic English communities. We worked with one of the Primary Care Trusts (the organizations which manage primary care and public health services in England) and a local charity in Birmingham, a city with a high proportion of minority ethnic inhabitants and a high level of social inequalities. The Trust employed community workers for both of the communities we were interested in and gave invaluable help

in designing the study. Neither of these communities had been known to be typically easy to access. Few people, especially in the Pakistani community, were familiar with or interested in university research, and many were reluctant to give personal details to strangers. In both groups and among Chinese men in particular, there is reluctance to discuss mental health. With the help of the community workers, we developed an approach that was tailored to each community and involved door-to-door assessment in streets with high proportions of Pakistani residents, most of whom knew each other having immigrated from one community in Pakistan; direct contact with people through fitness gyms, access to which was at that time being provided free of charge in deprived communities; and contact through taxi bases, sewing groups, youth groups, and from social network groups. The Chinese community members were approached by the community worker at places where they typically gathered on Sundays or at Chinese restaurants, supermarkets, travel agencies, hairdressers, local colleges, local housing associations, and by word of mouth. We offered £20 to focus group participants to cover their expenses and a mobile phone voucher worth £2.00 to those who completed the questionnaires. For the quantitative evaluation, we were able to supplement the data we had collected with data derived from a representative population survey undertaken in Coventry, a smaller, multiculturally deprived city close to Birmingham. Public health practitioners in this locality had undertaken a general population survey, which included WEMWBS alongside 44 other health-related questions, in a survey that took 15 min to complete. The data collection team used a quota sampling method to achieve a representative population and undertook interviews on doorsteps and on the street using computer-assisted technology. Overall, the respondents were representative of the population of the city in terms of demographic characteristics, with 44 % engaged in paid work, nearly half of which were male (48 %), and with a good spread across age range. Out of a total population of 3,750 (from a sampling frame of 8,500—a response rate of 44 %), data were collected on 43 Chinese and 94 Pakistani respondents, and these were included in the quantitative evaluation.

For the Birmingham study, a booklet containing WEMWBS together with two comparator scales—the General Health Questionnaire (GHQ-12; Goldberg et al. 1997) and the WHO-5 Well-Being Index (Bech 2004) with demographic details—was designed by the research team at Warwick University and approved by representatives of the Chinese and Pakistani community in Birmingham, by public health practitioners working in the Primary Care Trust, and by the University Ethics Committee. The latter involved considerable negotiation because committee members felt that in order to get effective consent, participants should be offered a week between first contact and taking part in the study, an approach which was not considered practical or necessary by community workers. Letters of invitation for door-to-door and on-the-spot recruitment, information sheets, thank you cards, and consent forms for both the survey and the focus groups were also approved.

Community workers distributed 120 questionnaires in each community using a quota sampling method so that equal numbers of men and women were represented and so that the age mix reflected that of the UK population. Many people who were approached declined to complete the questionnaire. Most participants answered the questionnaire on the spot, but some preferred to take it away to complete at home.

Of those who agreed to take a questionnaire, for the Pakistani group, 107 out of 120 (89%) questionnaires were returned, while for the Chinese group, 116 out of 120 (97%) were returned. The mean age of respondents was 48 (SD 9.0) for the Pakistani community, with a preponderance of young and middle-aged respondents. In the Chinese community, the mean age for men was 47 (SD 9.3), and for the women, the mean age was 50 (SD 11.2); there was a good spread across the age range. In both groups, even though just over half of the participants had been born in the UK, three quarters were less confident in English than they were in their first language. Half of those in the Pakistani community and two thirds of those in the Chinese community were engaged in paid work. Furthermore, all participants in the Pakistani group reported their religion to be Islam, and three quarters of the Chinese reported no religion.

Five age- and gender-specific focus groups were held in the Pakistani community: men aged 16–24 years, men aged 25–49 years, men aged 50–75 years, women aged 16–24 years, and women aged 25–49 years. Three age-specific groups were held in the Chinese community: ages 16–24 years, ages 25–49 years, and ages 50–75 years. Ten people were invited to each group. Participants were all able to speak English, with the exception of one older Chinese woman and three middle-aged Pakistani women for whom the community worker or other young women interpreted, respectively. We defined English speaking as the capacity to complete the questionnaire since this is how it would be defined in any population survey.

