

## The Bull's-Eye Values Survey: A Psychometric Evaluation

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*Two studies were conducted to develop and evaluate an instrument intended to identify and measure personal values, values attainment, and persistence in the face of barriers. Study 1 describes a content validity approach to the construction and preliminary validation of the Bull's Eye Values Survey (BEVS), using a sample of institutionalized patients suffering from epilepsy. Study 2 investigated the psychometric properties of the BEVS with a sample of Swedish university students. Results suggest that the BEVS is sensitive to treatment effects and can differentiate between clients who receive values-based interventions and those who do not. The BEVS subscales and total score appear to measure an independent dimension of psychological functioning that is negatively correlated with measures of depression, anxiety, and stress, and positively correlated with a measure of psychological flexibility. The BEVS also exhibits acceptable temporal stability and internal consistency. The study provides preliminary support for the BEVS as both a research and clinical tool for measuring values, values-action discrepancies, and barriers to value-based living.*

RESEARCH on cognitive behavioral therapies has historically tended to emphasize symptom reduction as the primary outcome of interest. However, recent papers have called for placing a greater emphasis on the measurement of functional outcomes in domains such as work, school, relationships (McKnight & Kashdan, 2009a), and positive dimensions of human functioning (Duckworth, Steen, & Seligman, 2005). One newer cognitive behavioral model that emphasizes positive life functioning over symptom reduction is Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 1999). ACT seeks to enhance psychological flexibility—the ability to mindfully and actively accept unpleasant thoughts, feelings, and other private experiences while also maintaining flexible and effective action that is consistent with a person's chosen values. To date, several studies have supported the importance of mindfulness and acceptance processes in promoting psychological flexibility (for a review, see Hayes, Luoma, Bond, Masuda,

& Lillis, 2006); however, research on the values and commitment processes has lagged behind. One factor impeding research may be the lack of reliable and valid measures for assessing values and commitment processes. This paper outlines one attempt to develop such a measure.

This measure development project was guided by a technical definition of values that emerges from a psychological flexibility model: “values are freely chosen, verbally constructed consequences of ongoing, dynamic, evolving patterns of activity, which establish predominant reinforcers for that activity that are intrinsic in engagement in the valued behavioral pattern itself” (Wilson et al., 2010, p. 65). For readers interested in a thorough description of this technical definition that incorporates elements of behavior analysis and Relational Frame Theory (Hayes, Barnes-Holmes, & Roche, 2001), we refer readers to Dahl et al. (2009). Speaking more colloquially, values are not goals or ends in themselves, but can be thought of as principles for living that organize and direct current action. Values also are theorized to provide part of the motivation for acceptance and persistence in the face of barriers to living according to these principles for living, as supported in one analogue study that showed that adding a values-focused component to an acceptance intervention enhanced participant tolerance of cold-pressor induced pain (Branstetter-Rost, Cushing, & Douleh, 2009). While our

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definition of values is specific to the psychological flexibility model that guides this line of research, related lines of research on concepts such as personal strivings (Emmons, 1991) or meaning in life (McKnight & Kashdan, 2009b) also corroborate the idea that values-consistent behavior is important for psychological health. Generally, research in this area suggests that goal-related activity oriented toward pursuing and accomplishing intrinsically meaningful goals, such as those congruent with important life values, contributes more to well-being than other forms of goal-related activity, such as activity oriented toward changing mood states (Steger, Kashdan, & Oishi, 2008).

The only published measure of values that has psychometric data derived from a clinical sample is the Chronic Pain Values Inventory (CPVI; McCracken & Yang, 2006), which is used with chronic pain patients. The CPVI includes an assessment of six domains of valued living, rated according to how important clients consider their values to be, along with a measure of the consistency between importance and actual activity level. This measure has demonstrated correlations with a variety of pain-related outcomes and functioning (McCracken & Keogh, 2009; McCracken & Velleman, 2009; McCracken & Yang, 2006) while changes in this measure as a result of intervention correlate with improvement in pain-related outcomes (Vowles & McCracken, 2008). While this provides evidence for the importance of values in promoting psychological health, the CPVI has limited generalizability as it has been constructed to measure values specifically for those experiencing chronic pain. A second measure of valued living was developed by another team of researchers concurrently with this measure, the Valued Living Questionnaire (VLQ), and has been evaluated in a nonclinical population (Wilson, Sandoz, Kitchens, & Roberts, 2010). This measure assesses 10 domains of valued living, rated according to how important clients consider their values to be, along with the consistency between importance and actual activity level.

