



## Rapid assessment of well-being: The Short Depression-Happiness Scale (SDHS)

Stephen Joseph<sup>1\*</sup>, P. Alex Linley<sup>2</sup>, Jake Harwood<sup>3</sup>,  
Christopher Alan Lewis<sup>4</sup> and Patrick McCollam<sup>4</sup>

<sup>1</sup>University of Warwick, UK

<sup>2</sup>University of Leicester, UK

<sup>3</sup>University of Arizona, USA

<sup>4</sup>University of Ulster, UK

The purpose of this paper was: first, to develop the short six-item form of the Depression-Happiness Scale; and second, to examine evidence of reliability and validity for the short form. Three studies are presented. In the first study, principal components analysis is reported and used to select six items to compose the short form of the scale. In the second study, re-analyses of data from three previous studies are presented which confirm that the short scale has good psychometric properties of internal consistency reliability, test–retest reliability, and convergent and discriminant validity. In the third study, the short form is found to have a single component structure and convergent validity with measures of depression, happiness and personality.

The psychometric literature in psychology and psychotherapy has traditionally emphasized psychopathology. Given the nature of the work most often carried out by psychological therapists, this is not surprising. However, in recent years there has been an increasing awareness of the therapeutic potential of the positive psychological perspective (e.g. Joseph & Linley, 2004; Keyes & Lopez, 2002; Maddux, 2002). The positive psychologist might be described as someone who is concerned not only with the alleviation of psychopathology, but also with the promotion of well-being, and there is growing interest in the positive psychological perspective among practitioners (e.g. Linley & Joseph, 2004; Lopez & Snyder, 2003; Snyder & Lopez, 2002).

---

\* Correspondence should be addressed to Stephen Joseph, Department of Psychology, University of Warwick, Coventry CV4 7AL, UK (e-mail: [S.Joseph@warwick.ac.uk](mailto:S.Joseph@warwick.ac.uk)).

Measurement resource volumes typically used by therapists (e.g. Corcoran & Fischer, 2000) offer little by way of tools for those working in this positive way (although Lopez & Snyder, 2003, provides a recent exception). In order to address one measurement need of the positive psychologist, Joseph and Lewis (1998) described the development of the Depression-Happiness Scale; a self-report scale designed to measure depression and happiness. In this paper we describe the development of the short form of the scale to provide rapid assessment of depression and happiness.

In terms of the assessment of psychopathology, various self-report measures of depression already exist. The most well known of these is probably the Beck Depression Inventory (BDI; Beck, Rush, Shaw, & Emery, 1979), a 21-item measure on which scores can range from 0 to 63, with higher scores indicating greater severity of depression. However, low scores on the BDI, whilst indicating the absence of depression, do not necessarily indicate the presence of happiness. Someone scoring around the zero point on the BDI could score either low or high on a measure of happiness. For the positive psychologist, an instrument that extended from the state of depression through the zero point into the state of happiness is potentially very useful in both therapeutic and research settings (Maddux, Snyder, & Lopez, 2004; Ruini & Fava, 2004; Seligman, 2002). A similar argument is made by Peterson (2000) in relation to optimism.

Happiness is not just the absence of depression, but also the presence of a number of positive emotional and cognitive states. The debate continues about the best way to understand the structure of emotion as a whole (e.g. Diener, 1999). However, unlike positive and negative affect, there is now broad agreement that happiness and depression can be usefully understood as opposite ends of a bipolar valence dimension (e.g. Russell & Feldman Barrett, 1999; Watson, Wiese, Vaidya, & Tellegen, 1999; Yik, Russell, & Feldman Barrett, 1999). Further, some researchers have suggested that this underlying bipolarity is often masked by measurement error (e.g. Green, Goldman, & Salovey, 1993; Green, Salovey, & Truax, 1999). The structure of affect may or may not be best characterized by a range of circumplex models (e.g. Russell & Feldman Barrett, 1999; Watson *et al.*, 1999), but happiness and depression are reliably represented as falling at opposite ends of a bipolar valence dimension.

The Depression-Happiness Scale (DHS) is a 25-item statistically bipolar self-report scale designed to measure depression and happiness. Twelve items ask about positive thoughts, feelings, and bodily experiences. Thirteen items ask about negative thoughts, feelings, and bodily experiences. Respondents are asked to think about how they have felt in the past 7 days and to rate the frequency of each item on a 4-point scale: *never* (0), *rarely* (1), *sometimes* (2), and *often* (3). Items concerning negative thoughts, feelings, and bodily experiences are reverse-scored so that respondents can score between 0 and 75, with higher scores indicating greater frequency of positive thoughts and feelings and lower frequency of negative thoughts and feelings (Joseph & Lewis, 1998). Conceptually, the DHS is similar to the well known Faces Scale developed by Andrews and Withey (1976), which asks respondents to rate how they feel using seven schematic

faces whose expressions range along a continuum from very negative (face with downturned mouth) to very positive (face with upturned mouth).