## *Quantitative Findings*

We undertook an evaluation of content, construct, and criterion validity, as well as an assessment of internal consistency, with data on a total of 159 Chinese and 211 Pakistani participants (using data from both Birmingham and Coventry). Tim Friede, in Germany, undertook the main statistical analysis and Alan Tennant, from Leeds University, undertook a Rasch analysis.

WEMWBS' content validity in these two communities was good. There were no significant floor or ceiling effects, and all level of response categories were checked for all items by at least one respondent in each community (see Fig. 7.1). Some block responding was evident at a mean of 42, which meant that respondents were likely to have checked the middle level for all 14 items; this problem was not marked. Pakistani respondents were more likely to miss individual items than Chinese respondents; they were most likely to miss item 1 "I've been feeling optimistic about the future" and item 14 "I've been feeling cheerful."

Among the Pakistani community, several items were rarely scored as *none of the time*. These items were 2, 3, 7, 8, and 9 (feeling useful, relaxed, thinking clearly, feeling good about oneself, and feeling close to others). For the Chinese community, the only item which was rarely scored as *none of the time* was item 12 (feeling loved).

The results of the latent variable confirmatory factor analyses for a single factor solution are shown in Table 7.1. The goodness of fit index and adjusted goodness of fit index were acceptable for both communities and compare well with that achieved in the origi-

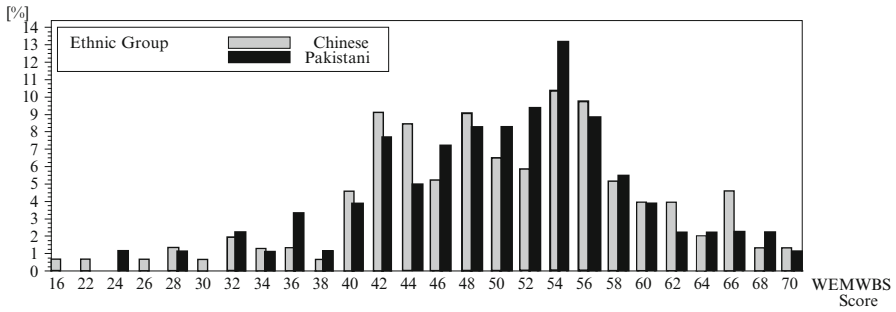


Fig. 7.1 Score distributions for WEMWBS in Chinese and Pakistani samples

Table 7.1 Confirmatory factor analysis of WEMWBS in Chinese and Pakistani groups and the majority of the UK population

Measure	Chinese (n = 154)	Pakistani (n = 183)	Tennant et al. (2007a, b): gen population (n = 1,749)	Tennant et al. (2007a, b): students (n = 348)
Goodness of fit index (GFI)	1.00	1.00	0.91	0.93
Adjusted goodness of fit index (AGFI)	1.0	1.0	0.87	0.89
Root mean square error of approximation (RMSEA)	0.0464	0.0455	0.0502	0.0551
Chi-square statistic (df) P value	<i>p</i> = 0.035	<i>p</i> = 0.025	<i>p</i> < 0.05	<i>p</i> < 0.01

nal population. The root mean square error of approximation (RMSEA) was somewhat below the desirable level. Also, there was a significant lack of goodness of fit ( $P=0.035$  for the Chinese and  $P=0.025$  for the Pakistani group). These results are similar to those obtained with the original validation of WEMWBS in the general population. They are consistent with the Eigen values, which were 7.33 (Chinese) and 6.8 (Pakistani) for the first factor, below 1 for other factors in the Chinese group, and were just greater than 1 in the Pakistani group for a second (1.1) and third factor (1.01). The difference between the Eigen values for the strongest factor and the other factors in the two communities is reasonably strong evidence in favor of a one factor solution.

With regard to internal consistency, Cronbach’s alphas were high: 0.92 in the Chinese and 0.91 in the Pakistani groups, suggesting there may be room to shorten the scale as we found in the main validation. With regard to item total correlation, which measures whether responses vary for each item in line with the total score, we found that item 1, “I’ve been feeling optimistic,” had the lowest correlation in the Pakistani group. The next lowest was item 5; “I’ve had energy to spare.” Among the Chinese, the lowest item correlation was found with item 4, “I’ve been feeling



interested in other people,” but the difference between items was not marked. In both groups, items 8 “I’ve been feeling confident” and 10 “I’ve been feeling good about myself” had the highest item correlation ( $p > 0.70$ ).