In developing a new measure of valued living, we were particularly interested in developing a measure that would be both psychometrically sound for use in research, but also have high clinical utility for therapists. When values are addressed in ACT, therapists help clients to better identify their personal values and the psychological barriers (e.g., thoughts, feelings, memories, or urges) that impede their ability to live according to their values. In ACT, mindfulness and acceptance techniques are used to help clients take action in a manner that is consistent with these life principles, while learning to make room for (i.e., accept) unpleasant emotions, thoughts, memories, and bodily sensations that are triggered along the way. Our measure was designed to guide a process of identifying chosen principles for living in important life domains and assessing for specific barriers that could be later targeted

in treatment. Thus, we asked participants to identify what they value within important life domains, representing an addition to the CPVI or VLQ, which simply ask respondents to rate the importance of that area of living. We also asked participants to identify perceived barriers to following those values, again an addition to the CPVI/VLQ strategy of asking about the discrepancy between behavior and values. We felt that this idiographic assessment of values and barriers would be useful to clinicians to use in treatment planning and progress monitoring. Finally, we strove to create a measure that could be completed rapidly and that could be easily used and understood by individuals of varying levels of education and intellectual functioning. The result of this process was the Bull's-Eye Values Survey (BEVS).

This paper describes the results of two studies that examined the construct validity of the BEVS. Study 1 describes the initial development of the BEVS, provides information on content validity, and describes its sensitivity to intervention. Study 2 relates our measures of values attainment and persistence in the face of barriers to various measures of psychological distress, overall well-being, and psychological flexibility, in order to examine construct validity. In addition, Study 2 provides information on temporal stability.

### Study 1: Development of the BEVS

Study 1 outlines the initial piloting of the BEVS as part of a larger clinical trial on the treatment of epilepsy (for more complete information on this trial, see Lundgren, Dahl, Melin, Kies, 2006). The goals of Study 1 were to pilot the assessment procedure, evaluate the content validity of responses, and examine the sensitivity of the measure to intervention. The measure was developed in response to a perceived need for a clinically useful and psychometrically valid measure of values-focused processes of change that were targeted in the intervention.

### Participants

Participants were 27 South African adults (13 male, 14 female), ranging between 21 to 55 years old (mean age=40.7), with 13 married and 14 single. All had an electroencephalography-verified diagnosis of epilepsy and were being treated with antiepileptic medication through a center for epilepsy in South Africa. All participants were living in poverty. Inclusion criteria for the larger study included experiencing uncontrolled frequent epileptic seizures and being willing to participate in the treatment study. Through conversation between research and study staff, participants judged as unable to actively participate in the study due to cognitive impairment were excluded from the study. Participants who were unable to actively participate in the program or who changed their medication during the study period were excluded from the study.

There were no significant differences between the groups in terms of age, gender, seizing time, or type of epileptic seizure. All participants were taking antiepileptic drugs.

Procedure

Participants were randomly assigned to 9 hours of therapy over a 4-week period, either an ACT intervention focused on epilepsy or supportive therapy. In both conditions, treatment began with one 90-minute individual session, followed by two 3-hour group sessions, and another 90-minute individual session. The BEVS was completed at pretreatment, posttreatment, 6-month follow-up, and 1-year follow-up as part of a larger assessment battery. Nine of the participants required an interpreter to interact with study assessors and therapists. The interpreters were staff members at the center who had undergone a 4-hour training in the BEVS prior to the start of the study. Results showed that ACT resulted in significant reductions in seizure frequency and improvements in subjective well-being at posttreatment and that these changes were maintained at 1-year follow-up (Lundgren et al., 2006). Mediation analyses showed that BEVS values attainment scores, in combination with other measures of psychological flexibility, mediated the relationship between the ACT intervention and epileptic seizures, quality of life, and well-being (Lundgren, Dahl, & Hayes, 2008).

