Running head: VALUED LIVING QUESTIONNAIRE

The Valued Living Questionnaire: Defining and Measuring Valued Action within a Behavioral Framework

Kelly G. Wilson

Emily K. Sandoz

Jennifer Kitchens

University of Mississippi

and

Miguel Roberts

VA Maryland Healthcare System

Address editorial correspondence to: Kelly G. Wilson

Department of Psychology/ Peabody Building

University of Mississippi

University, MS 38677

kwilson@olemiss.edu

This Manuscript is currently under review at *The Psychological Record*. Please contact

corresponding author for any updates on the manuscript prior to citing.

with kind regards, Kelly

Abstract

A number of recently developed cognitive behavior therapies strongly emphasize changes in particular behavioral processes as mediators of clinical change with that therapy. This shift in emphasis calls not only for the demonstration of efficacy of these new therapies, but also for the development of measures sensitive to changes in the therapies processes and outcomes. Among these is Acceptance and Commitment Therapy (ACT), which posits valued living as one of its primary core processes. This paper offers a definition of values from a behavioral perspective and offers the Valued Living Questionnaire (VLQ) as a first attempt at assessment of valued living. The VLQ is relatively brief and easily administered. Further, it is well integrated into the delivery of ACT, since the instrument is derived directly from the primary text on ACT. Initial support found for the VLQøs basic psychometric properties suggests that valued living can be measured, even with the most simple of instruments, in such a way as to predict important outcomes.

THE VALUED LIVING QUESTIONNAIRE: DEFINING AND MEASURING VALUED

ACTION WITHIN A BEHAVIORAL FRAMEWORK

New Therapies, New Measures

Emerging õthird wave,ö behavior therapies, including Functional Analytic

Psychotherapy (FAP; Kohlenberg & Tsai, 1991), Dialectical Behavior Therapy (DBT; Linehan,

1993), Integrative Behavioral Couple Therapy (IBCT; Christensen, Jacobson & Babcock, 1995;

Jacobson & Christensen, 1996; Jacobson, Christensen, Prince, Cordova, & Eldridge, 2000),

Mindfulness-Based Cognitive Therapy (MBCT; Segal, Williams, & Teasdale, 2002), Behavioral

Activation (Dimidjian et al., 2006; Jacobson et al., 1996), and Borkovec's present moment

focused approach to the treatment of GAD (e.g., Borkevec & Sharpless, 2004), among others,

concentrate on the õconstruction of broad, flexible and effective repertoires over an eliminative

approach to narrowly defined problemsö (Hayes, 2004).

In addition to changes in the focus of treatment outcome, many of these newer therapies

propose differences in putative mechanisms of action. Changes in acceptance, mindfulness,

distress tolerance, and cognitive defusion, among others, have been proposed as mediators of

clinical change. Because of these differences, third wave behavioral treatments pose significant

empirical challenges. Not only do we need to carry the burden of examining their efficacy, we

have the additional challenge of generating and refining measures sensitive to differences in

process and outcome.

Acceptance and Commitment Therapy is one among these emergent cognitive behavioral

therapy in which examination of change processes and outcome is being pursued (ACT said as a

word, not as individual letters; Hayes, Strosahl, & Wilson, 1999). ACT is based on a functional

contextualist philosophical framework and a contemporary contextual behavioral theory of human action. ACTøs underlying theory incorporates well validated basic operant and respondent conditioning processes from behavior analysis with Relational Frame Theory, a post-Skinnerian theory of relational conditioning processes considered central to understanding human language, cognition, emotion, and motivation (Hayes, Barnes-Holmes, & Roche, 2001).

Examination of relative clinical efficacy of ACT is in its infancy. However, early randomized trials have shown considerable promise. Compared to waitlist, placebo, or treatment-as-usual, a recent meta analysis of ACT (n=404) demonstrated a large mean effect size (Cohenøs d=.63; Hayes, Luoma, Bond, Masuda, & Lillis, 2006), in treating a wide variety of psychological syndromes, as well as other problematic experiences (e.g., burnout; see Hayes et al., 2004).

Although the studies referred to above showed reductions in distress on a variety of well-standardized measures, such reductions in distress are not the primary targets of treatment. Rather than focus on symptom elimination, the primary purpose of ACT is to teach clients to accept and embrace necessary suffering in order to increase their ability to engage in committed, life-affirming action. Assessment and intervention for difficult psychological content are well developed; however, the assessment and intervention of life-affirming action, or values, have been the subject of far less theoretical and empirical development within the behavior therapy movement.

<div align="center">Values Work in ACT</div>

Work on committed, life-affirming action is generally addressed in the values and commitment components of ACT. (Hayes, Strosahl, & Wilson, 1999). Values work is seen as both directing and dignifying the hard work of treatment (Wilson & Murrell, 2004). Details of values interventions are described in both books (Hayes, Strosahl, & Wilson, 1999; Eifert &

Forsyth, 2005; Dahl, Wilson, Luciano, & Hayes, 2005) and chapters (Wilson & Murrell, 2004;

Wilson & Byrd, 2004) as well as in treatment manuals used in clinical trials (Hayes, et al. 2004;

Dahl, Wilson, & Nilsson, 2004). While values have been conceptualized in a number of ways in

psychology (e.g., Allport, Vernon, & Linzey, 1960; Rokeach, 1973), a discussion of these

alternative perspectives is beyond the scope of this paper. Rather, the focus of this paper will be

on the definition and measurement of this domain within a behavioral framework.

Defining Values in ACT

  Values are ongoing patterns of activity. In ACT, values are distinguished from goals.

Goals are achievable ends. ACT uses goals, as do many other behavioral interventions (Beck,

Rush, Shaw, & Emery, 1979; Rollnick & Miller, 1995; Meichenbaum, 1975; Linehan, 1993).