Criterion validity could only be assessed in the Birmingham group because the relevant data were not collected in the Coventry Household Survey. Spearman correlation coefficients for WEMWBS with the GHQ-12 were as follows:  $-0.63$  with the Chinese and  $-0.58$  with the Pakistani community. Correlation with the WHO-5 general well-being scale was lower than we found in the original validation (0.77): among the Chinese, it was 0.62, and among the Pakistani is 0.64.

## Rasch Model Analysis

Rasch modeling was developed to investigate the psychometric properties of scales and instruments. Based initially on examination data, it assumed a hierarchy among items with questions being more or less difficult to answer. It also assumed that each item retained its hierarchical order in all cases (or students). Instruments which meet Rasch criteria have the important property of numerical scaling, so the difference between 5 and 10 can be assumed to be the same as the difference between 20 and 25. These assumptions are implicitly made about most instruments used to measure mental health, but they are not necessarily justifiable from a mathematical point of view. Lack of fit to the Rasch model does not invalidate a scale, but it does violate many of the assumptions of the statistical tests which are used to assess their significance and the implicit assumptions about the scores. Such scales can show respondents to be higher or lower on a scale than other respondents but are not clear as to how much better or worse they are.

The initial analysis of WEMWBS data from both minority ethnic groups in both cities, together and separately, showed a poor fit to Rasch model assumptions. This was no surprise, as WEMWBS data from the majority population in the UK also showed a poor fit with this model (Stewart-Brown et al. 2009). The latter analyses identified a seven-item scale, which we have called SWEMWBS (the shortened WEMWBS), that met Rasch criteria well. This shortened scale is now being used in many surveys where respondent burden is an issue.

The fit of SWEMWBS minority ethnic data to the Rasch model was much better than the fit of WEMWBS data. This was true both in individual minority groups and in the combined dataset. The results were characterized by chi-square fit, strict unidimensionality, and the absence of local dependency of data. Rasch analysis identifies items that show differential item functioning (DIF), that is, they seem to be answered in different ways by different groups relative to their overall responses or total scores. In the original analysis (Stewart-Brown et al. 2009), for example, we found that the item “I’ve been feeling confident” showed significant DIF for gender. At each level of WEMWBS’ score, men were more likely to report more confidence. This finding seems to replicate past observations and, at some level, reassures that the scale is working well. At the mathematical level, however, it caused problems in



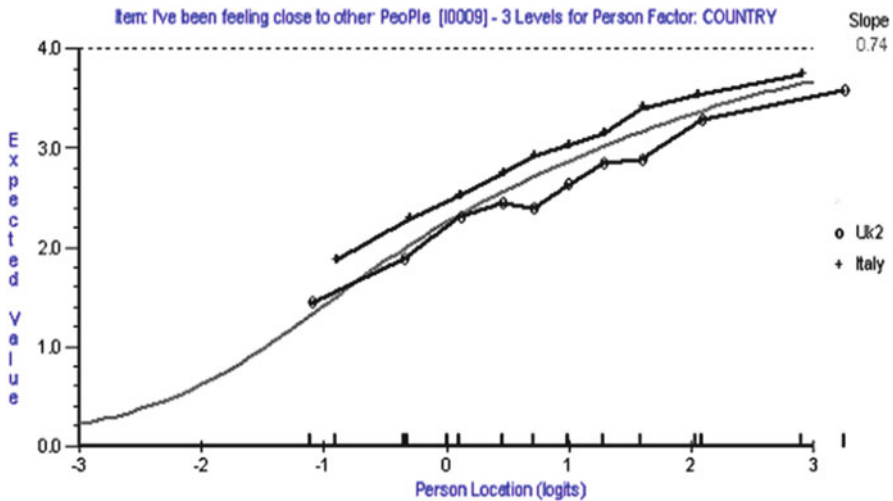


Fig. 7.2 Differential item functioning by nationality in samples from the UK and Italy