The DHS was originally developed to address a gap in the measurement literature. The rationale was that the scoring floor on measures of depression such as the BDI was arbitrary and that the measurement of depression could theoretically be extended through the zero point into measures of happiness. In constructing the DHS, an initial pool of 40 items was developed to assess the general content of typical depression scales (20 items: e.g. I felt sad) and their reversed content (20 items; e.g. I felt happy) (see Joseph & Lewis, 1998). Inspection of the scree plot following principal components analysis suggested that one component could be extracted. The 25 highest loading items were then selected to compose the DHS. Convergent validity of the DHS has been reported with the BDI (Beck *et al.*, 1979) ( $r = -.75$ ,  $p < .00$ ), the Self-Rating Depression Scale (Zung, 1965) ( $r = -.81$ ,  $p < .001$ ), and the Center for Epidemiological Studies Depression Scale (Radloff, 1977) ( $r = -.85$ ,  $p < .001$ ) (Joseph, Lewis, & Olsen, 1996). As a measure of depressive thoughts and feelings, the DHS would seem to perform as well as these other measures of depression. A score of 42 has been suggested as a cut-off for identifying mild but clinically relevant depression, approximate to a score of 10 on the BDI (Lewis, Joseph, & Shevlin, 1999).

However, unlike these other measures of depression, the DHS purports to provide a continuous measure of the depression-happiness continuum. Thus, although there are already several well-established measures of depression (Corcoran & Fischer, 2000), the DHS remains unique in its dual measurement of depression and happiness as opposite ends of a single continuum. Of the other measures of depression available, none are explicitly designed also to assess happiness. Similarly, although there are a number of other measures of happiness available (see Andrews & Robinson, 1991), none are designed to assess the continuum of depression-happiness.

The DHS is of practical use to therapists working within a positive psychological framework, who are concerned not only with the alleviation of depression but also with the promotion of happiness. Using the DHS, changes can be documented along the depression-happiness continuum. One key research assessment advantage of the DHS is that it avoids floor and ceiling effects in general population samples. This is an important consideration for therapeutically relevant social psychological and personality-related research, where restricted variability in mood measurement can reduce the strength of association found with other variables.

There are four primary arguments for developing a shorter version of the DHS. First, in research with particular populations (e.g. those with memory impairments, attention limitations) shortened versions are essential to gather data in a limited amount of time. Second, the problems of time-limited data collection can be exacerbated when data must be collected via interview formats (e.g. with low-literacy populations or in telephone interviews). Interviews take considerably longer than traditional paper-and-pencil self-report contexts, and hence shorter versions of scales can be particularly useful. Third, shortened versions can also be useful when measurement of a number

of variables is being attempted and hence considerable questionnaire space cannot be dedicated to any one variable. Fourth, a short version of the DHS also promises to be useful for practitioners who want to be able to assess change, but who want to keep the completion of self-report measures during the therapy session to a minimum. For example, there is an increasing use of single case time-series methodology that requires respondents to complete measures repeatedly at several points in time in order to document change in relation to therapeutic interventions. Even relatively brief self-report instruments consisting of around 20–30 items are cumbersome for this purpose. Shorter and more rapid assessment methods are needed here. The aim of the present paper is to present preliminary results on a new rapid assessment method for assessing the depression–happiness continuum.

## STUDY I

### Component structure and item selection for the short scale

In this first study we present data on the component structure of the 25-item DHS with a sample from the USA and use these data to select those items with high loadings to compose the short form of the scale. Second, we present data showing the component structure of the short form of the scale, its internal consistency reliability and convergent and discriminant validity with an established measure of mental health.

## Method

### *Participants and procedure*

Respondents were 137 undergraduate students at the University of Kansas, Lawrence, USA (60 male, 77 female) ranging in age from 18 to 48 years ( $M = 20.48$  years,  $SD = 3.42$ ). They were predominantly White (83%) with small representations of African-American Asian-American, and Hispanic-American participants. All were full-time students enrolled at the university.

Respondents completed the 25-item Depression-Happiness Scale (DHS: Joseph & Lewis, 1998) as part of participation in a larger study of attitudes and behaviours which they were taking part in for course work credit. No monetary incentive was provided to respondents in these studies.