Bull's Eye Assessment

In our efforts to build a measure that was accessible to a wide range of individuals and usable across cultures, the BEVS uses the visual analogy of a dart board or archery target because most people are familiar with aiming at a multi-ring target. In the BEVS, the target measures 4.5 centimeters from the center of the target to the edge of the outer ring. Scores were measured using a ruler and rounded to the nearest millimeter. The BEVS procedure in Study 1 consisted of several steps:

1. The participant was given three pieces of paper, each with a representation of a dart board on it. They were instructed to "Choose three areas in your life that you feel you want to develop or have in your life which you don't have today." A description of a value as it pertained to each area was written under the dartboard on each of the three pieces of paper. An example values description is, "I want to be a present dad, a model that both listens to my daughter and supports her when she needs it. I want to show her that I love her very much."
2. The respondent was then asked to place a mark (e.g., an X) somewhere on the first dart board to signify the extent to which the person was living in a manner consistent with that value. The further

the mark was placed away from the bull's eye, the greater the perceived value-action discrepancy. This was repeated for the second and third dart board.

3. Following identification and definition of the valued domains, participants were provided with a fourth dart board where they were asked to write down the psychological barriers to living in accord with these values. Participants were asked to indicate with another mark how much they persisted in the face of these barriers. This was scored so that high persistence was indicated by a mark in the center of the target. An example description of barriers is, "My epilepsy, and I have let my daughter down for many years and now it is too late. It is better that I don't disturb her and her mother. I am not a good dad and I don't have enough confidence."

Values attainment was calculated by averaging the scores of the first three dart boards. Persistence in the face of barriers was measured using the single score of the last dart board. Scores ranged from 0 to 4.5, with lower scores indicating greater values attainment and greater persistence with barriers.

Results

Content Validity

Responses from the 27 participants (84 responses, 3 per participant) were independently categorized by the first author into an initial group of 10 life domains (see Table 1) based on concurrent research conducted on a different measure of valuing (Wilson et al., 2010). Disagreements in classifications between the first and third author were discussed and a final category was determined through consensus. Results indicated that the most frequent domains related to work/education and social relationships (i.e., relationships, family, parenting, friendship). Other less frequently endorsed domains were health, spirituality, and community work.

Table 1  
Number of Responses in Each Valued Domain (N=84)

| Chosen domains  | Number of responses |
|-----------------|---------------------|
| Work            | 19                  |
| Relationships   | 17                  |
| Family          | 13                  |
| Parenting       | 11                  |
| Education       | 7                   |
| Leisure time    | 6                   |
| Health          | 4                   |
| Friendship      | 3                   |
| Spirituality    | 2                   |
| Community work  | 2                   |
| Total Responses | 84                  |

### *Discriminative Validity: Sensitivity to Intervention*

As mentioned previously, this instrument development project was part of a larger study of using ACT for treatment-refractory epilepsy. Core ACT interventions are to engage the client in a dialogue about personal values, have the client evaluate the extent to which daily behaviors are consistent with identified values, and to identify and overcome external or internal factors that function as obstacles to value-consistent living. In this study, ACT was compared to a general supportive psychotherapy intervention that lacked an explicit focus on values clarification and value-action discrepancies. Thus, we predicted that only the patients in the ACT condition would exhibit a positive change in their values attainment scores (i.e., a reduction in value-action discrepancies). This permitted an evaluation of the extent to which the BEVS is sensitive to clinical changes related to treatments that do and do not explicitly target values. The data were analyzed using repeated measures ANOVA. As reported in Table 2, results provide preliminary support for the hypothesis that the BEVS values attainment scale is sensitive to clinical intervention. ACT clients reported highly significant positive changes in their values attainment scores when compared with clients in the supportive therapy treatment. This was indicated by a significant interaction effect between groups over time in favor of the ACT group. Furthermore, Cohen's *d* showed that the positive changes in the ACT group were large and stable from post to one-year follow up, while changes in the Supportive Therapy group were minimal or nonexistent.

### **Study 2: Psychometric Properties of the BEVS**

The goal of Study 2 was to evaluate the psychometric properties of the BEVS, particularly its test-retest reliability, internal consistency, discriminant validity, and concurrent validity with respect to established measures of psychological flexibility, psychological distress, and life satisfaction.