that the item needed to be abandoned. Among the Pakistani and Chinese communities, one item showed DIF in the SWEMWBS data at a marginal level that was corrected for in the analysis. This was item 7; “I have been thinking clearly.” Interestingly, the DIF here was both minority group and community specific; the Birmingham Pakistanis and Coventry Chinese rated the item similarly with regard to their total scores, as did the Coventry Pakistanis and Birmingham Chinese. The latter rated the item higher at the same level of overall well-being or total score. This analysis also identified about 5 % of respondents who block responded, that is, who answered all questions at one level. We saw this in Fig. 7.1. It is inevitable that some respondents will answer in this way, aiming to complete the question rapidly rather than thoughtfully, but this can create problems with the data by reducing variability in response. The respondents who did this were mostly young. When block responders were removed from the analysis, the fit of the SWEMWBS data improved further in both the Chinese and Pakistani samples.

### Validation in Italian and Setswana Communities

Paola Gremigni translated and back translated SWEMWBS and collected data from 325 people in Bologna, Italy, with a mean age of 39 years. She found that that the shortened instrument worked well in this context. Rasch modeling showed no local dependency of data, strict unidimensionality, and chi-square fit to the model. In the Italian sample, she found no differential item functioning, but when the data were pooled with a sample of similar size and age distribution from the UK, she found DIF for nationality on four items. Figure 7.2 illustrates this DIF with regard to item 9;

**The Short Warwick-Edinburgh  
Mental Well-being Scale  
(SWEMWBS)**

Below are some statements about feelings and thoughts.

Please tick the box that best describes your experience of  
each over the last 2 weeks

STATEMENTS	None of the time	Rarely	Some of the time	Often	All of the time
I've been feeling optimistic about the future	1	2	3	4	5
I've been feeling useful	1	2	3	4	5
I've been feeling relaxed	1	2	3	4	5
I've been dealing with problems well	1	2	3	4	5
I've been thinking clearly	1	2	3	4	5
I've been feeling close to other people	1	2	3	4	5
I've been able to make up my own mind about things	1	2	3	4	5

"Warwick Edinburgh Mental Well-Being Scale (WEMWBS)  
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"I've been feeling close to other people." As we might have guessed, at each level of WEMWBS, Italian people scored this item higher than British. As with the excess of confidence in men identified above, this is entirely consistent with caricatures of national characteristics. When all four items were considered together in the combined populations, their effects canceled each other out, meaning that cross-national characteristics are valid (Gremigni and Stewart-Brown 2011).

Marie Wissing undertook a more sophisticated translation with sensitivity to cultural factors and use of a research committee to translated into Setswana. Setswana is one of the 11 official languages of southern Africa used by approximately four million people. This language has much in common with Sesotho and Sepedi, and together, these three languages are used by a quarter of the South African population. As part of a major epidemiological project in the northwest province of South Africa, she collected WEMWBS data on a randomly selected community sample of 581 adults (mean age 55.7 year) living in urban areas. Structured interview format was used for illiterate people. Preliminary analyses suggest that WEMWBS is working well in this population. Item total correlations ranged from 0.46 for item 1, "I've been feeling optimistic about the future," to 0.64 for item 8, "I've been feeling good about myself." In confirmatory factor analysis using the principal components

method of factor extraction, all items loaded on a single factor, with loadings ranging from 0.53 for item 5, “I’ve had energy to spare,” to 0.71 for item 9, “I’ve been feeling close to other people.” Cronbach’s alpha was 0.88.

## **Levels of Mental Well-Being in Minority Groups**

These various quantitative validations have provided mean scores for WEMWBS, and they show significant differences between ethnic groups and geographical locations. In the UK, given their socioeconomic circumstances and the assumption that the latter are a key determinant of well-being, minority groups’ scores were surprisingly higher (i.e., showed better mental well-being) than those of the general population in the UK. What was also notable was that those living in Coventry from either ethnic group reported higher levels of well-being than those living in Birmingham ( $F=5.92$ ,  $p<0.001$ ). The Italian population that took part in the Bologna validation recorded significantly lower scores on SWEMWBS than the UK population, and the Setswana community recorded the highest scores of all (i.e., best mental well-being of all). Given the response rates to some of the surveys in which the data were collected (42 % in Coventry overall and unknown but anecdotally well below 50 % in the minority ethnic communities in both cities), significant questions remain about the representativeness of some of the samples; we need to be cautious when interpreting these very interesting findings. However, they provide a fruitful area for further research with highly significant implications for our understanding of the determinants of mental well-being.