## Results

### *Principal components analysis of the DHS*

The DHS was first subjected to exploratory principal components analysis (with varimax rotation). Five components had eigenvalues greater than 1.00 (9.09, 2.24, 1.57, 1.26 and 1.12, respectively) and accounted for 61.5% of the extracted

variance. The eigenvalues-greater-than-one criterion is known potentially to inflate the number of factors to be extracted because it is sensitive to the number of variables in the analysis. Cattell's (1966) scree test is a more reliable indicator of the number of factors to be extracted because it draws on the relative values of the eigenvalues, and so is not sensitive to the number of variables in the analysis (Zwick & Velicer, 1986). Cattell (1966) recommended that the number of factors to be extracted is the number of eigenvalues that lie well above the scree slope, and is a more reliable test for the number of factors in cases where there is a clear and easily interpretable scree slope (Zwick & Velicer, 1986). Inspection of the scree plot, following Cattell's (1966) recommendations, suggested that a one-component solution was appropriate.

A principal components analysis with a forced one-component solution specified was conducted on the 25 items. Component loadings ranged from .42 to .79 (see Table 1). Internal consistency of the 25 items, estimated with Cronbach's  $\alpha$ , was .92. Scores on the 25-item DHS have a potential range of 0 to 75. In the present sample scores ranged between 16 and 72 ( $M = 52.00$ ,  $SD = 11.47$ ) confirming that the scale is able to capture individual differences in well-being without floor or ceiling effects.

### Development of the short scale

In order to develop the short form of the DHS, we wanted to select a small number of items that were most reflective of the underlying content of the component.

However, before selecting items on the basis of the strength of their component loadings, we were concerned to check that the 25 items were similarly reflective of content across previous studies. Two previous studies have also reported principal component analytic data on the 25 DHS items (Joseph & Lewis, 1998; McGreal & Joseph, 1993). Both of these studies also show one component solutions (see Table 1).

Spearman correlation coefficients were therefore computed to compare the rank ordering of the component loadings of all 25 DHS items in the current sample with those of the two previous studies that have also reported component analytic data. The rank order of component loadings in the current sample was associated with the rank order of loadings in the McGreal and Joseph (1993) sample ( $\rho = .65$ ,  $p < .01$ ), and in the Joseph and Lewis (1998) sample ( $\rho = .59$ ,  $p < .01$ ). The rank ordering of items in these samples was also highly correlated ( $\rho = .67$ ,  $p < .01$ ). These results show that items are similarly reflective of the underlying content of the component across these three different studies.

Having established that items were similarly ordered in terms of their strength of loading across all three data sets, we were interested in identifying those items that consistently loaded highly on the component. According to Comrey and Lee (1992), factor loadings in excess of .55 are considered good. Our criterion therefore was that we should have a sufficient pool of items that loaded above .55 on the component in each of the three analyses. We identified 11 items that met this criterion. Taking into

**Table 1.** Component loadings for Depression-Happiness Scale (DHS) items across data sets and rankings of positive and negative items

		Data set			Mean component loading	Ranking	
		Current (US data) <i>n</i> = 137	McGreal & Joseph (1993) <i>n</i> = 200	Joseph & Lewis (1998) <i>n</i> = 194		Positive items	Negative items
1	I felt sad	.45	.53	.60	.53		10
2	I felt that I had failed as a person	.53	.65	.69	.62		4
3	I felt dissatisfied with my life	.68	.69	.75	.71		1
4	I felt mentally alert	.44	.50	.45	.46	12	
5	I felt disappointed with myself	.44	.60	.70	.58		7
6	I felt cheerful	.71	.63	.68	.67	5	
7	I felt that life wasn't worth living	.58	.53	.50	.54		9
8	I felt satisfied with my life	.70	.67	.68	.68	4	
9	I felt healthy	.59	.65	.51	.58	8	
10	I felt like crying	.49	.52	.54	.52		11
11	I felt that I had been successful	.63	.59	.52	.58	9	
12	I felt happy	.77	.66	.74	.72	2	
13	I felt that I couldn't make decisions	.42	.56	.41	.46		13
14	I felt unattractive	.44	.54	.54	.51		12

Table 1. (Continued)

		Data set			Mean component loading	Ranking	
		Current (US data) <i>n</i> = 137	McGreal & Joseph (1993) <i>n</i> = 200	Joseph & Lewis (1998) <i>n</i> = 194		Positive items	Negative items
15	I felt optimistic about the future	.55	.65	.57	.59	7	
16	I felt that life was rewarding	.73	.65	.61	.66	6	
17	I felt cheerless	.71	.61	.73	.68		3
18	I felt that life had a purpose	.56	.50	.38	.48	11	
19	I felt too tired to do anything	.60	.64	.51	.58		6
20	I felt pleased with the way I am	.73	.69	.77	.73	1	
21	I felt lethargic	.60	.57	.54	.57		8
22	I found it easy to make decisions	.57	.53	.52	.54	10	
23	I felt that life was enjoyable	.79	.62	.73	.71	3	
24	I felt that life was meaningless	.73	.70	.67	.70		2
25	I felt run down	.63	.57	.58	.59		5

Note. Mean component loading refers to the mean component loading across the three samples. The rankings shown are based on the mean component loadings.

consideration the research and clinical utility of these items as part of a brief measure, and criticisms which have been made of scales consisting of less than five items (e.g. Endler & Parker, 1990), we decided that the short form should consist of six items. In order to choose six items, mean component loadings were calculated across the three data sets (see Table 1).

