University of Nevada, Reno

A Valued Path to Change: Evaluation of a Brief Values Intervention with College Students Seeking Therapy

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Psychology

by

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December, 2010

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We recommend that the dissertation
prepared under our supervision by

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entitled

A Valued Path To Change:
Evaluation Of A Brief Values Intervention With College Students Seeking Therapy

be accepted in partial fulfillment of the
requirements for the degree of

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Abstract

Data in recent years suggests that college students may be experiencing increasing levels of psychological difficulties in the form of more diagnosable disorders, increased complexity of problems, and stress related symptoms and that these mental health issues may be implicated in academic problems. Short-term treatments focused primarily on symptoms that may be increasingly used as resources are challenged may not address some core concerns that were more traditionally associated with longer term therapies, such as values, and these areas may be particularly important for the student population. Research in college students has found an increased sense of life meaning to be associated with lower levels of depression and suicidality and suggests that values might be a moderator of the relationship between stress and depression. Coupled with research on intrinsic values and well-being, this research suggests values interventions with college students entering psychotherapy could be one possible source of innovation that might empower many treatment approaches with students. The present study aimed to evaluate the effectiveness of a brief values pre-intervention at intake. The study compared a 30-45 minute values pre-intervention at intake (n=33) to a treatment as usual intake control (n=35). Results showed no statistically significant differences between groups at 3 month follow-up on measures of depression, general health, and values, but did show significant correlations between measures of values and decreased depression. The lack of statistically significant differences in outcome in the values group could be related to the lack of an integrated course of treatment structured to support the values approach, a hypothesis that may be corroborated by more recent findings suggesting values approaches alone may lead to poorer outcomes than acceptance approaches alone. There has been controversy for some time within Acceptance and Commitment Therapy research about beginning treatment with values work versus dealing with values later in treatment, and the findings of this study support the importance of continued research into specific factors that may be necessary to make values work successful in psychotherapy.

Acknowledgments

I am grateful for all of the people who have supported me in my journey through graduate school. I'd first like to acknowledge my parents, Rachel and David Bunting, who have supported me in more ways that I can count or detail here, but my father's amazing heart and my mother's intuitiveness and interpersonal savvy are no doubt central in the qualities that have led me to psychotherapy.

I would like to thank Kelly Wilson, without whose love, support, and zaniness I might never have applied to graduate school in the first place. I also want to acknowledge Jason Lillis and Roger Vilardaga, who provided me with support, and probably even more importantly emotional support, around statistics. I'd like to thank Lindsay Fletcher, Jen Villette, Wendy Abel, Roger Vilardaga, and Karen Erikson, who all volunteered their time as therapists on my study. I would also like to thank my remaining labmates, including Julieann Pankey, Casey Sackett, Alethea Varra, Heather Pierson, Aki Masuda, Tami Jeffcoat, Jamie Yadavia, Jen Plumb, Claudia Drossel, Tom Waltz and Mike Levin who provided the love, support, dedication and energy that made the ACT lab such a special place to learn and grow. I also want to thank my friends Molly Sullivan and Jessica Pullins, who were loving maternal bases on the internship leg of my journey when my ACT family was absent.

I'm also thankful to all the supervisors who have shaped my work and who I've become. Bill Follette always contributed to me with his sense of humor and challenged me to integrate art and science. Cindy Marczynski, who I didn't meet until the last leg of my journey, inspired me with her authenticity, integrity and compassion. Steve Graybar, with his presence, respectful appreciation of many world views, and generous contribution of his time and support taught me above all by who I saw him be, with others as well as with me. I also want to acknowledge Steve Hayes, my mentor and supervisor, who has weathered years of “Dad issues” with grace and acceptance, and whose own compassion and acceptance were the space where a lab that was about those things could emerge.

That lab and the amazing people in it have been a surrogate family for me for many years, and Steve has been the father figure for that family. In my time in academia, many of the people I have witnessed display Steve's level of deep dedication to the work of psychotherapy have been Steve's students, and I think this says something important about the family he has parented. The power of the love that is the source of this kind of dedication is what has led me to choose psychotherapy as my life's work, and to make the larger life commitment to serve and honor that power in all of us.

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A Valued Path to Change:

Evaluation of a Brief Pre-intervention with College Students Seeking Therapy

Mental health disorders are the leading cause of disability in both the U.S. and Canada (World Health Organization, 2004). It has recently been estimated that one in four adults in the general population suffers from a diagnosable mental disorder in a given year (Kessler, Chiu, Demler, & Walters, 2005), a statistic that only includes profiles of problems that meet certain criteria for diagnosis and does not represent a wide variety of mental health related physical problems, unhappy jobs and relationships and other disruptions in valued living. Eating disorders, for example, are estimated to be present at a level that meets criteria for diagnosis in somewhere between 3 and 9% of the population (Kessler et al., 2005), but a assessment of cultural problems related to issues with eating, exercise and body image reveals a much more substantial problem to even a casual observer. Within the college population, binging and purging behavior alone is estimated to be present within 25% of women as a weight management technique (Renfrew Center, 2003). This behavior alone would not constitute cause for an eating disorder diagnosis and is only one example of mental health related problems common in the college population that would not even merit inclusion as the one person out of four diagnosable within a given year.