## ***Qualitative Findings***

In our Birmingham study, we had the opportunity to undertake qualitative research with a number of age and—in the Pakistani community—gender-specific focus groups. The groups were gender specific in the Pakistani community because the community worker advised that it would be unlikely that we would be able to persuade women to speak freely of these matters in the presence of their male relatives or neighbors. The purpose of this aspect of the research was to identify whether participants understood the instrument and the individual items and whether they found them acceptable. We also aimed to explore what participants understood by mental well-being and whether they thought the instrument addressed these perceptions. Groups were run by Frances Taggart, and all were also attended by a community worker from the relevant community. The researcher worked from a topic guide and recorded all group conversations. All the recordings were transcribed in full.

## General Impressions of WEMWBS

Focus group members completed WEMWBS together with some basic demographic details before the discussions began. They were first asked to offer general comments about the instrument, and responses to this were positive. Group members described the questionnaire as easy to complete, easy to understand, and acceptable. Some commented that they positively enjoyed the opportunity it offered for self-reflection. A small number of people commented that the questions were a bit general and nonspecific. Some said that while they understood the questions themselves, the questions might be misunderstood by others who lacked the capacity for self-reflection. There was some concern that other people might be inclined just to check all items at the highest level. This comment, coming from a Chinese group, stands in contrast to what others have found about the Chinese that there is a cultural modesty which means that they are unlikely to say they are feeling wonderful even if they are (Christopher 1999). The comment was also made that the subjective responses collected in completing WEMWBS might not concur with an objective view of that individual's mental health.

## Reflections of Individual Items

Half of the items (6, 7, 8, 9, 10, 12, and 14) posed no problems for either minority group. Discussions sometimes revealed a sophisticated understanding of the nature of well-being, for example, the reciprocal nature of cheerfulness (item 14: "If you were cheerful with others, they cheered up and could be more cheerful with you and vice versa"). Discussion about item 12, "I've been feeling loved," revealed the various levels on which this could be interpreted, including consideration by others, support, love for others because that was part of religious duty, the love of god, and the fact that some people found it easier to love than others because that was in their character. Some of these findings are consistent with the quantitative analyses. In particular, the items "I've been feeling good about myself" (item 8) and "I've been feeling confident" (item 10) were those with the highest item total correlation. However, it is interesting that only three out of these seven easily understood items (6, "I've been dealing with problems well"; 7, "I've been thinking clearly"; and 9, "I've been feeling close to other people") were retained in the Rasch modeling and are, therefore, represented in SWEMWBS.

Several items created discussion about context. Participants queried in what context they were meant to think about "feeling relaxed" (item 3), "feeling useful" (item 2), or "interested in new things" (item 13). Was this, they asked, intended to relate to work, home, or leisure? However, there was also some sophisticated discussion about "feeling useful" and how this related to self-confidence or (especially among the women from both communities) being busy and having no time for oneself or shouldering responsibility. Among the Chinese community, some respondents talked

about being useful to themselves in the context of being able to prove themselves to others. Individuals made the connection between lack of “interest in new things” and fear of change, which was regarded as negative. Issues related to the use of drugs and alcohol were also raised in discussions about “feeling relaxed.”

Two items were well understood but clearly interpreted differently from the UK population in both minority groups. In both communities, but especially the Pakistani community, there was discussion about the item “I’ve been able to make up my own mind about things” (item 11). While this was appropriately linked to self-confidence, group members also described how it was considered inappropriate, even arrogant, to not consult and take advice from elders and family members in their community. Discussions in the different groups revealed some age differences here, with the young showing more inclination to make their own decisions and expressing frustration at not being allowed to. The item “I’ve had energy to spare” revealed interesting cultural differences relating to the Chinese understanding of the importance of physical activity in raising energy levels.