Mean component loadings were then rank-ordered separately for positive and negative items. The three positive and the three negative items with the highest mean loadings were retained. The resultant six items loaded greater than .60 in each of the three data sets. Each item also loaded greater than .70 in at least one of the data sets, and five of the six items loaded above .70 in two of the data sets (see Table 1). Principal components analysis of the six items yielded one component with an eigenvalue greater than 1.00 (eigenvalues = 3.62, 0.66, 0.59, 0.52, 0.41 and 0.21) and accounted for 60.27% of the extracted variance. Inspection of the scree plot following Cattell's (1966) recommendations showed a single component above a marked elbow. Component loadings of the six items (with negative items reverse-scored) ranged from .70 to .85, providing evidence that the six items can be summated to yield a statistically bipolar scale. Item-total correlations ranged from .58 to .74, and Cronbach's  $\alpha$  was found to be .86, providing evidence for internal consistency reliability. Scores on the six-item scale (see Appendix) were found to be highly correlated with scores on the total 25-item DHS ( $r = .93, p < .001$ ), confirming its convergent validity.

## STUDY 2

### Internal consistency reliability, convergent and discriminant validity of the SDHS

Having established the item content of the Short Depression-Happiness Scale (SDHS), we were concerned to estimate its internal consistency reliability, test-retest reliability and construct validity. We report data from three published studies that have reported on the psychometric properties of the full DHS (see Table 2), the results of which show its psychometric properties to be satisfactory. The aim of this study was to re-analyse

**Table 2.** Psychometric properties of the Short Depression-Happiness Scale (SDHS)

Sample		<i>N</i>	<i>M</i>	<i>SD</i>	Range	$\alpha$	DHS <i>r</i>
(1) Joseph & Lewis (1998)		100	12.04	3.37	3–18	.77	.90
(2) Lewis, Joseph, & McCollam (1996)		40	13.66	3.32	6–18	.81	.94
(3) Lewis, McCollum, & Joseph (1999)	Time 1	54	13.30	3.08	5–18	.89	.90
	Time 2	54	13.42	2.98	5–18	.92	.92

Note. DHS = Depression-Happiness Scale; SDHS = Short Depression-Happiness Scale. Data are taken from a re-analysis of three published studies.



data from these three samples to explore the internal consistency reliability, convergent and discriminant validity, and test-retest reliability of the SDHS.

## Method

### *Participants and procedure*

#### *Sample 1*

This sample (Joseph & Lewis, 1998) was composed of 100 undergraduate respondents (63 male, 37 female) ranging in age from 18 to 50 years ( $M = 24.78$  years,  $SD = 7.11$ ) at the University of Essex, UK. Participants completed the 25 item DHS (Joseph & Lewis, 1998) along with other measures that included the BDI (Beck *et al.*, 1979) and the OHI (OHI: Argyle, Martin, & Crossland, 1989). The BDI is a well-established and widely used measure of depression. The OHI is a measure of happiness developed to be identical but reversed in content to the BDI (Argyle *et al.*, 1989).

#### *Sample 2*

This sample (Lewis, Joseph, & McCollam, 1996) was composed of 40 undergraduate respondents from the University of Essex (11 female, 2 male) and the University of Ulster, UK (26 female, 1 male) ranging in age from 19 to 47 years ( $M = 23.05$  years,  $SD = 5.73$ ). Participants completed the DHS (Joseph & Lewis, 1998) as well as the Crown-Crisp Experiential Index (CCEI: Crown & Crisp, 1979). The CCEI has six scales: Free-floating anxiety; Phobic avoidance; Obsessionality; Somatic anxiety; Depression; and Hysteria.

#### *Sample 3*

This sample (Lewis, McCollum, & Joseph, 1999) was composed of 54 female students in full time attendance at the University of Ulster ranging in age from 19 to 50 years ( $M = 27.30$  years,  $SD = 9.30$ ). Participants completed the DHS twice at an interval of 2 weeks. Further details of these studies are available in the original published papers.