### **Participants**

The baseline sample consisted of 181 Swedish university students participating in a clinical psychology course. The purposes of the study were explained at the end of a class, and interested volunteers were contacted by phone or e-mail and enlisted into the study. Of the original sample, 156 completed the second assessment, 147 completed the third assessment, and 147 participants (48 male, 99 female) completed all assessments at all time points. Only data from those participants who completed all assessments are analyzed below. The mean age of participants was 26.4 years ( $SD=10.7$ ), with relationship status reported as 42% single, 26.5% dating, 19% cohabitating, and 12% married. Twenty-six percent reported having children.

### **Measures**

To increase the efficiency of the BEVS, the authors elected to condense the procedure for identifying values-action discrepancies into one unified protocol, rather than using separate sheets of paper for each life domain (see Appendix). The revised protocol elicits all value statements on a single page and, similarly, ratings of value-action discrepancies are displayed on a single target. The authors also chose to elicit ratings for a range of potentially important domains, rather than allowing participants to self-select which valued domains they might choose to focus on. The domains selected were based on clinical observations, as well as results from Study 1, where the most frequently observed domains of interest were work/education, relationships, and leisure time. In addition, the health and spirituality domains were clustered into a fourth domain termed Health/Personal Growth. Thus, the revised BEVS included four major life domains: Work/Education, Relationships, Leisure, Health/Personal Growth.

Two changes were made to the scoring of the BEVS compared to Study 1. First, the scoring direction of the

Table 2  
Average BEVS Values Attainment and Persistence With Barriers Scores for ACT and Supportive Therapy Patients

|                                  | Pre      |           | Post     |           | 6 months |           | 1 year   |           | Interaction effect                       | Within d<br>Pre to 1 year |
|----------------------------------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|--|---------------------------|
|                                  | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> |  |                           |
| <i>Values attainment</i>         |          |           |          |           |          |           |          |           |  |                           |
| ACT                              | 3.8      | 0.60      | 1.7      | (0.74)    | 1.3      | (0.76)    | 1.0      | (0.40)    | <i>F</i> (1, 3)=93.17<br><i>p</i> < .001 | 5.49                      |
| ST                               | 4.2      | 0.58      | 3.6      | (0.55)    | 4.3      | (0.42)    | 4.0      | (0.47)    |  | 0.07                      |
| <i>Persistence with barriers</i> |          |           |          |           |          |           |          |           |  |                           |
| ACT                              | 3.8      | (0.64)    | 1.4      | (0.87)    | 0.7      | (0.69)    | 0.7      | (0.79)    | <i>F</i> (1, 3)=61.45<br><i>p</i> < .001 | 4.31                      |
| ST                               | 3.8      | (1.01)    | 3.3      | (0.74)    | 4.1      | (0.72)    | 3.9      | (0.72)    |  | -0.11                     |

Note. In Study 1, lower scores indicated greater values attainment and greater persistence with barriers. Possible scores ranged from 0 to 4.5.



BEVS scales was reversed so that higher scores corresponded to greater attainment of valued living. Second, the measure of physical distance from the bull's eye was dropped in favor of a more user-friendly scoring system in which a value of 7 was supplied if the respondent placed a mark in the center of the bull's eye and 1 point was removed for each of the remaining 6 rings on the target. Thus, placing a mark in the outer most ring of the target equaled a score of 1. Lower numerical scores on the BEVS values attainment variable indicate a greater discrepancy and lower attainment. Higher scores indicate higher values attainment. These changes allowed us to score the BEVS values attainment score as a continuous variable while making the scoring process considerably more user friendly.

The procedure for identifying *persistence with barriers* was also modified. In the new version, participants were first asked to write down the obstacles that "stand between you and living your current life as you want to, from what you have written in your areas of value." They were then asked to provide a 1 (*doesn't prevent me at all*) to 7 (*prevents me completely*) Likert rating of the extent to which "the obstacle(s) you just described can prevent you from living your life in a way that is in keeping with your values." This item was reverse scored so that higher scores correspond with higher levels of persistence with barriers. The dart board was not used to supplement the Likert ratings of persistence.

#### Life Satisfaction

The Satisfaction With Life Scale (SWLS) is a self-report measure of global judgments of satisfaction with one's life (Diener, Emmons, Larsen, & Griffin, 1985). The scale consists of five statements (e.g., "In most ways my life is close to ideal" and "I am satisfied with my life"). Responses are rated on a 7-point scale from 1 (*strongly disagree*) to 7 (*strongly agree*), with scale totals ranging from 5 to 35. The SWLS has shown a strong internal reliability ( $\alpha = .87$ ) and good temporal stability (Diener, Emmons, Larsen, & Griffin, 1985) and is one of the primary well-being measures used in a large literature on the topic.