However, in ACT, goals are directed by core client values. Unlike goals, values cannot be

completed or achieved in an absolute sense. Rather, values are patterns that can be abstracted

from ongoing streams of complex human behavior. For example, getting a degree is a discrete,

achievable end. Education might be a relevant value that could continue for a lifetime. While

getting a degree could be an important indicator of valued living, one could always continue to

pursue education regardless of milestones achieved. Values, then, are more like directions in

which one travels, than they are like destinations at which one arrives.

  Values are a special class of reinforcers. ACT is a contextual behavioral treatment and,

as such, the language of values is a special way to speak about reinforcement among verbally

competent human subjects. Reinforcers for nonhumans, with a few exceptions, consist of a

relatively small set of evolutionary imperatives (primary reinforcers; e.g., food, shelter, water,

sex, social contact for some species) and events correlated with those imperatives (secondary

reinforcers). Further, with a few exceptions, these reinforces must occur in close proximity and

reasonably large magnitude in order to serve as reinforcers. A grain delivery will not reinforce a pigeon's key pecks unless the grain delivery is of a noticeable quantity and comes within a short period of time following the key peck.

Humans, in contrast, are able to respond to reinforcers that are extremely remote in time and where the benefits actually accrue in tiny increments. So, for example, a person might forgo foods with high levels of saturated fats even though the reinforcing value of the food is immediate and large in magnitude, and, where the delayed benefits accrue very slowly. In addition to the capacity to respond to remote and incremental benefits, humans can respond to benefits with which they could not, even in principle, make contact within their lifetime. So for example, a person might avoid sin in order to avoid hell and get to heaven. While it is clear that the pigeon pecks the key because it has a history in which key pecking has produced grain, it is not the case that the human prays and avoids sin because they have a history in which praying and avoiding sin have produced eternal life. Still though, many people throughout the world expend effort everyday in the service of such spiritual pursuits. One can argue that there are immediate benefits that accrue; however, to attribute all this activity to such immediate benefits trivializes the willingness of many individuals who have given their lives in the service of spiritual values. (Here, we make no judgment about the accuracy of such beliefs. We simply note their existence and behaviors devoted to their service.)

Values are verbal. ACT is based upon a post-Skinnnerian behavioral theory which includes Relational Frame Theory (RFT; Hayes, Barnes-Holmes, & Roche, 2001). According to RFT, relational or verbal conditioning processes are capable of making present psychological functions without the necessity of direct conditioning processes. While a tone or light can take on the psychological functions of food or shock by simple coordination in an operant or respondent

conditioning paradigm, the same can be done with humans with no such direct conditioning history. Experimental studies have demonstrated the transformation of sexual functions, avoidance evoking functions aversion, reinforcing functions, eliciting functions and discriminative functions, among others (Dougher et al., 1994; Auguston & Dougher, 1997; Roche & Barnes, 1997; Roche et al., 2000; Valverde, Soriano, Martinez, & Lopez, 2004; Dougher, Hamilton, Fink, & Harrington, in print). Consider an everyday example: simply telling a person that you got food poisoning at a particular restaurant may cause them to avoid the restaurant even though they have not been poisoned at that restaurant, and, even if they have never experienced food poisoning at all.

Many of the values which humans find important seem to defy direct conditioning interpretations. Take as a case example, Victor Frankl's experience in the death camps of Nazi Germany. After years in the camps and witnessing the vast majority of his fellow campmates die, Frankl found himself in a position in 1945 in which he and a colleague had the opportunity to escape the camp. He describes both excitement and anxiety as the time comes for his departure. Frankl has been running a rudimentary "clinic" in the camp, and although he did not have access to appropriate medications and wound dressings, he was able to provide some measure of comfort and marshal a few extra rations for his patients. Frankl describes making one last round of his patients before the planned escape. He came to a dying man who was from the same region as he. Frankl describes the man looking into his eyes and saying in a tired voice: "You, too, are getting out?" (Frankl, 1992, p.68). Frankl goes on to say that he decided to take his life into his own hands. He went to his colleague and told him that he would stay in the camp with his patients. Upon returning to sit with his patients, Frankl describes a sense of peace descending upon him that was unlike any he had experienced (Frankl, 1992, p. 68).

In ACT, we define values as a special class of reinforcers that have the following qualities. *Values are a special class of reinforcers that are verbally constructed, dynamic, ongoing patterns of activity, for which the predominant reinforcer is intrinsic in the correspondence between the individuals' behavior and the valued behavioral pattern.* Frankl's story is an apt example of such a pattern of activity. The predominant reinforcer described by Frankl is to be found in the consistency of his actions with his beliefs about what it means to be a doctor and more broadly as a person.

Valued living has been posited as a primary core process of ACT (Strosahl, Hayes, & Wilson, 2004; Hayes et al., 2006), and has been theoretically associated with other core processes like mindful acceptance, and many important outcomes such as decreased psychological distress, increased psychological adjustment, and improvements in quality of life (Wilson & Murrell, 2004). In the ACT model, individualøs attempts to eliminate or attenuate difficult psychological experiences causes avoidance which increases psychological distress and has a negative impact on valued living (Hayes et al., 1999). As suggested earlier, we have good measures of psychological distress. In addition, measures acceptance and experiential avoidance have been under development (Bond & Bunce, 2000; Bond & Bunce, 2003; Hayes, et al., 2004). The continued scientific progress of this work is partially reliant on the development of process measures of valued living that can be used to inform research, practice, and ultimately the validity of the ACT model.