Two items created discussion because they were not clearly understood by all group members. One of these was item 1, “I’ve been feeling optimistic about the future.” There is no direct translation of the word *optimism* in Pashtun, the language of most Pakistani focus group members. The nearest group members came to this were *feeling good about the future*, but other group members said things like “I am not sure what that means” and “I don’t like that question.” The other item which created some confusion was item 13, “I’ve been feeling interested in other people.” While the observation that people who are stressed tend to withdraw socially was made, together with comments about the need for self-confidence, others thought this item might be interpreted negatively as being *nosey* or *gossipy*. Some of the young men said they interpreted this in sexual terms: whether they were “interested” in girls.

A significant qualitative study was undertaken during the WEMWBS development project on another mental well-being instrument: the Affectometer 2 (Tennant et al. 2006). Validation of the latter instrument was the starting point for the development of WEMWBS. However, qualitative data relating to WEMWBS from the general UK population is limited to two focus groups undertaken in 2006 (Tennant et al. 2006). The latter studies showed that the UK general population finds WEMWBS easy to understand and acceptable to complete, but there is little in the way of qualitative data reviewing individual items. However, item 1 which states “I’ve been feeling optimistic” was one of the items that was spontaneously mentioned in these groups as causing difficulty because people were not sure of their response. This is rather different from saying that it was not understood. The other items that were spontaneously mentioned in this context were item 9, “I’ve been feeling close to other people,” and item 4, “I’ve been feeling interested in other people.” The context in which these items were mentioned was said to be “emotional,” meaning that reflection on their responses brought feelings of sadness.

A much larger qualitative study was undertaken in the recent validation of WEMWBS among 13–15-year-old youth in schools (Clarke et al. 2011) and two

items, where item 1, "I've been feeling optimistic," and item 4, "I've been feeling interested in other people," caused the most difficulty with this age group. Item 1 was also the item with the lowest item total correlation in quantitative analysis of Pakistani data, yet it was retained in the Rasch modeling and is therefore represented in SWEMWBS. Item 4 was the item with the lowest item total correlation among the Chinese; this item caused some problems with the Rasch modeling and is not represented in the shortened version, SWEMWBS.

## Qualitative Findings Relating to Concepts of Mental Well-Being

In focus group discussions, members were also asked to talk about their general perceptions of mental well-being. Overall, this was not a concept that either community understood. All groups focused instead on mental illness and poor mental health. This finding is consistent with studies on the majority population (Tennant et al. 2006). With respect to mental illness, the key issues raised by both minority groups were those related to shame and stigma. In neither community was it acceptable to acknowledge mental health problems. Nor did either community find it acceptable to seek help for such problems from health services. Shame was powerfully felt by family members as well as the individual, so becoming mentally ill had wider ramifications than it might in the general population.

Among the Pakistani community, women talked of finding help in support from other women and in religion; men talked of hiding, of returning home to Pakistan, and of Islam. In both groups, the family was seen to be a key support. Pakistani groups identified unemployment, social isolation, poor physical health, and the rigors of cultural adaptation as causes of mental distress. Another specific and real cause was worry about other family members, particularly in the context of how others might judge how *well* they were doing.

Among the Chinese, conversation turned to the need for endurance and getting on with things, not in complaining or blaming. There was some discussion within the groups on the value of *denial* as the appropriate coping mechanism, with some feeling that this was an inappropriate strategy, especially among relatives; still, there was a sense that it was considered inappropriate and bad manners to burden others with one's own distress. Groups spoke of Chinese understanding of positive and negative energy. Negative thoughts create negative energy, which affects others and is bad for all. It was therefore important to find ways to lift one's spirit. Here again, the importance of physical activity was mentioned, as well as general outlook on life and family support. The family was identified as the place where children should learn how to live in the right way and that *right living* protected against mental health problems. However, it was said that not all families offer this to their children, and families were also mentioned as a place where bad things could be learned.

## Qualitative Findings in the Context of the Wider Literature

These findings are broadly in line with the findings of Newbigging (2008) in her review of the literature relating to cultural concepts of mental well-being and her qualitative study with community workers in Pakistani and Chinese communities in Scotland. She found that the Chinese understood the term happiness, but not mental well-being. Pakistanis equally did not understand mental well-being and talked more of peace of mind and contentment. Both groups understood and talked about the concept of feeling good about oneself, and freedom from worry came up as important for happiness/contentment. Both freedom for worry (feeling relaxed) and feeling good about oneself are represented in WEMWBS, but not contentment or peace of mind.