In recent years, college students seem to be experiencing increasing rates of stress and mental health disorders, in addition to perceiving themselves as less physically and emotionally healthy (Sax, 1997; Reisberg, 2000; Benton, Robertson, Tseng, Newton, & Benton, 2003). Data suggests that well being may gradually decline over the first year of

college and implicates some of the changes correlated with the transition to college in these physical and mental health issues (Towbes & Cohen, 1996; Pritchard, Wilson, & Yamnitz, 2007). One fourth of freshman don't return their sophomore year and many of these students cite emotional reasons for leaving college (Upcraft & Gardner, 1989; Rickinson & Rutherford, 1995). It seems that the college years actually negatively impact students' mental and physical health problems, increasing depression and stress, and there is no clear data as of yet to explain what about college in particular has this effect (Sax, 1997; Ross, Niebling, & Heckert 1999). Counseling center resources are also being drained by higher rates of severe presentations in students and increased complexity of problems, which may be a reflection of increases in the levels of mental illness in society (O'Malley, Wheeler, Murphey, O'Connell, & Waldo, 1990).

Students as a Unique Population

Students are in many ways a particularly vulnerable population in the growing mental health crisis. There is evidence that the college years contain unique stressors, many of which students may be experiencing for the first time in college (Garrett, 2001). Students arrive at college for the first time confronted with a myriad of changes as well as new independence. Most change their living situations and many change their locale, whether it be a change of city, state, region or even country. Many will be living with a roommate for the first time and many will be leaving their parents homes for the first time. Although specific variables in terms of change that may be a source of stress for students differ in nature and quantity, it is predictable that most students will be dealing with a variety of new stressors. Stress has been established as an important source of

negative affects in the arenas of psychological and physical health generally (Tennant, 2002) and studies looking at academic stress specifically have produced similar findings (Arthur, 1998; Torsheim, & Wold, 2001).

Financial stresses

The socioeconomic range of new college students is widening and as a result more students may be supporting themselves financially as they begin college. Even students who are not striving to be financially independent may feel more pressure to work at jobs in addition to pursuing their studies. An American College Health Survey of almost 100,000 students at 117 institutions of higher education found 60% of students worked for pay in addition to their studies, 20% of students worked for pay 10-19 hours a week and another approximately 20% worked 20 hours or more in addition to their studies (2006). A 1999 study indicates that 71% of students report financial difficulties (Ross, Niebling, & Heckert).

Social stresses

College involves completely different social situations and pressures. In one study, 71% of students reported stressors due to change in social activities and 61% of students reported stress from roommate conflict (Ross, Niebling, & Heckert 1999). Many new students are leaving their established friendships for an environment in which they must completely start over socially. Most are finding themselves surrounded by the social behaviors and pressures of other unsupervised teenagers, rather than their parents who have previously been a source of social examples. The social norms students are dealing

with include 31% of college students meeting criteria for alcohol abuse (Knight et al., 2002) and 19-30% of college age women meeting criteria for an eating disorder (Fisher, Golden, Katzman, & Kreipe, 1995). Although this could be a time where teenagers begin to make their own choices and differentiate their own values around social relationships, their primary sources of example may be their peers.

Academic stresses

Professors who might provide positive modeling for students may be seen as the source of new stressors rather that supportive figures. Professors are the administrators of assignments that are likely more challenging to students than their previous schoolwork. The role of professors in evaluating and grading students probably makes it difficult for students to experience them as supportive figures. The ongoing experience of being evaluated, including regular assignments, tests and papers for which students usually receive letter grades, is probably an exceptional stressor not seen in most working environments (Wright, 1964). This experience of being constantly evaluated is also likely to be seen by students as directly related to future success at finding a career, not to mention their own worth as individuals. The pressure created by this evaluation process and the desire to earn good grades and a get a degree is often very high (Hirsch & Ellis, 1996; Murphy & Archer, 1996).

Cultural stresses

When we consider cultural trends around topics like body image, the picture appears even more challenging for students. Media sources like magazines and television

may be more influential for students in the absence of parental input and restrictions and may distract students from searches for personal identity around careers and relationships. Students who have been raised in environments where they have not previously had free access to media may be particularly likely to be attracted to these sources of information without any other mitigating influences other than peers.