The Valued Living Questionnaire (VLQ) represents a first attempt to systematically assess valued living, or the extent to which an individual contacts his or her chosen values in everyday life, from an ACT perspective. This approach was initially described as a clinical intervention in *Acceptance and Commitment Therapy: An Experiential Approach to Behavior*

Change (Hayes et al., 1999)*,* but has since come to be used more broadly as an assessment of valued living. The purpose of the following studies was to examine the psychometric properties of the VLQ and thus its appropriateness as a measure for use in examining psychotherapy outcome and process. The advantages of the use of the instrument include the relative ease with which the data can be collected and with its existing integration both clinically and theoretically with ACT. The first study was designed to establish the measureøs reliability and the second, its validity.

Study One: Reliability

Participants

Seventy-six undergraduates from a southern university (24% male, 44.7% AA, M = 22.29 years) were recruited for participation in return for extra credit in their psychology classes. Participants with incomplete or invalid data (details of exclusion below) were omitted from all analyses (*n* = 19 excluded). Remaining participants (*N* = 57) had an average age of 22.6 with 75.4% of them being between the ages of 18 and 22. The sample was 63.2% female, 52.6% Caucasian, and 86% single.

Measures

Valued Living Questionnaire. The VLQ (see Appendix) is a 2-part instrument designed to assess valued living. In the first part, participants rate the *importance* of 10 domains of living on a 10-point Likert-style scale. These life domains included: 1) family (other than parenting and intimate relations), 2) marriage/couples/intimate relations, 3) parenting, 4) friendship, 5) work, 6) education, 7) recreation, 8) spirituality, 9) citizenship, and 10) physical self-care. The instructions specify that not everyone values all of these domains, and that some may be more important, or important in different ways at different times in an individualøs life. This part of the

questionnaire is designed to measure in what domains of living the individual chooses to value a particular behavioral pattern. The second part of the VLQ asks the client to rate, using a 10-point Likert-style scale, how *consistently* they have lived in accord with the valued behavioral pattern within each domain over the past week. This part of the questionnaire is designed to measure self-assessment of the correspondence between the client's actual activities and the valued behavioral pattern.

Responses from both importance and consistency are used to calculate a Valued Living composite, which takes into account both importance and consistency to quantify the extent to which one is contacting values in his everyday life. This composite represents the primary theoretical importance of values in the ACT conceptualization rather than the extremeness or range of one's values, (measured on the Importance scale), or the degree to which an individual lives consistently with valuing life domains they may or may not have identified as important (measured on the Consistency scale).

Butcher Treatment Planning Inventory. The BTPI (Butcher, 1998) is a 210-item, true-false measure of clinical symptomatology and treatment difficulty. The reliability and validity of the BTPI are well-established (Butcher, 1998; Butcher, Rouse, & Perry, 1998; Perry & Butcher, 1999). It was originally developed for use in clinical settings, but provides additional norms for use with other populations, including college samples. Utilizing the nationally representative sample, raw scores were converted T-scores (Mean=50; SD=10) as indicated in the manual (Butcher, 1998). Clinical scale scores for Depression, Anxiety, Anger-In, Anger-Out, Lack of Environmental Support, Narcissism, Low Expectation of Benefit, Relationship Problems, and Somatization were computed as directed in the manual. The BTPI also provides 4 indicators of response style: Inconsistent responding (INC), a measure of the consistency of responding;

Overly Virtuous Self-Views (VIR), a measure of reluctance to admit minor flaws; Exaggerated

Problem Presentation (EXA), a measure of symptom exaggeration; and Closed-Mindedness

(CLM), a measure of a client's openness to treatment. The clinical scales were not the focus of

the study, rather, the response style indicators were used as validity scales to omit invalid

responders. In keeping with the test manual, participants deviating more than one standard

deviation from the mean for college students based on the standardization sample were

eliminated from analyses.

Procedure

Using an IRB-approved protocol, participants were seen on two separate assessment

occasions. After signing the consent form, participants completed the VLQ, the BTPI, and a

Demographics Questionnaire, and were scheduled to return one to two weeks later. In session

two, participants completed the VLQ again, and received a debriefing form, providing more

detailed information regarding the study's hypotheses and references for supplementary

information and/or mental health services.

<div align="center">Results</div>

Calculations and Descriptive Statistics

As this is the first time that the VLQ was evaluated for use as a psychometric instrument,

Importance and Consistency responses were subjected to separate statistical analyses, along with

the Valued Living composite. Descriptive statistics were computed in order to examine the

distribution of responses and to provide a basis of comparison for future use.

Importance. First, the distributions of responses on the two parts of the VLQ (Importance

and Consistency) were considered separately in preliminary analyses. Responses on the first part

of the measure were summed to yield an overall Importance score for the two administrations,

and the distributions were examined. The average Importance scores were 84.65 and 84.39, with standard deviations of 10.38 and 11.80, for the first and second administrations, respectively. Importance scores ranged from 53 to 100 in the first administration, and from 51 to 100 in the second administration. Thus, the average per item rating was between 8 and 9, with per item ratings ranging, on average, from 5 to 10. Means and standard deviations of Importance responses for each item can be seen in Table 1.

Consistency. Next, responses on the second part of the measure were summed to yield an overall Consistency score for the two administrations, and the distributions were examined. The average Consistency scores were 68.11 and 72.63, with standard deviations of 12.82 and 11.93 for the first and second administrations, respectively. Consistency scores ranged from 41 to 100 in the first administration and 49 to 100 in the second administration. Thus, the average per item rating was around 7, with per item ratings ranging from 4 to 10. Means and standard deviations of Importance responses for each item can be seen in Table 1.

Valued Living. Finally, the Valued Living composite was calculated using responses from the Importance and Consistency responses. For each domain represented in the questionnaire, the product of the Consistency and Importance ratings was calculated. The mean of these products is the Valued Living composite. The mean Valued Living composites were 59.52 and 63.68, with standard deviations of 14.14 and 15.02 for the first and second administrations, respectively. Valued Living composites ranged from 32.5 to 95.10 in the first administration and ranged from 34.90 to 98.00 n the second administration.