#### Psychological Flexibility

The Acceptance and Action Questionnaire II (AAQ-II) is a 10-question measure of psychological flexibility (Hayes et al., 2004). The AAQ-II is a widely used instrument in ACT studies to assess the purported mechanism of change in psychotherapeutic research (Hayes et al., 2006). The scale consists of 10 statements rated on a 7-point scale from 1 (*never true of me*) to 7 (*always true of me*). Higher scores indicate higher psychological flexibility. The AAQ-II has shown good reliability (test-retest reliability = .81-.87) and validity (Bond et al., 2011).

#### Depression, Anxiety, and Stress

The Depression, Anxiety and Stress Scale (DASS-21; Antony, Bieling, Cox, Enns, & Swinson, 1998) is a short version of the DASS-42 (Lovibond & Lovibond, 1995) and is a widely used measure of depression/anxiety/stress in clinical research. The instrument consists of 21 statements about stress, anxiety, and depression symptoms that have been experienced in the past week. Statements are rated on a 4-point scale from 1 (*did not apply to me at all*) to 4 (*applied to me very much, or most of the time*). The DASS-21 and its subscales have been demonstrated to have good internal consistency (Crawford & Henry, 2003), as well as temporal stability and convergent validity (Brown, Chorpita, Korotitsch & Barlow, 1997).

#### Procedure

Participants completed three separate assessments with 2-week intervals separating each assessment. The first assessment session lasted approximately 40 minutes and required participants to complete the BEVS, SWLS, AAQ-II, and DASS-21. Subsequent sessions involved only completing the BEVS. Assessments were conducted in a classroom in groups of 7 to 10 participants. A research assistant was present to answer any questions about how to complete each instrument. The assessment leader was not allowed to add any new information or to suggest any answers when fielding questions. This is important because the first part of the BEVS, where participants write statements describing their values, can be easily influenced by the experimenter. The final two assessment sessions took place in the same classroom as the initial assessment and the same research assistant guided the process. Each participant's values statements gathered at Session 1 were preprinted on the unified BEVS protocol. Participants interested in a more detailed description of the study were offered a written description of the study and a half-hour lecture on values work in ACT after the third assessment occasion.

#### Results

There was no evidence of floor or ceiling effects on the BEVS. Means for all subscales were in the middle range of possible scores—Work/Education ( $M = 3.7$ ,  $SD = 1.5$ ), Relationships ( $M = 4.2$ ,  $SD = 1.8$ ), Leisure ( $M = 3.7$ ,  $SD = 1.7$ ), Health/Personal Growth ( $M = 3.5$ ,  $SD = 1.4$ ), and persistence with barriers ( $M = 4.1$ ,  $SD = 1.2$ ).

#### Reliability

The test-retest correlations for the total BEVS values attainment scores were significant between Times 1 and 2,  $r(180) = .85$ ,  $p < .001$ ; between Time 1 and 3,  $r(180) = .70$ ,  $p < .001$ ; and between Times 2 and 3,  $r(180) = .71$ ,  $p < .001$ . The test-retest correlation for the persistence with barriers

score was significant between Times 1 and 2,  $r(180) = .89$ ,  $p < .001$ ; between Times 1 and 3,  $r(180) = .90$ ,  $p < .001$ ; and between Times 2 and 3,  $r(180) = .71$ ,  $p < .001$ .

### Correlational Analyses

The four values attainment scores, average values attainment scores, and persistence with values scores from the BEVS were correlated with the SWLS, AAQ-II, and DASS-21 subscale scores (see Table 3). Overall, higher values attainment scores were associated with lower psychological distress, higher psychological flexibility, and higher subjective well-being. The exception was the DASS-21 Anxiety subscale, which was not significantly correlated with three of the BEVS subscales. The persistence with barriers scores showed a similar pattern, with higher persistence being associated with lower psychological distress, higher psychological flexibility, and higher subjective well-being.