One example of the problematic influence of media comes from the developing research on internet use, addiction and dependence, which is particularly examined in college students. A 2001 study found even the typical student uses the internet recreationally approximately 100 minutes a day, and that a reworking of the criteria used for alcohol dependence (including difficulty controlling use, negative affects, interference with other activities, tolerance and withdrawal) could be applied to internet use in 10% of students (Anderson). Given the rapid expansion of online activities, excessive internet use may even have increased since the time of the study. A study of internet gambling in students found more problems than in the general population, with 23% reporting gambling over the internet, increases in rates of internet gambling associated with poorer health as measured by the GHQ, and more than 10% of students qualifying as probable pathological gamblers (Petry & Weinstock, 2007). One recent study of college students found that students who spent 10 or more hours a week chatting or gaming on the internet scored significantly lower on measures designed to assess resolution of Eriksonian crises of identity formation and intimacy, including measures reflecting more career uncertainty, less decision making ability, poorer social skills and increased isolation (Ya-Rong, 2006).

Counseling Centers

Given the data on stressors affecting college students and the fact that mental health services are typically free to students, if anything it seems surprising that no more than one in ten of students typically presents at a college counseling center (Gallagher, 2006), and it seems like it could even be a positive trend that the number of students who come to college counseling centers is increasing. A national survey of counseling center directors does indicate, however, that the primary administrative concern for directors is a growing demand for services without a corresponding increase in resources; 92% of counseling center directors report that the number of students with severe psychological problems has increased in recent years and when asked about service provision directors expressed greater concern for every area than in previous years (Gallagher, 2006). According to the 2005 National Survey of Counseling Directors, 95% of directors reported that more freshman than ever are coming to campus already taking psychiatric medications (Gallagher, 2005). In an American College Health Association 2006 survey of around 100,000 college students at 117 institutions almost half of all students reported at times feeling so depressed it was difficult to function and 10% reported seriously considering a suicide attempt (ACHA, 2006). The previous year's study found that as many as 1 in 5 of college students seriously consider suicide at least once in the course of a year (ACHA, 2005). A study looking at more longitudinal data found rates of depression have doubled and suicides have tripled (O'Malley, Wheeler, Murphy, O'Connell, & Waldo, 1990).

As media coverage of college student suicidality and psychopathology increases, questions have begun to be asked. Parents who are at times litigious may ask what is

wrong with colleges or their counseling services. Colleges may ask what is wrong with their counseling center's services, staff, directors or structure. College counseling centers may ask what is wrong with colleges that do not provide them with adequate resources to treat students, the mental health of students when they arrive at college or the home environments they arrive from. Responsibility is questioned and shifted between authorities, but solutions that will support students remain unclear.

Valued Living

Data reflecting the exceptional stressors during the college years and college student mental health is especially concerning when the importance of this time to students' future lives is considered. In the increasing conversation about problems in college student mental health that has begun among suicides, shootings and other media coverage, fingers are only occasionally pointed at the authority figure of our culture, which some authors have posited may be providing college students with material and media substitutes for the painful search for individual identity (Ya-Rong, 2006). Although cultural influences are frequently a context of conversations about specific crises that have come into public attention, such as eating disorders and violent behavior, there is little attention in public discussions of the counseling crisis of how an examination of the problematic role of cultural values might relate to the improved provision of therapy itself. Research that demonstrates problematic youth values such as materialism are supported by similar values and communication around these values in peers (Flouri, 1999) and parents (Goldberg, Gorn & Perrachio, 2003, Kasser et al., 1995) may provide insight into possible innovations with struggling students. If the consideration of personal

values in a supportive context apart from these sociocultural forces could be supported or just initiated in students, it could provide a foundation for students to improve their psychological health in the course of college, therapy and their own life process.

Empowering students to build lives grounded in personal values and life meaning during college may assist them in dealing with difficulties; some new research has looked at the relationship between students' sense of a purpose in life and mental health. One study found measures of a sense of purpose in life and meaningfulness in college students was associated with lower levels of current suicidality and lower likelihood of future suicide attempts (Edwards & Holden, 2001). Measures of existential meaning have also been associated with lower levels of depressive symptoms in college students and have explained variance in depressive symptoms over time when measures of factors considered related to personality were controlled for (Mascaro & Rosen, 2002 & 2005). Meaning also appears to moderate the relationship of stress and depressive symptoms in students (Feldman & Snyder, 2005). This finding is consistent with literature on stress indicating that it is not stressors themselves that are the source of stress related problems, but rather than interaction between stressors and the individual's perception and reaction (Lazarus & Folkman, 1984), and systems of values that recontextualize stressors may be one such perceptual filter. This finding about the buffering effect of values is further supported by research examining physiological as well as psychological responses to stress (Creswell et al., 2005, Sherman, Bunyan, Creswell & Jaremka, 2009). This buffering function has been suggested to be one reason values interventions may result in improved academic performance in students (Cohen, Garcia, Apfel & Master, 2006). This stress buffering effect of affirming values has also been suggested to be the source of the

health benefits found with expressive writing (Creswell et al. 2007).