No monetary or other incentive was provided to respondents in these studies, except in Sample 1, where a small payment was made to respondents who completed these measures during their participation in an unrelated project to do with cognitive functioning.

## Results

The internal consistency reliability of the SDHS, as estimated with Cronbach's  $\alpha$ , ranged from .77 to .92. The SDHS was highly associated with the full DHS, ranging from  $r = .90$  to  $r = .94$ ,  $p < .001$ . Scores on the SDHS were positively associated with scores on the OHI ( $r = .59$ ,  $p < .001$ ) and negatively associated with scores on the BDI

( $r = -.68, p < .001$ ). Using the CCEI, higher scores on the SDHS were associated with lower scores on depression ( $r = -.74, p < .01$ ), free-floating anxiety ( $r = -.55, p < .01$ ), somatic anxiety ( $r = -.52, p < .01$ ), and hysteria ( $r = -.34, p < .05$ ), and as with the full DHS no statistically significant associations were found with the phobic anxiety ( $r = -.15, ns$ ) or obsessionality ( $r = -.17, ns$ ) scales. These results provide evidence for the convergent and discriminant validity of the SDHS. Evidence for the test-retest reliability of the SDHS was also found in Sample 3 with scores on the SDHS completed at a 2-week interval being found to correlate at  $r = .68 (p < .001)$ , with no difference between Time 1 and Time 2 scores ( $t = -.84, ns$ ).

## STUDY 3

### Dimensional structure, internal consistency reliability, convergent validity of the six-item SDHS

Study 2 provided a re-analysis of three published studies for the internal consistency reliability and convergent and discriminant validity of the SDHS. Although the results showed evidence for adequate internal consistency reliability, and convergent and discriminant validity of the SDHS, it must be remembered that the six SDHS items in these previous studies were administered within the context of the full 25-item DHS. This is a limitation insofar as we cannot be sure that the six items will have similar properties when completed in isolation. Thus, in this final study, we were interested in ascertaining the dimensional structure, internal consistency reliability, and convergent validity of the six-item SDHS. In addition, we were interested in understanding the association between the SDHS and personality. DeNeve and Cooper's (1998) meta-analytic review provided evidence that happiness was associated with greater extraversion and agreeableness, and lower neuroticism. We sought to replicate these findings to provide further evidence for the convergent validity of the SDHS.

## Method

### Participants and procedure

A total of 241 participants (54 male, 187 female), ranging in age from 16 to 86 years ( $M = 25.73, SD = 14.83$ ) were recruited from undergraduate psychology classes and a psychology evening class at the University of Warwick. All participants completed the 6-item SDHS ( $N = 241$ ). One subsample of these 241 participants was also asked to complete the NEO Five Factor Inventory (Costa & McCrae, 1991;  $N = 62$ ). A second subsample was also asked to complete the BDI (Beck *et al.*, 1979;  $N = 61$ ), and the OHI (Argyle *et al.*, 1989;  $N = 61$ ). Participants were predominantly of White British ethnic background (92.3%), the remainder were either Chinese (3.7%), Asian (3.0%) or Black African (1.0%). No monetary or other incentive was provided to respondents.

Respondents completed these measures during their participation in a psychological research methods class. Participants were informed that the study was examining the relationship between happiness and other psychological constructs.

## Results

Descriptive statistics for all Study 3 variables are presented in Table 3.

**Table 3.** Descriptive statistics for Study 3 variables

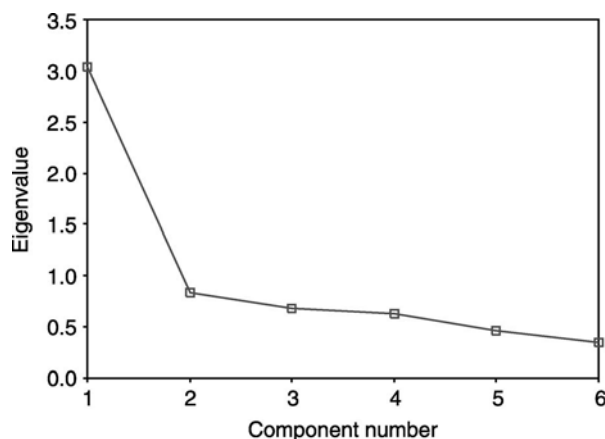
Variable	N	$\alpha$	M	SD	Range
Short Depression-Happiness Scale	241	.80	12.13	3.27	0–18
Beck Depression Inventory	61	.85	7.97	6.61	0–24
Oxford Happiness Inventory	61	.91	36.74	12.19	14–80
NEO Neuroticism	62	.85	24.42	8.66	11–46
NEO Extraversion	62	.80	28.32	6.97	13–44
NEO Openness to experience	62	.72	29.73	6.20	18–43
NEO Agreeableness	62	.66	32.21	5.47	16–44
NEO Conscientiousness	62	.87	30.35	7.67	9–45