### Factor Analyses

An exploratory factor analysis was conducted in an effort to determine the underlying relationship between the various measures examined in this study. Principal components analysis was used for factor extraction, and varimax (orthogonal) rotation was used for factor rotation. Variables entered in the factor analyses were the five scores that make up the BEVS and the total scores of the instruments described above (see Table 4). Components were retained if their eigenvalues exceeded 1.0. Factor loadings for specific variables were retained if they were greater than positive or negative .50. As can be seen in Table 4, two factors collectively explained 52% of the variance. The first factor appears to reflect a psychological distress dimension characterized by high DASS scores, low psychological flexibility, and low subjective well-being. The second factor appears to reflect a life satisfaction dimension characterized by a positive association between value attainment and subjective well-being. That these components were nearly orthogonal supported the hypothesis that the BEVS measures something distinct from most of the other measures in the study. Of particular interest

Table 4

Principal Component Factor Loadings for All Study Measures

| Variables                        | Factor One | Factor Two |
|----------------------------------|------------|------------|
| Work                             | .12        | -.51       |
| Leisure                          | .07        | -.70       |
| Relations                        | .10        | -.66       |
| Health/personal growth           | .24        | -.54       |
| Persistence with barriers        | -.28       | .57        |
| Depression                       | .76        | .01        |
| Anxiety                          | .79        | .04        |
| Stress                           | .86        | .09        |
| Psychological flexibility        | .73        | .21        |
| Subjective well-being            | -.61       | -.52       |
| Eigenvalue                       | 2.93       | 2.25       |
| Explained variance in percentage | 29%        | 23%        |

is that psychological flexibility (AAQ-II) loaded on a different factor than the BEVS scales.

### Discussion

The results of the present study provide preliminary support for the BEVS as a useful tool for both process (Lundgren et al., 2008) and outcome research for treatments that employ values-based interventions. The BEVS exhibited good temporal stability and showed many properties supporting its construct validity. High scores on the BEVS values attainment scale indicated a small discrepancy between personal values and actions that were consistent with those values. Lower values attainment was related to heightened levels of depression, anxiety, and stress, as well as lower levels of psychological flexibility and reduced reports of subjective well-being. In addition, lower levels of BEVS persistence in the face of barriers predicted heightened levels of depression, anxiety, and reduced levels of psychological flexibility and subjective well-being.

Factor analyses of the scales in Study 2 showed that our measure of general psychological flexibility, the AAQ-II, loaded on an overall distress factor with measures of depression, anxiety, stress, and well-being. In contrast, BEVS scores loaded on a separate factor along with the

Table 3

Correlations Between BEVS and Other Measures ( $N = 147$ )

| Bull's-Eye Domains        | DASS-t | DASS-d | DASS-a | DASS-s | AAQ II  | SWLS    |
|---------------------------|--------|--------|--------|--------|---------|---------|
| Relationships             | -.16*  | -.16*  | -.09   | -.15   | .26**   | .46***  |
| Work/Education            | -.20*  | -.23** | -.13   | -.17*  | .14     | .27**   |
| Leisure                   | -.19*  | -.18*  | -.15   | -.16*  | .23**   | .28**   |
| Personal growth/Health    | -.28** | -.17*  | -.28** | -.26** | .22**   | .39***  |
| Overall values attainment | -.24** | -.23** | -.17*  | -.20*  | .26**   | .47***  |
| Persistence with barriers | .30*** | .20*   | .25**  | .30*** | -.31*** | -.38*** |

Note. DASS-t = Total score of Depression Anxiety and Stress Scale, DASS-d = Depression scale, DASS-a = Anxiety scale, DASS-s = Stress scale, AAQ = Acceptance and Action Questioner, SWLS = Subjective Well Being Life Scale.

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

well-being scale. This pattern suggested that the BEVS scales were not redundant with the more general measure of psychological flexibility. Also, the results suggested that well-being was not simply related to lower levels of distress, but also to the presence of positive action toward valued ends. Overall, our findings indicate that the BEVS may be a useful measure for researchers who are interested in studying valued living and related constructs.