Values and Changes in College Counseling

Shifts of resources to short term, problem focused treatments, however, may mean that these questions of life meaning are being considered less in the course of therapy. Therapeutic standards are not defined solely by the subjective experience of consumers, but also socially and politically and the advent of managed care has had an impact on the determination of what constitutes an effective therapeutic approach (McLeod, 2001). Socially mandated changes in treatment focus that emphasize the removal of problematic symptoms in the minimal amount of time may be particularly relevant to college students whose reporting symptoms may be intertwined in their own searches for adult identity. Proponents of long term therapies and more existential and humanistic treatment approaches have raised concerns about whether questions of meaningful living are being addressed in more recently developed treatments and point out that research involved in the development of briefer therapies may not accurately measure or utilize elements of therapy such as the therapeutic relationship and values (McWilliams, 2005, McLeod, 2001). Short-term problem focused treatments may be all that is available for many students due to the lack of resources available for the long term treatment of mental health issues, but there is little research on how this paradigm shift in psychotherapy may be affecting values issues.

Research does indicate that there has been a change in the philosophical orientation of counseling centers to more of a mental health clinic conceptualization (Pledge, Lapan, Heppner, Kivlighan, & Roehlke, 1998). The study by Benton and

colleagues tracking increased problems in counseling center clients over 13 years bears closer consideration in this issue (Benton et al., 2003). The study points out that, although college counseling centers do not bill insurance companies, one change that correlated with the increase in complexity and severity of problems in the time period of the study was an effort to limit clients to 10 sessions of therapy, regardless of the nature and severity of presenting problems, and a shift to a focus on immediate aspects of problems in accord with the short term model. The study points out that in the earlier years of the study and in past years, the number of sessions and type of clinical work would have been tailored more to students' individual issues. This same study also observed a significant increase in students struggling with issues of career indecision, another concern relevant to the question of values. The study commented that although the opening of a career center temporarily reduced the percentage of students reporting these concerns, in the later years of the study the number of students struggling with vocational choice returned to the percentages prior to the opening of the career center, although the career center continued to work with a large number of students. Increasing numbers of students utilizing services and complexity of problems may mean clinical work will be increasingly focused on the minimal intervention required for reporting problems, a change which may already be affecting the extent to which questions like values are addressed. The extent and importance of this change in orientation in college counseling is an issue complicated by the lack of research into these issues.

Defining Values

One major limitation in considering values aspects of therapy is the lack of easily

interpretable research. Research into values work in therapy requires consideration of what values are, and there are many definitions in the literature, most with considerable overlap with constructs like meaning and self-actualization. Rokeach, one of the first prominent researchers in this area, has defined values as enduring beliefs that "a specific mode of conduct or end state of existence is personally or socially preferable to an opposite or converse mode of conduct or end state of existence" and held that if values conflicts could be discriminated values could undergo lasting change (Rokeach, 1973). This definition has been selected by authors who have reviewed the literature and looked at some of the difficulties around the inconsistency of values constructs (Kelly, 1990, Beutler & Bergan, 1991).

Overlaps of concepts such as self-actualization and meaning also seem worth analyzing beside this definition, given the predominance of these constructs. These constructs contain an evaluative component, in that they do not speak merely to the existence of values, but of the attainment of preferred or intrinsic values that is often considered a therapeutic goal. Kohlberg's research (1972) on value development across countries and cultures suggests that there is a consistent process whereby this kind of meaning is developed. He suggests that behavior is initially governed by an orientation to immediate punishment and reward, followed by an evolution to the typical adult level of conventional values in which one behaves in order to win the approval of peers or social institutions like religions and legal authorities. His "post-conventional" or "autonomous" level of values in which values are defined by personal experience, conscience, and social contract are considered to only be present in a segment of even the adult population. This definition appears to hold the closest correspondence to the "intrinsic values" or "self-

actualization” concepts of positive attainment in the realm of values discussed in the literature.

Research on Values Change in Therapy

The discussion of the role of values in therapy in a culture that may promote unhealthy values is not a new one (Hennessey, 1980) . Values have been central in some therapy traditions for decades, but there is far more discussion than empirical research, probably partially due to the non-empirical nature of values. There is confusion around overlaps between differing concepts like “values” and “life meaning” used by various traditions, and some research looks at specific valued areas rather than values in general, raising questions about how individual values like “friendship”, “relationships” and “kindness” may relate. These inconsistent and ambiguous definitions of constructs contribute to already poor measures and results that are difficult to interpret (Kelly, 1990, Beutler & Bergan, 1991). For the purposes of this proposal, terms such as values, life meaning and existential meaning are used interchangeably with an awareness that they may not completely converge and substantial disagreement about how these terms overlap exists.