### Principal components analysis

Cattell (1966) recommended that the number of factors to be extracted is the number of eigenvalues that lie well above the scree slope, and is a more reliable test for the number of factors in cases where there is a clear and easily interpretable scree slope (Zwick & Velicer, 1986). Principal components analysis of the six items yielded a scree plot showing a clear one-component solution (see Fig. 1). This single component had an eigenvalue of 3.04 (other eigenvalues = 0.84, 0.68, 0.63, 0.46, 0.35), that accounted for 50.69% of the variance. All six items had loadings on the component  $> .63$ . These results are consistent with the conceptualization of the SDHS as assessing one dimension. The six items were therefore summed (with negative items reverse-scored) so that higher scores reflected greater well-being ( $M = 12.13$ ,  $SD = 3.27$ , range 0–18). While scores were observed across the full potential range of the SDHS, floor and ceiling effects that may have restricted the utility of the measure were not found: one participant (0.4%) scored at the floor of 0; four participants (1.2%) scored at the ceiling of 18.

### Associations with BDI and OHI

Correlations were computed between scores on the SDHS, the BDI, and the OHI. Higher scores on the SDHS were associated with lower scores on the BDI ( $r = -.63$ ,  $p < .001$ ), and higher scores on the OHI ( $r = .69$ ,  $p < .001$ ), providing evidence for the convergent validity of the SDHS as both a measure of depression and happiness. The BDI was negatively associated with the OHI ( $r = -.60$ ,  $p < .001$ ), which is only to be



**Fig. 1.** Scree plot showing principal components analysis of the SDHS items.

expected since the OHI was developed to be reversed in content, but otherwise identical to the BDI (Argyle *et al.*, 1989).

#### **Preliminary normative data**

It would be useful to have some indication of what score on the SDHS might be taken as a cut-off point for clinically relevant depression. Twenty-one respondents scored 10 or above on the BDI ( $M = 15.76$ ,  $SD = 4.83$ ). Their median score on the SDHS was 9.00 ( $M = 9.43$ ,  $SD = 2.87$ ), suggesting that a score below 10 on the SDHS might be taken as a cut-off point for mild but clinically relevant depression. However, this issue would benefit from further investigation using clinical samples.

#### **Associations with personality**

Correlations were also computed between scores on the SDHS and the five personality factors of the NEO Five Factor Inventory (Costa & McCrae, 1991). Consistent with DeNeve and Cooper (1998), SDHS scores were significantly positively associated with extraversion ( $r = .58$ ,  $p < .001$ ) and agreeableness ( $r = .42$ ,  $p < .001$ ), and negatively associated with neuroticism ( $r = -.79$ ,  $p < .001$ ). Associations with conscientiousness ( $r = .01$ , *ns*) and openness to experience ( $r = .00$ , *ns*) were non-significant.

## **DISCUSSION**

Six items that loaded consistently highly across three data sets were selected to compose the Short Depression-Happiness Scale (SDHS). In order to maintain the statistical bipolarity of the short scale, three negative items and three positive items were selected. Principal components analysis provided evidence in support of a single-component solution, confirming that the six items can be summed to yield a single score. The SDHS

was demonstrated to have good internal consistency reliability and good test-retest reliability over a 2-week period. It was also demonstrated to have good convergent validity with the full DHS, as well as with other established measures of depression and happiness, and good discriminant validity with established measures of free-floating anxiety, somatic anxiety, and hysteria. Its associations with personality were consistent with a recent meta-analytic review (DeNeve & Cooper, 1998), providing further validation of its psychometric properties.

The SDHS will be useful to practitioners and researchers who are in need of a short but reliable and valid measure of the depression-happiness continuum. The magnitude of the correlations between the SDHS and the full 25-item scale, together with its comparable reliability estimates and correlations with convergent and discriminant validity criterion measures, indicate that the SDHS, despite its brevity, provides a highly reliable and valid measure of depression and happiness.

A strength of the SDHS is that items were developed using both US and UK samples, so we expect the measure to be appropriate for use in both the USA and the UK. The SDHS, in terms of face validity is similar to many other measures that are already widely used in the USA and UK. However, we would still encourage further research into the psychometric properties of the SDHS, particularly with more diverse populations. Also, there is a need for further research using the SDHS with more diverse populations to report normative data. In this study, we present some tentative suggestions toward using cut-off scores on the SDHS. Preliminary analysis suggests that a score of 9 might be indicative of mild but clinically relevant depression. However, we would caution that further work is now needed to establish cut-off scores for levels of depression intensity.