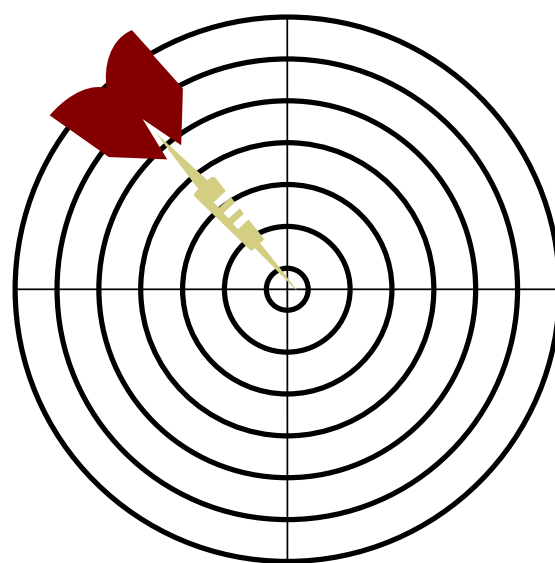
In addition to its utility in research studies, the BEVS may have clinical utility. First, the BEVS can be used to identify values idiographically and thus can be used as a treatment-planning tool in therapy. Compared with traditional quality-of-life measures, which use standard questions that are rated on a Likert scale, the BEVS also obtains an idiographic measure of valuing that may have clinical utility. For example, it may allow for a more targeted clinical approach to behavior change in line with individual client's particular values. Second, the BEVS quantifies the discrepancy between personal values and actions that are consistent with those values within a particular domain, making it possible to examine the differential impact of value-action discrepancies within different life domains. If tracked over time, values attainment scores could serve as a way to measure progress in treatment. Third, the BEVS elicits an idiographic assessment of perceived obstacles to improving value-action discrepancies. The types of obstacles that serve as barriers and the degree to which these obstacles are seen as insurmountable are important pieces of information for clinical practice. The psychological content presented by the client in the assessment can be responded to with acceptance, mindfulness, and defusion processes. The BEVS can also serve as a guide to choosing domains where valued actions might be taken and identifying what valued actions might challenge his or her obstacles. Taking active steps in valued directions then serves to break rigid behavior patterns and broaden the client's behavioral repertoire.

There were several limitations in the current study. First, the initial development sample was small and this might have skewed the life domains that were selected for the BEVS. Another weakness was that the measure was revised somewhat between Study 1 and 2, leaving the question open as to how well the results from Study 1 apply to the measure used in Study 2, for example, the bull's eye scoring was changed from a continuous physical analogue measure to an ordinal measure, which may have influenced responding. However, previous studies comparing visual analogue to interval measures have shown that they tend to correlate highly with each other (Guyatt, Townsend, Berman, & Keller, 1987; Laerhoven, Zaag Loonen & Derkx, 2004). Finally, studies will be needed to determine whether the psychometric properties observed in the Swedish university sample will generalize to populations from other nationalities, or other racial, ethnic, or

clinical samples. On the other hand, the fact that results obtained with the Swedish sample were consistent with those obtained with the South African sample increases our confidence that this measure may be reliable and valid across different cultural contexts.

The purpose of this study was to develop clinically useful and psychometrically valid assessment process for personal values. Evidence was also provided that living life in accord with one's values contributes to well-being above and beyond negative mood states. Our hope is that the availability of the new measure of valuing we developed will aid in future studies on personal values and their role in increasing quality of life.

### Appendix. Bull's-Eye Values Survey



Age: \_\_\_\_\_

Sex: (Circle): Woman      Man

Civil status: (Circle) Married   Living together   Girl/-Boy friend   Single

Children: (yes or no) \_\_\_\_\_ If yes, how many: \_\_\_\_\_

Occupation: \_\_\_\_\_

### Bull's-Eye

The Bull's Eye dart board on [next page] is divided into four areas of living that are important in people's lives: work/education, leisure, relationships and personal growth/health.

- 1) Work/Education refers to your career aims, your values about improving your education and knowledge, and generally feeling of use to those close to you or to your community (i.e., volunteering, overseeing your household, etc.).

- 2) Leisure refers to how you play in your life, how you enjoy yourself, your hobbies or other activities that you spend your free time doing (i.e., gardening, sewing, coaching a children's soccer team, fishing, playing sports).
- 3) Relationships refers to intimacy in your life, relationships with your children, your family of origin, your friends and social contacts in the community.
- 4) Personal growth/health refers to your spiritual life, either in organized religion or personal expressions of spirituality, exercise, nutrition, and addressing health risk factors like drinking, drug use, smoking, weight.