Values and the individual search for a valued life has long been a central construct of logotherapy and humanistic and existential psychotherapies (Maslow 1971, Rogers 1964, Frankl 1992). Viktor Frankl (1992) proposed that change of concrete life circumstances was not necessary for psychological change, so long as the individual experience was anchored in values that would guide behavior and provide intrinsic life meaning and satisfaction. The increasing involvement of science in research and practice

and the development of more empirically supported treatments may have influenced the take on values since the advent of these therapies. There may be some reluctance on the part of therapists to explicitly address values aspects of therapy because of the desire to portray therapy as value free, but there is considerable literature to suggest that therapists are unable to remain value free even when that is an active goal, and indeed much data to suggest that clients' values move towards therapists' values in therapy (Kelly, 1990). There is some evidence that client improvement may be associated with convergence with the therapist's values, even when measures independent of counselor rating are considered, although the inclusion of this data reduces the strength of the relationship (Beutler & Bergan, 1991). A review of research into the relationship between improvement and initial similarity and dissimilarity of therapist values found comparable amounts of findings supporting the advantage of therapist-client similarity and dissimilarity (Beutler, 1981) supporting the idea that values change in the therapeutic relationship is complex. What does seem clear is evidence demonstrating supportive relationships such as parenting relationships, cultural influences and personal experience all shape a person's values over time, and the therapeutic relationship likely constitutes a similar influence to a parenting or cultural context (Nicholson & Stepina, 1998; Rohan & Zanna, 1996; Rokeach, 1973). Individuals may change their values as the result of many interpersonal influences, however, and college students are experiencing a vulnerable time with respect to relationship influences and life direction. Detrimental peer and media input may affect their values in a way that makes this values aspect of the therapeutic relationship particularly salient. There is ample literature supporting the importance of the therapeutic alliance in therapy, and counseling literature has conjectured that shared

goals, tasks and attachment bonds are the substance of this alliance (Shaw, McMahon, Chan, & Hannold, 2004), suggesting therapist and client alignment on the client's valued direction could be of utmost importance to therapeutic work.

It is hard to determine the extent to which values are being addressed in current therapies, and this probably varies widely by organizational context and individual therapist, and possibly even by client, given the lack of explicit attention to these issues. Therapists do learn about client values in the course of their work even if they do not ask about them, but this may be an interactive process that occurs alongside the processes of addressing presenting problems and therapeutic relationship development. When we consider the myriad of cues present in information like therapist diction, dress, eye contact, body language, facial expression and other aspects of interpersonal style it is clear therapist values are going to become involved in the process of therapy. If therapists have values that enhance the client's well being, these factors may not be a problem, but research is inconclusive. Most therapists would probably agree the goal of therapy would be to work within the client's true subjective values but also argue that many clients come into therapy unaware of their own values. It may be possible to develop brief interventions that help clients get in touch with their values prior to extensive entanglement with the therapeutic relationship so as to empower their work in therapy and enhance their lives and well being.

Empirical Research into Values and Values Interventions

Despite the relative dearth of data on values interventions in psychotherapy, the data on values interventions outside of psychotherapy is supported by substantial

correlational evidence supporting the importance of values in psychological health, much of it from the undergraduate population. Large discrepancies between the perceived attainment and subjective importance placed on values have been found to be associated with anxiety and depression (Nordin, Wasteson, Hoffman, Glimelius, & Per-Olow, 2001, Lampic, Thurfjell, Bergh, Carlsson, Sjoden, 2002). There is significant literature suggesting that intrinsic values are associated with higher levels of well-being, as opposed to extrinsic values like social recognition, appearance and financial success (Schmuck, Kasser, & Ryan, 2000, Kasser, & Ryan 1996). Extrinsic values are conceptualized as values that are focused on attaining rewards and positive evaluations from others, while intrinsic values are considered to be inherently satisfying for the individual (Schmuck, Kasser, & Ryan, 1999). Research also supports the detrimental effects of materialistic values on well-being, and some researchers have made the case that this effect may be due to the interference of these values with the pursuit of intrinsic values (Burroughs & Rindfleisch, 2002). A review of several studies of goal pursuit in undergraduates also supported the idea that intrinsic goals (i.e. relationships as opposed to financial goals), and goals with intrinsic motives (goals pursued on the basis of personal experiential enjoyment as opposed to praise, rewards, or external pressure) were not only associated with well being, but also contributed independent variance to measures of well being, supporting the idea that both value content and the source of value motivation matter (Sheldon, Ryan, Deci, & Kasser 2004). Sheldon and Elliot found empirical support for a model holding that self-concordant goals are both more attainable for the individuals pursuing them and more beneficial for well being when attained (1999). The empirical support for the importance of the motives behind values as well as

the values themselves in well being suggests values interventions would be a productive area for intervention.

The majority of the literature addressing values interventions is limited to medical and classroom settings, with relatively limited research looking at values in psychotherapy. This is remarkable given that some values clarification work is undoubtedly conducted in therapy settings as a part of other interventions. Isolated values work in the form of values clarification was popularized by the publication of Raths, Harmin and Simon's book, *Values and Teaching*, in 1966. Raths challenged the idea that values were universal or moral ideals which should be imposed on students and instead encouraged value development through helping people clarify their own unique values systems through questions he developed with other researchers (Raths, Harmin, & Simon, 1966). Values clarification interventions were implemented in schools, but publications related to this work declined after the 1970s, possibly due to decreases in humanistic orientation among psychologists, paradigm shifts and debates about what constituted successful values clarification (Kinnier, 1995). A review of the value clarification literature and its effects on students reported mixed results in terms of improvements in student "self-concept" from these interventions, but the inconsistencies between methodology and measurement in studies make it hard to make comparisons between studies or make conclusive statements about effectiveness, although the interventions were widely used in the 1970s (Redman, 1978). (Kinnier, 1995).