Further research with clinical populations is also required in order to extend the findings presented here. However, the preliminary evidence reported above supports further research into the SDHS as the only measure of which we are aware that provides clinicians with a tool to assess a therapeutic change from states of depression through to states of happiness. Unlike other measures of depression, the SDHS is not restricted by floor effects that would indicate the absence of depression, but which are unable to indicate the presence of happiness. Unlike other measures of happiness, the SDHS is also able to reliably document states of both depression and happiness, making it a potentially useful measure for therapeutic practice. There are now suggestions for various positive psychology interventions with clinical and health-related populations, and the SDHS promises to provide a useful tool for researchers wishing to assess the effectiveness of their interventions.

In addition to its therapeutic utility, the SDHS also promises to be a useful tool for researchers who are seeking to sample respondents from across the range of depression and happiness, and who wish to rapidly assess both of these states. The growing interest in the positive psychological perspective (see, e.g. Linley, Joseph, & Boniwell, 2003; Seligman & Csikszentmihalyi, 2000) creates an attendant need for the development of measures that will be of use to applied psychologists who wish to operate from this positive perspective (e.g. Linley & Joseph, 2004). Practitioners and researchers will

probably increasingly seek to assess change from states of psychopathology through to states of well-being, rather than focusing their attention simply on one side of this distribution. The SDHS provides one such measure that allows this more holistic assessment.

## Acknowledgements

We thank Gordon Brown and Kate Miriam Loewenthal for their comments on an earlier version of this manuscript, and Jenny Linley for her assistance with data entry.

## References

- Andrews, F. M., & Robinson, J. P. (1991). Measures of subjective well-being. In J. P. Robinson, P. R. Shaver & L. S. Wrightsman (Eds), *Measures of personality and social psychological attitudes* (pp. 61 - 114). San Diego: Academic Press.
- Andrews, F. M., & Withey, S. B. (1976). *Social indicators of well-being: America's perception of life quality*. New York: Plenum.
- Argyle, M., Martin, M., & Crossland, J. (1989). Happiness as a function of personality and social encounters. In J. P. Forgas & J. M. Innes (Eds), *Recent advances in social psychology: An international perspective* (pp. 189 - 203). Amsterdam, The Netherlands: Elsevier Science.
- Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive therapy of depression: A treatment manual*. New York: Guilford.
- Cattell, R. B. (1966). The scree test for the number of factors. *Multivariate Behavioral Research*, 1, 140 - 161.
- Comrey, A. L., & Lee, H. B. (1992). *A first course in factor analysis* (2nd ed.). Hillsdale, NJ: Erlbaum.
- Corcoran, K., & Fischer, J. (2000). *Measures for clinical practice: A sourcebook (Vol. 2 Adults)* (3rd ed.). New York: Free Press.
- Costa, P. T., Jr, & McCrae, R. R. (1991). *Revised NEO Personality Inventory and NEO Five-Factor Inventory: Professional manual*. Odessa, FL: Psychological Assessment Resources.
- Crown, S., & Crisp, A. H. (1979). *Manual of the Crown-Crisp Experiential Index*. London: Hodder and Stoughton.
- DeNeve, K., & Cooper, H. (1998). The happy personality: A meta-analysis of 137 personality traits and subjective well-being. *Psychological Bulletin*, 124, 197 - 229.
- Diener, E. (1999). Introduction to the special section on the structure of emotion. *Journal of Personality and Social Psychology*, 76, 803 - 804.
- Endler, N. S., & Parker, J. D. A. (1990). Multidimensional assessment of coping: A critical evaluation. *Journal of Personality and Social Psychology*, 58, 844 - 854.
- Green, D. P., Goldman, S. L., & Salovey, P. (1993). Measurement error masks bipolarity in affect ratings. *Journal of Personality and Social Psychology*, 64, 1029 - 1041.
- Green, D. P., Salovey, P., & Truax, K. M. (1999). Static, dynamic, and causative bipolarity of affect. *Journal of Personality and Social Psychology*, 76, 856 - 867.
- Joseph, S., & Lewis, C. A. (1998). The Depression - Happiness Scale: Reliability and validity of a bipolar self-report scale. *Journal of Clinical Psychology*, 54, 537 - 544.