Reliability

Evaluations of reliability of the VLQ focused on the Valued Living composite. It was, however, theoretically unclear how consistent the VLQ should be between different domains of

living and over time, as valued living, the construct it was designed to measure, is conceptualized

in ACT as a dynamic ongoing pattern of responding that varies in the extent to which it

corresponds to the verbally constructed pattern. However, we would expect to see somewhat

greater reliability on values-importance than on values-consistency scores. One of the claimed

advantages of using values as a guide to behavior is the relative stability of values over time

(Wilson & Murrell, 2004). Thus, reliability was evaluated in an exploratory fashion. First,

reliability of values-importance and values-consistency were evaluated separately, followed by

an analysis of the reliability of the composite valued living score.

Internal Consistency. Cronbach's alpha was used to evaluate the internal consistency of

the VLQ. Inter-item consistency was adequate ($\alpha_1 = .65$, $\alpha_2 = .74$) for the first and second

administrations. This suggests that individuals' degree of consistency is relatively constant

across the different domains that are important to them.

Test-Retest Reliability. Next, the VLQ was examined for stability over time. The intra-

class correlation coefficient (ICC; Shrout & Fleiss, 1979; Griffin & Gonzales, 1995) was

calculated for the Valued Living composite, as an estimate of test-retest reliability. Although the

scale's conceptualization would suggest a low degree of stability over time as it is considered to

measure a characteristic of behavior that is dynamic from moment to moment, test-retest

reliability was good with an ICC of .75 (p < .001).

<div align="center">Study Two: Validity</div>

Participants

Three hundred thirty-eight undergraduates at a southern university (23% male, 18% AA,

M=19.94 yrs.) were recruited for participation in return for extra credit in their psychology

classes. Participants ($n = 85$) were excluded because of incomplete or invalid data. The remaining 253 participants were retained.

As is often the case with samples drawn from undergraduate university students, the sample was rather homogenous with regard to demographic characteristics. Participants had an average age of 20 years with 92.3% of them being between the ages of 18 and 22. The sample was 80% female, 80.4% Caucasian, and 97% single. Twenty three percent of participants had seen a mental health professional at some point in the past, but only 3.5% were being treated by a mental health professional at the time of the survey.

Measures

In addition to the VLQ, the BTPI, and the Demographics Questionnaire described in the previous section, four measures of theoretically related constructs were included in Study Two:

Acceptance and Action Questionnaire. The AAQ-16 (Hayes et al., 2004; Bond & Bunce, 2003) is a 16-item, 7-point Likert scale measure of experiential avoidance, or the tendency to avoid undesirable thoughts and feelings.   The AAQ-16 has been shown to have good validity and adequate internal consistency (see Bond & Bunce, 2003). Higher scores indicate more experiential avoidance.

Short Form-36. The SF-36 (Brazier et al., 1992) is a measure of general health status, including physical health, sense of well being, quality of life, and ability to function. The SF-36 has been shown to have good reliability and validity (Brazier et al., 1992). Responses are scored as directed in the manual to yield scores for: Physical Functioning, General Health, Role of Physical Discomfort, Role of Emotional Discomfort, Bodily Pain, Vitality, and Social Functioning, Mental Health. Higher scores are indicative of better health.

Procedure

Using an IRB-approved protocol, participants attended one assessment session. After signing the consent form, participants completed the battery of measures including the VLQ, AAQ, BTPI, SF-36, and a Demographics Questionnaire. Participants received a debriefing form upon completion, providing more detailed information regarding the study's hypotheses and references for supplementary information and mental health services.

<div align="center">Results</div>

Calculations and Descriptive Statistics

As in study 1, overall scores for Importance and Consistency were computed, and subjected to statistical analyses along with individual item responses. The average Importance score was 87.23 (indicating an average per item rating of almost 9), with a standard deviation of 8.69. Importance scores ranged from 53 (indicating an average per item rating of about 5) to 100 (indicating an average per item response of 10). Means and standard deviations of Importance responses for each item can be seen in Table 2.

The average Consistency score was 71.67 (indicating an average per item rating of about 7), with a standard deviation of 14.37. Consistency scores ranged from 31 (indicating an average per item response of about 3) to 100 (indicating an average per item response of 10). Table 2 shows the means and standard deviations of the responses to each item on both the Importance and Consistency scales. Means and standard deviations of Consistency responses for each item can be seen in Table 2.

The Valued Living composite was then calculated as described in study 1 above, averaging only those consistency responses for domains that were rated as maximally important. The average Valued Living composite was 64.21 with a standard deviation of 15.41. Valued Living composites ranged from 29.40 to 100.

Reliability

The Valued Living composite was examined for internal consistency. Inter-item

consistency was good, with a Cronbach's alpha of .77. As in study 1, this suggests that

individuals' degree of consistency is relatively constant across the different domains that are

important to them.

Validity

Content Validity. The content of the VLQ emerged from clinical experiences. Therapists

trained in ACT initially developed interventions aimed at systematically identifying domains of

living that would provide motivation for the hard work of treatment (Hayes et al., 1999). These

domains were abstracted from the interventions and used to create the VLQ. The domains

included (family, intimate relationships, parenting, friendship, work, education, recreation,

spirituality, citizenship, and physical self-care) were the most frequently reported valued

domains of living in the clinical experience of the authors and consulted clinicians.

Construct Validity. In ACT, values are defined to be a special class of reinforcers that are

verbally constructed, dynamic, ongoing patterns of activity, for which the predominant reinforcer

is intrinsic in the correspondence between the individuals' behavior and the valued behavioral

pattern. Thus, the VLQ, which is designed to measure the extent to which an individual is

contacting their chosen values, was expected to be unidimensional. Principal factor analysis

yielded one clear factor that accounted for 35.04% of the variation in VLQ responses. Visual

inspection of the scree plot of eigenvalues (Chart 1) supported the extraction of one factor, as

would be theoretically consistent. This one-factor solution produced factor loadings ranging from

.385 (Parenting item) to .647 (Friendships/Social Relationships item), suggesting items are

measuring a general tendency toward valued living. This is consistent with the idea in ACT that individuals can learn valued living as a skill that can be generalized to other domains.