There has been more recent empirical work in the area of values interventions with student populations outside of psychotherapy settings that indicates the utility of values interventions in school performance (Cohen, Garcia, Apfel and Master, 2006), and

reducing stress (Creswell et al. 2005) including in the ACT tradition (Chase, 2010). Some recent use of similar interventions based in values clarification in organizations has been hypothesized to benefit mental and physical health by asking life questions that focus participants more on their intrinsic values by placing their daily actions in a broader perspective, but there is no data to determine whether or not this is actually the mechanism of action in these interventions (Adams & Bezner, 1995).

One major reason for the lack of research into values in psychotherapy in general as well with specific values interventions in psychotherapy may be measurement issues. One recent study of humanistic research literature in particular found that 73% of the 116 measures in the analyzed studies were used only once, possibly because relevant standardized measures were not available (Levitt, Stanley, Frankel, & Raina, 2005). The same study found that the most utilized outcome measures were tailored to more medical, behavioral and cognitive conceptions of therapy and of the measures examined by the study none examined what the study defined as personal growth (Levitt et al., 2005). This data supports the conjecture that some elements of psychotherapy may not be addressed to the extent that they could be in empirical research and in the development of science based treatments, possibly because of conceptual issues that create difficulties developing good measures for these elements. The current state of available measures necessitates the development and validation of appropriate measures that clearly define their approach to values if values interventions are to be studied empirically. The development of such measures may remove a large barrier to useful values research and allow for an empirical foundation for the effective utilization of values in improving treatment outcomes.

There are new trends that may provide openings for addressing values more

thoroughly in therapy. A promising literature is developing the realm of positive psychology, where the emphasis is on psychological well-being and interventions that make use of strengths (Seligman & Csikszentmihalyi 2000, Sheldon and King 2001). The conception of client "strengths" in positive psychology has considerable overlap with definitions of values; for instance one empirical study with positive results treating depression describes a case in which a client applies her value of beauty to her life as a part of her work on her depressive symptoms (Seligman, Rashid, & Parks, 2006). Literature from self-efficacy research and cognitive psychology supports positively focused interventions, and that even including positively focused questions in assessment procedures could be helpful and elicit relevant information for therapy, but that research in this area is needed (Harris, Thoresen, & Lopez, 2007).

New "third-wave" cognitive behavioral therapies that incorporate a focus on valued outcomes rather than focusing on symptom alleviation as the primary goal are producing promising data (Curran & Houghton, 2007). Empirically based therapies such as Acceptance and Commitment Therapy (ACT) and Motivational Interviewing (Miller and Rollnick 2002) are both used in short term applications and explicitly prescribe attention to client values as part of treatment protocols. Acceptance and Commitment Therapy in particular is clear that the focus of treatment is not on symptom removal, but rather on enabling the client to pursue valued goals and utilizes this focus to empower difficult work around psychological issues (Hayes, Strosahl, & Wilson, 1999).

Acceptance and Commitment Therapy

Theory

Acceptance and Commitment Therapy is based on functional contextualism as a philosophy of science (Biglan & Hayes, 1996; Hayes, 1993), and on the basic principles of behavior analysis as augmented by Relational Frame Theory (RFT; Hayes, Barnes-Holmes, & Roche, 2001), which is a basic behavioral research program into the nature of human language and cognition. ACT theorists perceive pathology as based in pervasive human verbal processes, a unique perspective that is theoretically in line with the cited findings that psychological struggles are relatively common in college students as well as the general population. Although values are often discussed in humanistic approaches to psychotherapy, the ACT work is also unique in the rigor that it brings to the concept of values and the foundation that rigor provides for empirical and therapeutic work. Values in ACT are distinguished from notions of valuing that may be entangled in the very verbal processes that ACT theorists construe as the source of psychological difficulties, and this disambiguation of healthy notions of valuing in ACT is not only therapeutic work in and of itself, but is also extended to important areas of treatment, such as the conceptualization of treatment goals, in a manner that may be therapeutic. ACT exercises are designed to undermine the role of literal thoughts and enable clients to contact experientially based values. ACT's contextualist roots focus its therapeutic work on chosen client values as the foundation of a meaningful life, as well as a meaningful course of treatment. The valued living frame of treatment goals and treatment itself also distinguishes ACT from many alternative treatments.