- Joseph, S., Lewis, C. A., & Olsen, C. (1996). Convergent validity of the Depression-Happiness Scale with measures of depression. *Journal of Clinical Psychology, 52*, 551–554.
- Joseph, S., & Linley, P. A. (2004). Positive therapy: A positive psychological theory of therapeutic practice. In P. A. Linley & S. Joseph (Eds), *Positive psychology in practice* (pp. 354–368). Hoboken, NJ: Wiley.
- Keyes, C. L. M., & Lopez, S. J. (2002). Toward a science of mental health: Positive directions in diagnosis and interventions. In C. R. Snyder & S. J. Lopez (Eds), *Handbook of positive psychology* (pp. 45–59). New York: Oxford University Press.
- Lewis, C. A., Joseph, S., & McCollam, P. (1996). Convergent validity of the Depression - Happiness Scale with the Crown - Crisp Experiential Index. *Psychological Reports, 78*, 497–498.
- Lewis, C. A., Joseph, S., & Shevlin, M. (1999). Preliminary normative data on the Depression-Happiness Scale for a mildly depressed group. *North American Journal of Psychology, 1*, 319–322.
- Lewis, C. A., McCollum, M. A., & Joseph, S. (1999). The Depression-Happiness Scale: Test-retest data over two weeks. *Psychological Reports, 85*, 889–892.
- Linley, P. A., & Joseph, S. (2004). *Positive psychology in practice*. Hoboken, NJ: Wiley.
- Linley, P. A., Joseph, S., & Boniwell, I. (2003). Positive psychology. *Psychologist, 16*, 3.
- Lopez, S. J., & Snyder, C. R. (Eds) (2003). *Positive psychological assessment*. Washington, DC: American Psychological Association.
- Maddux, J. E. (2002). Stopping the “madness”: Positive psychology and the deconstruction of the illness ideology and the *DSM*. In C. R. Snyder & S. J. Lopez (Eds), *Handbook of positive psychology* (pp. 13–25). New York: Oxford University Press.
- Maddux, J. E., Snyder, C. R., & Lopez, S. J. (2004). Toward a positive clinical psychology: Deconstructing the illness ideology and constructing an ideology of human strengths and potential. In P. A. Linley & S. Joseph (Eds), *Positive psychology in practice* (pp. 320–334). Hoboken, NJ: Wiley.
- McGreal, R., & Joseph, S. (1993). The Depression-Happiness Scale. *Psychological Reports, 73*, 1279–1282.
- Peterson, C. (2000). The future of optimism. *American Psychologist, 55*, 44–55.
- Radloff, L. S. (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1*, 385–401.
- Ruini, C., & Fava, G. A. (2004). Clinical applications of well-being therapy. In P. A. Linley & S. Joseph (Eds), *Positive psychology in practice* (pp. 371–387). Hoboken, NJ: Wiley.
- Russell, J. A., & Feldman Barrett, L. (1999). Core affect, prototypical emotional episodes, and other things called *emotion*: Dissecting the elephant. *Journal of Personality and Social Psychology, 76*, 805–819.
- Seligman, M. E. P. (2002). Positive psychology, positive prevention, and positive therapy. In C. R. Snyder & S. J. Lopez (Eds), *Handbook of positive psychology* (pp. 3–9). New York: Oxford University Press.
- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist, 55*, 5–14.
- Snyder, C. R. & Lopez, S. J. (Eds) (2002). *Handbook of positive psychology*. New York: Oxford University Press.



Watson, D., Wiese, D., Vaidya, J., & Tellegen, A. (1999). The two general activation systems of affect: Structural findings, evolutionary considerations, and psychobiological evidence. *Journal of Personality and Social Psychology*, *76*, 820-838.

Yik, M. S. M., Russell, J. A., & Feldman Barrett, L. (1999). Structure of self reported current affect: Integration and beyond. *Journal of Personality and Social Psychology*, *77*, 600-619.

Zung, W. W. K. (1965). A self-rating depression scale. *Archives of General Psychiatry*, *12*, 63-70.

Zwick, W. R., & Velicer, W. F. (1986). Comparison of five rules for determining the number of components to retain. *Psychological Bulletin*, *99*, 432-442.

Received 4 March 2003; revised version received 5 February 2004

### Appendix: The Short Depression-Happiness Scale (SDHS)

©Stephen Joseph 2000

A number of statements that people have made to describe how they feel are given below. Please read each one and tick the box which best describes how frequently you felt that way in the past seven days, including today. Some statements describe positive feelings and some describe negative feelings. You may have experienced both positive and negative feelings at different times during the past seven days.

	Never	Rarely	Some-times	Often
(1) I felt dissatisfied with my life				
(2) I felt happy				
(3) I felt cheerless				
(4) I felt pleased with the way I am				
(5) I felt that life was enjoyable				
(6) I felt that life was meaningless				

Note. Items 1, 3, and 6 are reverse scored.



Copyright of Psychology & Psychotherapy: Theory, Research & Practice is the property of British Psychological Society and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.