ACT theory posits a relationship between processes targeted in the therapy and valued living as the primary outcome. In particular, acceptance of negative thoughts and feelings should be related to valued living (Wilson & Murrell, 2004). Correlational analyses provided initial support for these hypotheses. Pearson product-moment correlations were computed for Valued Living composites with scores on the AAQ-16. There was a significant negative correlation between valued living and experiential avoidance (r (251) = -.14, p < .05).

ACT also proposes that valued living should be related to positive outcomes such as decreased psychological distress and improvements in quality of life (Wilson & Murrell, 2004). Correlational and regression analyses provided initial support for these hypotheses. Pearson product-moment correlations were computed for VLQ scores with the clinical scales of the BTPI and the scales related to quality of life on the SF-36. As indicated in Table 3, all correlations were in expected directions. Analyses revealed significant negative correlations between valued living and depression, anxiety, somatization, hostile attitude, negative psychosocial environment, relationship difficulties, general pathology, and treatment difficulty. In addition, analyses revealed significant positive correlations between valued living and social functioning, vitality, mental health, and action despite emotional or physical problems problems. A multiple regression analysis was conducted including each of these predictors of valued living as independent variables. The resulting model was highly significant ($p < .001$), and accounted for 15.6% of the variance in valued living.

<center>Discussion</center>

The current studies were conducted to provide an initial consideration of the reliability and validity of the assessment of valued living, or the extent to which one's behavior puts them in contact with their values, as defined in ACT. The Valued Living Questionnaire, a preliminary measure developed for clinical use, was evaluated in terms of its internal consistency, stability over time, and its relationship with theoretically relevant outcomes.

Initial support for the instrument's reliability was provided. Responses seemed to be relatively stable, suggesting that with fairly brief intervals and no prescribed intervention, valued living remains relatively constant. Internal consistency was good, suggesting that, rather than individuals focusing on values in one domain at the expense of another, individuals tend to engage in valued living across the domains that are important to them, whether it be 1 domain or 10.

Support for the instrument's validity was also provided. As hypothesized, scores on the VLQ were related to experiential avoidance, psychological distress (i.e., anxiety, depression, general pathology), social issues (i.e., lack of support and social functioning), mental health and quality of life (i.e., vitality and low interference from emotional discomfort). The correlations presented are modest (.10-.20), suggesting that there are other variables that account for variations in valued living better than psychological distress, social functioning, and quality of life. However, the overall pattern of correlations suggest of a meaningful relationship between valued living and general functioning in the broadest sense. As with the development of other attributes or process measures (e.g., community functioning), the lack of established criterion gold standard measures of values made the process of establishing construct validity of the VLQ was made more difficult (Bellack, et al., 2007).

The current studies had several limitations. For one, the samples were quite homogenous in the validity study. The majority of participants in that study were white upper middle class females ages 18-22 in above average physical and emotional health. Not surprisingly, they also reported living quite consistently with the valued behavioral pattern with the majority of average ratings of consistency between 5 and 9.5 on a 10-point scale. The restriction of range in the predictors and the dependent variable may also account for the relatively small magnitude of the correlations.   In addition, some participants may have had difficulty responding to items that referred to domains in which they were not currently engaged in much relevant activity (e.g., Parenting or Employment). A sample that is more heterogenous might provide more evidence for inter-item consistency and construct validity as domains would be more clearly relevant to participants.

There are also problems with the VLQ itself due to the fact that it was designed for responses to be interpreted qualitatively, not for the computation of an overall valued living score. For one thing, the domains represented in the VLQ are not exhaustive and may not reflect the most important domains in some individualsø lives. In addition, participants have the freedom to rate all domains a 10 in importance and consistency, which would be interesting in a clinical setting (e.g., might point to choosing values and self-monitoring as a possible clinical focus), but most likely invalid for further interpretation, prediction, or as a process measure. Finally, as is the case with many self-report measures, the items are face valid and could be easily manipulated to form the impression of valued living. The current version of the VLQ does not allow for easy remediation of such issues. However, clinically, we have seen clients enter treatment rating values quite highly, seen these ratings decrease as clients make contact with ways they are not living consistently with their values, and finally increase again as the clients

improved in treatment. Such patterning of response is potentially interesting from both a clinical and theoretical perspective.

Despite these limitations, the results of the current study are encouraging. It seems that even with the most simple of instruments, valued living can be measured in such a way as to predict important outcomes like distress, avoidance, and quality of life. Further research on the topic of values and valued living might focus on more objective measures of valued living, such as having respondents report specifically the domains they value the most and then track the frequency and/or duration of behaviors related to those domains. After all, feedback from the VLQ has been utilized in exactly this manner in clinical settings (Hayes et al., 1999; Wilson & Murrell, 2004).

Other possibilities for the assessment of valuing and valued living certainly exist, and several have been explored since the development of the VLQ. One approach, as seen in the Personal Values Questionnaire and the Social Values Survey, avoids potential measurement error related to what is meant by value by prompting more specific responses and assessing the õpurityö of reported values, or the extent to which they may be the function of gaining othersø approval or avoiding negative experience (Blackledge & Ciarrochi, 2006). Another approach, the Bulløs-Eye Instrument for Valued Life, which was developed initially as a clinical intervention (Murrell & Wilson, 2002; Murrell, Coyne, & Wilson, 2004) and more recently as an assessment instrument (Lundgren, Dahl, & Melin, 2005). The Bulløs Eye allows for a visual representation of consistency in physical distance from the ideal valued action in different domains, and also assesses for persistence of valued living when obstacles arise. Others have developed measures of valued living specific to particular difficulties, such as the Chronic Pain Values Inventory (McCracken & Yang, 2006). The variability in the approaches toward the

assessment of valued living, the researchers pursuing it, and the populations with which the research is done, both reflects and facilitates continued interest in values as an important aspect of psychological functioning.