The ACT model of human language and cognition states that the domination of verbally based concepts over actual experience plays a significant role in psychological difficulties. ACT theorists also point out that although clients may initially present in

therapy with concerns related to “anxiety” or “depression”, these private events are related to actual problems in their lives that are almost certainly involved in issues of valued living. Clients may be responding to problems by avoiding anxiety provoking situations, discontinuing valued activities or withdrawing in relationships in a way that takes them out of contact with their subjective experiences of valued living. In this kind of situation where behavior is out of accord with values, depression and anxiety may even be related to the lack of valued experience. A fused thought like “I have to stop feeling anxious before I can spend more time with my friends” may actually create a verbal trap in which a client is removed more and more from possible sources of valued living and anxiety or depression is exacerbated.

Wilson and DuFrene define values in ACT as “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 “ (2009). This definition of values is distinct from some of the concepts of values within the literature which may include instances of valuing which an ACT perspective would view as verbal fusion. For instance, someone might report highly valuing financial and material aspects of living, but further investigation of this reported value might discover that this value was not based on reinforcers intrinsic in wealth and material things, but rather the verbally constructed expectation of social reinforcement for appearing wealthy. The literature associating intrinsic values with health and well-being above and beyond more extrinsically rooted values supports the idea that this distinction is an important one; the disambiguation of these different notions of valuing that informs the ACT line of research and ACT interventions is a strong foundation for clearer

empirical indications about the importance of values in general and the role of values in psychotherapy. It is the actual subjective experience of meaningful living targeted in the ACT definition of values, as opposed to some verbally constructed notion of values that might not correspond with intrinsically reinforcing experience, that has been suggested to be a mediator between stress and depression (Feldman & Snyder, 2005).

ACT theorists consider the verbal fusion and accompanying behavioral patterns that get in the way of intrinsically reinforcing valued behaviors to be one core source of psychopathology, and this consideration also influences the ACT approach to treatment more generally. Treatment models that contextualize treatment in terms of experientially based client values, values from an ACT perspective, may enhance treatment. Psychological difficulties are considered to be historical, conditioned and highly verbally networked in a way that makes psychological content, such as difficult thoughts and feelings themselves, difficult to change rapidly. At the level of context, content does not need to be changed in order for psychological and behavioral changes to occur, making rapid change to broad areas possible. Treatment may be conceptualized in terms of client values in a way that changes client's subjective experience of symptoms and of therapy itself. ACT theorists conceptualize client awareness of values as dignifying difficult therapeutic work and taking the focus of treatment away from problematic obsessions with removing difficult thoughts and feelings. ACT theorists view values as directions, not outcomes. Life is seen as a process by which valued directions are not things to attain, but rather serve to guide the client through a process of vital living. ACT therapists use a variety of exercises to help clients choose valued directions in various domains (e.g. family, career, spirituality) while attempting to undermine verbal dominance (e.g. "I

should value X" or "A good person would value Y"). ACT therapists aim to empower clients to move through symptoms by contextualizing them as barriers to valued living, rather than areas to focus in a manner that may create more symptoms. Value awareness may result in a building cycle of psychological benefits as clients contact increasingly more positive experiences by acting in line with chosen values. This view of value awareness supports the idea that lasting benefits could be available from even brief values interventions.

The original presentation of ACT (Hayes et al., 1999) placed values work later in the process of treatment out of concern for fused, avoidant, or compliant values dominating before acceptance and defusion skills were established. However, many ACT therapists do values work before other ACT components on the ground that it can create a valued context for treatment. ACT exercises are designed to help clients consider questions of life meaning outside of verbally fused cognitive frameworks. For example, an ACT therapist might ask a client "What do you want your life to stand for?" or have a client describe the eulogy he or she would want at his or her own funeral. ACT values interventions are designed to clarify the areas of living and experiences individuals subjectively evaluate as meaningful and reinforcing in everyday life and separate them from verbal content that is out of contact with their actual experience or is actually aimed at avoiding difficult thoughts and feelings. The manifestation of values discrepancies created by problematic control efforts and verbal fusion may be individuals pursuing less valued or extrinsic goals. ACT therapists implement exercises to allow values to be freely chosen ("I'm really inspired by the idea of working with children") based on real or imagined experience ("if I could imagine any eulogy I would want to hear about the

difference I made in the world", "I feel really good when I'm volunteering at the school") rather than dominated by problematic efforts at controlling thoughts and feelings ("I want to stop having feelings of depression") or fused content ("I should value X" or "A good person would value Y").

Casting treatment in terms of values could prevent avoidant goals from dominating in treatment. One basic tenant of ACT is that the tendency to fight against difficult thoughts and feelings can be harmful. An underlying theory of language, RFT, describes why focusing on pathology may encourage a relationship to difficult thoughts and feelings that paradoxically increases them. For instance, deliberately not thinking of something involves following a rule ("don't think of x") that actually evokes "x", since "x" must be thought of in the process of applying the rule. Empirical research demonstrates that subjects asked to suppress thoughts or other private experiences in this manner actually demonstrate increased incidence of the private event in question relative to subjects not given these instructions. When this language problem is conceived in terms of anxiety, it predicts that a negative evaluation of anxiety may cause anxiety to be elicited in as a response to anticipated anxiety, since anxiety is the typical response to aversive events. ACT theorists hold that the attempts at purposeful control that work in many domains may not work well with the private experiences therapy typically targets.