Both groups identified the need to achieve a balance in life for it to be healthy and rewarding. For the Chinese, a good life also included prosperity; for the Pakistanis, serenity. Both groups were also clear about the need for acceptance of the inevitable, bowing to fate, and fulfilling family and gender obligations. Living in harmony with the others was of preeminent importance, together with interdependence in family and community. The Chinese identified peaceful attitudes toward others; the Pakistanis identified the concept of collective shame. Both groups reported that the need for acceptance by others was strong, with the suggestion that this is more important than acceptance by self.

The Chinese identified endurance and hard work as protective. They believed that living a virtuous life, which required internal strength, leads to material abundance, status, and health. Pakistanis identified patience and fulfilling family and religious duties as protective.

While there are items relating to relationships with others in WEMWBS, these fall short of describing the preeminence of harmonious relationships described by these two communities. WEMWBS, reflecting western influences, does not cover balance in life, acceptance of fate, serenity, endurance, or fulfilling obligations or responsibilities.

## Conclusions

So what does all this mean for the use of WEMWBS, and the shortened version SWEMWBS, in cultures and countries other than that in which they were developed? From a quantitative point of view, it would seem that both instruments perform better than could reasonably have been expected. There are very significant differences between the different cultures' views of mental health, and they have very different beliefs about its determinants. Nevertheless, these quantitative evaluations in diverse communities suggest WEMWBS and SWEMWBS perform as well as they do with the UK general population. It also seems that other cultural groups find the instrument acceptable and that, in general, people understand the items and enjoy filling them in.



With regard to the choice of WEMWBS or SWEMWBS, both continue to have their advantages. WEMWBS contains a number of items that are associated with concepts of positive mental health in other cultures that are not represented in SWEMWBS (feeling good about self and confident) and therefore may have greater face validity. SWEMWBS includes one of the items (optimism) that seems to cause most problems with all groups who have been asked for their views. The advantage of SWEMWBS' unidimensional scaling properties is great not only in monitoring general population health and well-being, but also for confidence in statistical assessment of the significance of differences attributed to interventions. SWEMWBS also represents half of the respondent burden. However, it is in the nature of mental well-being that different cultures and genders will respond to items differently and these differences may result in differential item functioning with regard to total score. So whether a strictly Rasch compatible instrument is practical in mental well-being remains to be seen. It would be satisfying if the items that seem to cause people problems in qualitative analysis were also those which cause problems in the quantitative analyses, but this does not often seem to be the case (Scott et al. 2010). One advantage of WEMWBS over SWEMWBS is that data is beginning to come in from empirical studies, both controlled and uncontrolled, showing that WEMWBS is sensitive to the changes that might be expected to occur in mental health promotion programs. To date, we do not have such data for SWEMWBS.

At the same time, it is clear that some items in WEMWBS and SWEMWBS cause difficulty in minority populations. Some of the offending items have been identified as causing difficulty with groups of the majority population, as well. Others, like items representing autonomy, though not creating difficulty, do carry different meanings with regard to mental health in minority groups. These do not necessarily seem to show differential item functioning as might be expected. Some concepts of importance to mental health in minority groups, for example, peace of mind and doing one's duty toward others, are not adequately represented in WEMWBS. While items reflecting relationships are featured in the instrument, the preeminent importance of social harmony in the family and community is not.

Instrument development is something of an art as well as a science, and in both respects, instruments can almost always be improved upon. It would be satisfying to improve the wording of problem items in WEMWBS. It would also be a good to add items reflecting missing concepts. However, both of these actions would invalidate trend-based data, which has now started to be collected internationally. WEMWBS is playing a part in developing the public mental health agenda and is helping to put mental well-being on the map, both at the level of policy making and in the general public. It seems sensible, therefore, to take the results of the studies described in this chapter at face value and conclude that WEMWBS and SWEMWBS perform well enough at present. In a few years, when understanding of mental well-being and its importance has moved on, there is likely to come a time when the instrument needs to be updated.

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