As the results of these different lines of research become more apparent, the refinement of the assessment of valued living and subsequent scientific progress in this area increases. Behavior therapy is in transition. There is an increasing interest in domains such as acceptance, present moment focus, and values. These new directions in behavior therapy present challenges to develop theoretically coherent, practical, and psychometrically sound assessment strategies. Further, although this study focused on values in terms of their clinical relevance, interest in valued living is extending into related disciplines (e.g., Cresswell et al., 2005; Cohen, Garcia, Apfel, & Master, 2006), and shared assessment strategies can facilitate communication and progress across these disciplines. The VLQ is offered as a step in this direction.

References

Allport, G. W., Vernon, P. E., and Lindzey, G. (1960). *Study of values*. Boston: Houghton Mifflin.

Augustson, E. M., & Dougher, M. J. (1997). The transfer of avoidance evoking functions through stimulus equivalence classes. *Journal of Behavior Therapy and Experimental Psychiatry, 28,* 181-191.

Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive therapy of depression.* New York: Guilford.

Bellack, A.S., Green, M.F., Cook, J.A., Fenton, W., Harvey, P.D., Heaton, R.K., Laughren, T., Leon, A.C., Mayo, D.J., Patrick, D.L., Patterson, T.L., Rose, A., Stover, E., & Wykes, T. (2007). Assessment of community functioning in people with schizophrenia and other severe mental illnesses: A white paper based on a NIMH-sponsored workshop. *Schizophrenia Bulletin, 33*(3), 805-822.

Blackledge, J. T., & Ciarrochi, J. (2006). Assessing values in Acceptance and Commitment Therapy (Presented at the 2006 conference of the Association for Behavior Analysis in Atlanta, Georgia).

Bond, F. W. & Bunce, D. (2000). Outcomes and mediators of change in emotion-focused and problem-focused worksite stress management interventions. *Journal of Occupational Health Psychology*, *5*, 156 ó 163.

Bond, F. W., & Bunce, D. (2003). The role of acceptance and job control in mental health, job satisfaction, and work performance. *Journal of Applied Psychology*, *88*, 1057-1067.

Borkevec, T. D., & Sharpless, B. (2004). Generalized anxiety disorder: Bringing cognitive-behavioral therapy into the valued present. In S. C. Hayes, V. M. Follette, & M. M. Linehan (Eds.), *Mindfulness and acceptance: Expanding the cognitive-behavioral tradition* (pp. 209-242). New York: Guilford.

Brazier, J. E., Harper, R., Jones, N. M., O'Cathain, A., Thomas, K. J., Usherwood, T., Westlake, L. (1992). Validating the SF-36 health survey questionnaire: new outcome measure for primary care. *British Medical Journal*, *305*, 160-164.

Butcher, J. N. (1998). *The Butcher Treatment Planning Inventory: Manual*. San Antonio, TX: The Psychological Corporation. (Republished in 2005 by MultiHealth Systems, Toronto, Canada).

Butcher, J. N., Rouse, S. V., & Perry, J. N. (1998). Assessing resistance to psychological treatment. *Measurement and Evaluation in Counseling and Development,* 31, 95-108.

Christensen, A., Jacobson, N. S., & Babcock, J. C. (1995). Integrative behavioral couple therapy. In N. S. Jacobson & A. S. Gurmann (Eds.), *Clinical handbook of couple therapy* (pp. 31-64). New York: Guilford.

Cohen, G. L., Garcia, J., Apfel, N., & Master, A. (2006). Reducing the racial achievement gap: A social-psychological intervention. *Science*, *313*, 1307-1308.

Cresswell, J. D., Welch, W. T., Taylor, S. E., Sherman, D. K., Gruenewald, T. L., & Mann, T. Affirmation of personal values buffers neuroendocrine and psychological stress response. *Psychological Science*, *16*, 846-851.

Dahl, J., Wilson, K. G., Luciano, C., & Hayes, S. C. (2005). *Acceptance and Commitment Therapy for Chronic Pain*. Reno, NV: Context Press.

Dahl, J., Wilson, K. G., & Nilsson, A. (2004). Acceptance and Commitment Therapy and the Treatment of Persons at Risk for Long-Term Disability Resulting from Stress and Pain Symptoms: A Preliminary Randomized Trial. *Behavior Therapy, 35,* 785-801.

Dimidjian, S., Hollon, S.D., Dobson, K.S., Schmaling, K.B., Kohlenberg, R., Addis, M., Gallop, R., McGlinchey, J., Markley, D., Gollan, J.K., Atkins, D.C., Dunner, D.L., & Jacobson, N.S. (2006). Randomized trial of behavioral activation, cognitive therapy, and antidepressant medication in the acute treatment of adults with major depression. *Journal of Consulting and Clinical Psychology,* 74, 658-670.

Dougher, M. J., Augustson, E. M., Markham, M. R., Wulfert, E., & Greenway, D. E. (1994). The transfer of respondent eliciting and extinction functions through stimulus equivalence classes. *Journal of the Experimental Analysis of Behavior, 50*, 125-144.

Dougher, M. J., Hamilton, D., Fink, B., & Harrington, J. (In press). Transformation of the discriminative and eliciting functions of generalized relational stimuli. *Journal of Experimental Analysis of Behavior*.

Eifert, G., & Forsyth, J. (2005). *Acceptance and Commitment Therapy for anxiety disorders*. Oakland: New Harbinger.