In this exercise, you will be asked to look more closely at your personal values in each of these areas and write them out. Then, you will evaluate how close you are to living your life in keeping with your values. You will also take a closer look at the barriers or obstacles in your life that stand between you and the kind of life you want to live. Don't rush through this; just take your time.

### Part 1. Identify Your Values

Start by describing your *values* within each of the four values areas. Think about each area in terms of your dreams, like you had the possibility to get your wishes completely fulfilled. What are the qualities that you would like to get out of each area and what are your expectations from these areas of your life? Your value should not be a specific goal but instead reflect a way you would like to live your life over time. For example, getting married might be a goal you have in life, but it just reflects your value of being an affectionate, honest and loving partner. To accompany your son to a baseball game might be a goal; to be an involved and interested parent might be the value. **Note!** Write your value for each area on the lines provided below. It is **your** personal values that are important in this exercise.

Work/education: \_\_\_\_\_

\_\_\_\_\_

Leisure: \_\_\_\_\_

\_\_\_\_\_

Relationships: \_\_\_\_\_

\_\_\_\_\_

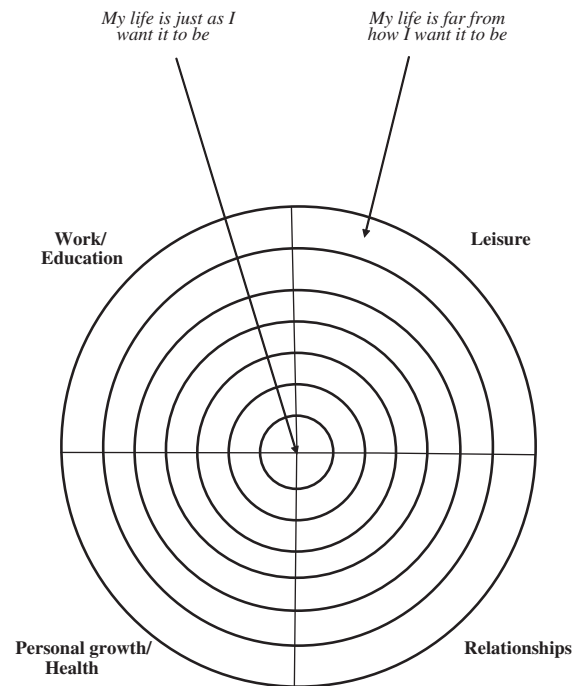
Personal growth/health: \_\_\_\_\_

\_\_\_\_\_

Now, look again at the values you have written above. Think of your value as "bull's eye" (the middle of the dart board). "Bull's eye" is exactly how you want your life to be, a direct hit, where you are living your life in a way that is consistent with your value. Now, make an X on the dart board in each area that best represents where you stand today. An X in the bull's eye means that you are living

completely in keeping with your value for that area of living. An X far from bull's eye means that your life is way off the mark in terms of how you are living your life.

Since there are four areas of valued living, you should mark **four Xs** on the dart board. **Note!** Use the dart board on this page before you go to Part 2 of this exercise.



### Part 2: Identify Your Obstacles

Now write down what stands between you and living your current life as you want to, from what you have written in your areas of value. When you think of the life you want to live and the values that you would like to put in play, what gets in the way of you living that kind of life? Describe any obstacle (s) on the lines below.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Now estimate to what extent the obstacle (s) you just described can prevent you from living your life in a way that is in keeping with your values. Circle one number below that best describes how powerful this obstacle (s) is in your life.

1      2      3      4      5      6      7

Doesn't prevent me at all      Prevents me completely

### Part 3. My Valued Action Plan

Think about actions you can take in your daily life that would tell you that you are zeroing in on the bull's-eye in



each important area of your life. These actions could be small steps toward a particular goal or they could just be actions that reflect what you want to be about as a person. Usually, taking a valued step includes being willing to encounter the obstacle(s) you identified earlier and to take the action anyway. *Try to identify at least one value-based action you are willing to take in each of the four areas listed below.*

Work/education: \_\_\_\_\_

\_\_\_\_\_

Leisure: \_\_\_\_\_

\_\_\_\_\_

Relationships: \_\_\_\_\_

\_\_\_\_\_

Personal growth/health: \_\_\_\_\_

\_\_\_\_\_

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