Frankl, V. E. (1992). *Man's Search for Meaning* (Ilse Lasch, Trans.) Cutchogue, NY: Buccaneer Books. (Original work copyrighted 1959).

Griffin, D., & Gonzalez, R. (1995). Correlational analysis of dyad-level data in the exchangeable case. *Psychological Bulletin, 118*, 430-439.

Hayes, S. C., Strosahl, K., & Wilson, K. G. (1999). *Acceptance and Commitment Therapy: An experiential approach to behavior change.* New York: Guilford.

Hayes, S. C. (2004). Acceptance and Commitment Therapy and the new behavior therapies: Mindfulness, acceptance and relationship. In S. C. Hayes, V. M. Follette, & M. Linehan (Eds.), *Mindfulness and acceptance: Expanding the cognitive behavioral tradition* (pp. 1-29). New York: Guilford.

Hayes, S. C. (2004). Acceptance and Commitment Therapy, Relational Frame Theory, and Third Wave of Behavioral and Cognitive Therapies. *Behavior Therapy*, *35*, 639-655.

Hayes, S. C., Barnes-Holmes, D., & Roche, B. (Eds.). (2001). *Relational Frame Theory: A Post-Skinnerian account of human language and cognition*. New York: Plenum Press.

Hayes, S. C., Bissett, R., Roget, N., Padilla, M., Kohlenberg, B. S., Fisher, G., Masuda, A., Pistorello, J., Rye, A. K., Berry, K. & Niccolls, R. (2004). The impact of acceptance and commitment training and multicultural training on the stigmatizing attitudes and professional burnout of substance abuse counselors. *Behavior Therapy, 35,* 821-835.

Hayes, S. C., Luoma, J., Bond, F., Masuda, A., and Lillis, J. (2006). Acceptance and Commitment Therapy: Model, processes, and outcomes. *Behaviour Research and Therapy, 44,* 1-25.

Jacobson, N. S. & Christensen, A. (1996). *Integrative couple therapy: Promoting acceptance and change.* New York: Norton.

Jacobson, N. S., Dobson, K. S., Truax, P. A., Addis, M. E., Koerner, K., Gollan, J. K., Gortner, E., & Prince, S. E. (1996). A component analysis of cognitive-behavioral treatment for depression. *Journal of Consulting and Clinical Psychology*, *64*, 295-304.

Jacobson, N. S., Christensen, A., Prince, S. E., Cordova, & Eldridge, K. (2000). Integrative behavioral couple therapy: An acceptance-based, promising new treatment for couple discord. *Journal of Consulting and Clinical Psychology, 68,* 351-355.

Kohlenberg, R. J. & Tsai, M. (1991). *Functional Analytic Psychotherapy: Creating intense and curative therapeutic relationships.* New York: Plenum.

Linehan, M. M. (1993). *Cognitive-behavioral treatment of borderline personality disorder.* New York: Guilford.

Lundgren, A.T., Dahl, J., & Melin, L. (2005). Bulls-Eye: A measure of valued living. Unpublished manuscript.

McCracken, L. M., & Yang, S. Y. (2006). The role of values in a contextual cognitive-behavioral approach to chronic pain. *Pain*, *123*, 137-145.

Meichenbaum, D. (1975). Self-instructional methods. In F. H. Kanfer & A. P. Goldstein (Eds.)., Helping people change (pp. 357-391). New York: Pergamon Press.

Murrell, A. R., Coyne, L., & Wilson, K. G. (2004). Treating Children with Acceptance and Commitment Therapy. In S. C. Hayes & K. Strosahl, (Eds.) *A Practical Guide to Acceptance and Commitment Therapy* (pp. 249-274). New York: Springer Press.

Murrell, A. R., & Wilson, K. G. (2002). *Acceptance and commitment therapy adapted for children.* Available from the author at Department of Psychology, University of Mississippi, University, MS.

Perry, J. & Butcher, J. N. (1999). The Butcher Treatment Planning Inventory (BTPI): An objective guide to treatment planning. In M. E. Maruish (Ed.). *The use of psychological testing for treatment planning and outcomes assessment* (Second edition) (pp. 1157-172). Hillsdale, NJ: Lawrence Erlbaum Press.

Roche, B., & Barnes, D. (1997). A transformation of respondently conditioned stimulus functions in accordance with arbitrarily applicable relations. *Journal of the Experimental Analysis of Behavior, 67*, 275-301.

Roche, B., Barnes-Holmes, D., Smeets, P. M., Barnes-Holmes, Y., & McGeady, S. (2000). *The Psychological Record, 50*, 267-291.

Rokeach, M. (1973). *The nature of human values*. New York: Free Press.

Rollnick S., & Miller, W.R. (1995). What is motivational interviewing? *Behavioural and Cognitive Psychotherapy*, *23*, 325-334.

Segal, Z. V., Williams, J. M. G., & Teasdale, J. D. (2002). *Mindfulness-based cognitive therapy for depression: A new approach to preventing relapse.* New York: Guilford Press.

Shrout, P.E. & Fleiss, J.L. (1979). Intraclass Correlations: Uses in Assessing Rater Reliability. *Psychological Bulletin, 2*, 420-428.

Strosahl, K., Hayes, S. C., & Wilson, K. G. (2004). An Acceptance and Commitment Therapy Primer: Core Therapy Processes, Intervention Strategies, and Therapist Competencies. In S. C. Hayes & K. Strosahl, (Eds.) *A Practical Guide to Acceptance and Commitment Therapy* (pp. 31-58). New York: Springer Press.

Valverde, M. R., Soriano, C. L., Martinez, O. G., & Lopez, M. H. (2004). Transfer of latent inhibition of aversively conditioned autonomic responses through equivalence clasees. *International Journal of Psychology and Psychological Therapy*, *4*, 605-622.

Wilson, K. G. & Murrell, A. R. (2004). Values work in Acceptance and Commitment Therapy: Setting a Course for Behavioral Treatment. In Hayes, S. C., Follette, V. M., & Linehan, M. (Eds.) *Mindfulness & Acceptance: Expanding the cognitive-behavioral tradition* (pp. 120-151). New York: Guilford Press.

Wilson, K. G. & Byrd, M. R. (2004). Acceptance and Commitment Therapy for Substance Abuse and Dependence. In S. C. Hayes & K. Strosahl, (Eds.) *A Practical Guide to Acceptance and Commitment Therapy* (pp. 153-184). New York: Springer Press.

Table 1. Means and Standard Deviations of Importance and Consistency Responses by

Item and Administration in Study 1

Domain	Importance		Consistency	
	M_1 M_2	SD_1 SD_2	M_1 M_2	SD_1 SD_2
1. Family relations (other than marriage or parenting)	9.04 9.11	1.79 1.59	8.63 8.51	1.68 1.88
2. Marriage/couples/intimate relations	8.68 8.72	1.66 1.89	6.70 7.07	2.68 2.60
3. Parenting	9.00 8.61	1.83 2.17	5.46 5.61	3.52 3.43
4. Friendships/social relations	8.30 8.44	1.68 1.56	7.54 8.18	2.33 1.58
5. Employment	8.40 8.04	1.90 1.95	5.23 6.70	3.78 3.24
6. Education/training	9.18 9.18	1.36 1.33	8.86 9.04	1.48 1.34
7. Recreation	7.33 7.54	2.05 2.32	6.51 6.74	2.96 2.43
8. Spirituality	8.84 8.70	1.63 1.74	6.70 6.84	2.71 2.67
9. Citizenship/Community Life	7.16 7.21	2.22 2.41	5.91 6.18	3.04 2.89
10. Physical well-being	8.72 8.84	1.28 1.44	6.81 7.77	2.80 2.52

Table 2. Means and Standard Deviations of Importance and Consistency Responses by Item in Study 2

Domain	Importance		Consistency	
	M	SD	M	SD
1. Family relations (other than marriage or parenting)	9.23	1.28	8.17	1.82
2. Marriage/couples/intimate relations	9.37	1.12	7.15	2.97
3. Parenting	9.46	1.46	6.12	3.69
4. Friendships/social relations	8.90	1.23	8.17	1.76
5. Employment	8.35	1.57	6.04	3.38
6. Education/training	8.85	1.38	8.55	1.50
7. Recreation	7.76	1.69	7.07	2.41
8. Spirituality	9.02	1.76	6.97	2.64
9. Citizenship/Community Life	7.43	1.84	5.86	2.72
10. Physical well-being	8.94	1.27	7.71	2.01

Table 3. Significant Correlations with Valued Living

	r
Experiential Avoidance	-.14*
Depression	-.26***
Anxiety	-.14*
Somatization	-.19**
Hostile Attitude	.20**
Negative Psychosocial Environment	-.21**
Relationship Difficulties	-.23***
General Pathology	-.27***
Treatment Difficulty	-.20**
Lack Interference by Emotional Problems	.22***
Lack Interference by Physical Problems	.15*
Social Functioning	.13*
Vitality	.27***
Mental Health	.23***

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

Chart 1. Scree Plot of eigenvalues from principal factor analysis of ten values domains on VLQ

Scree Plot

Appendix

Valued Living Questionnaire

Below are domains of life that are valued by some people. We are concerned with your subjective experience of your quality of life in each of these domains. One aspect of quality of life involves the importance one puts on the different domains of living. Rate the importance of each domain (by circling a number) on a scale of 1-10. 1 means that domain is not at all important and 10 means that domain is very important. Not everyone will value all of these domains, or value all domains the same. Rate each domain according to your own personal sense of importance.

Domain	not at all important									extremely important
1. Family relations (other than marriage or parenting)	1	2	3	4	5	6	7	8	9	10
2. Marriage/couples/intimate relations	1	2	3	4	5	6	7	8	9	10
3. Parenting	1	2	3	4	5	6	7	8	9	10
4. Friendships/social relations	1	2	3	4	5	6	7	8	9	10
5. Employment	1	2	3	4	5	6	7	8	9	10
6. Education/training	1	2	3	4	5	6	7	8	9	10
7. Recreation	1	2	3	4	5	6	7	8	9	10
8. Spirituality	1	2	3	4	5	6	7	8	9	10
9. Citizenship/Community Life	1	2	3	4	5	6	7	8	9	10
10. Physical well-being	1	2	3	4	5	6	7	8	9	10

In this section, we would like you to give a rating of how <u>consistent</u> your actions are with each value. Everyone does better in some domains than others. We are NOT asking about your ideal in each domain. We want to know how you think you have been doing **during the past week.** Rate each item (by circling a number) on a scale of 1-10. 1 means that your actions have been fully inconsistent with your value and 10 means that your actions have been fully consistent with your value.

During the past week

Domain	not at all consistent									extremely consistent
1. Family relations (other than marriage or parenting)	1	2	3	4	5	6	7	8	9	10
2. Marriage/couples/intimate relations	1	2	3	4	5	6	7	8	9	10
3. Parenting	1	2	3	4	5	6	7	8	9	10
4. Friendships/social relations	1	2	3	4	5	6	7	8	9	10
5. Employment	1	2	3	4	5	6	7	8	9	10
6. Education/training	1	2	3	4	5	6	7	8	9	10
7. Recreation	1	2	3	4	5	6	7	8	9	10
8. Spirituality	1	2	3	4	5	6	7	8	9	10
9. Citizenship/Community Life	1	2	3	4	5	6	7	8	9	10
10. Physical well-being	1	2	3	4	5	6	7	8	9	10