The ACT model may provide some new insight into the literature surrounding values and psychotherapy, and possibly more productive directions for research. From an ACT perspective, positive change in psychotherapy as a result of values interventions should occur provided there is sufficient disruption of verbal fusion that predominates over actual contact with values and corresponding intrinsically valued experience. ACT

therapists aim to discriminate verbally fused values (“I should be successful”) from experientially valued domains (“if I only had a year left to live I would want to spend it with my family”). The mixed results of values studies as they are generally designed and measured do not distinguish verbally fused values from values as ACT theory would define them.

Research

ACT is based in a theory of normal human language and cognition (Hayes et al., 1996; Hayes et al., 2001) and is thus designed to be applicable to a broad range of problems, and indeed it appears to be (Hayes, Luoma, Bond, Masuda & Lillis 2006). ACT interventions including values work have been used effectively with a wide range of problems and disorders, including anxiety disorders (e.g., Block, 2002; Hayes, 1987; Zettle, in press), psychosis (e.g., Bach & Hayes, 2002), substance use disorders (e.g., Gifford, 2002; Hayes, Wilson, Gifford, Bissett, Batten, Piasecki, Byrd, & Gregg, 2002), chronic illness (e.g., Geiser, 1992), eating disorder (Heffner, Sperry, Eifert, & Detweiler, 2002) work related stress (Bond & Bunce, 2000), worker burnout and client stigmatization (Hayes, Bissett et al., 2004), and stigma towards psychological difficulties in college students in brief group applications (Masuda, Hayes, Fletcher, Seignourel, Bunting, Herbst, Twohig, Lillis, 2007). The vast majority of this research has examined the impact of values work in the context of acceptance and defusion (Hayes, Luoma, Bond, Masuda & Lillis 2006; Hayes, Masuda, Bissett, Luoma, Guerrero, 2004)

Analog component research has also indicated that ACT interventions designed to view psychological difficulties from a values perspective can be effective in allowing

people to deal with difficult feelings. A recent pain study compared the effects of brief interventions framing values in terms of acceptance and suppression in pain tolerance and found an ACT consistent approach to be significantly more effective. 70% of participants in the ACT condition reached the maximum pain tolerance versus only 20% of participants in the condition emphasizing values pursuit through suppression of pain. This may suggest the importance of acceptance based approaches to values in treating psychological suffering as well the effectiveness of even brief ACT based values interventions (Páez-Blarrina, Luciano, Gutiérrez-Martínez, Valdivia, Ortega & Rodriguez-Valverde, 2008). Another study looking at an ACT intervention for pain with and without the values component concluded that the values component of ACT led to significantly greater pain tolerance than the acceptance component alone (Brandstetter-Rost, Cushing & Douleh, 2009). ACT has also been demonstrated to be useful in increasing the pursuit of chosen values with epilepsy (Lundgren, Dahl & Melin, 2006). In epilepsy, these values changes have been found to mediate seizure and quality of life outcomes (Lundgren, Dahl, & Hayes, in press) suggesting that this effect is an important aspect of ACT. There are also successful cases studies that have emphasized values work over other components (e.g., Heffner, Eifert, Parker, Hernandez, & Sperry, 2003).

The greater context of values work may also be important, however, and the interaction of values with the rest of treatment may be important. Values work alone could have different results. Villatte and Hayes (2010) conducted a small randomized trial of outpatients seeking help for anxiety and depression comparing two ACT protocols: one that excluded any work on values and one that excluded any work on acceptance and defusion. Outcomes were superior in the protocol that excluded any values work. In

examining individual growth curves the problem appeared to be that a small portion of those receiving the protocol with values work and no acceptance and defusion work became less accepting and more fused with depressogenic thoughts. It is possible that values work without acceptance and defusion processes in place sometimes leads to support of fused, compliant, and avoidant values.

Case for Brief Values Pre-intervention with College Students

College students in particular may derive significant benefits from isolated values interventions. There has been research with young adults suggesting that extrinsic values may increase the susceptibility to psychological disorders (Cohen & Cohen, 1996) and that college students who display greater shifts towards intrinsic values over their college years also report greater increases in psychological well being and self-determination (Sheldon, 2005). The college years could provide an opportunity for development of intrinsic values that are more in line with students own thoughts, feelings and experiences, given their separation from parents and opportunities for exploring relationships, activities and academic interests. Some researchers have made the case that extrinsic values develop as a result of exposure to social models and feelings of insecurity (Kasser, Ryan, Couchman, & Sheldon, 2004), which suggests college students in times of transition may also be particularly at risk for values influences that researchers have associated with decreased well being and increased probability of psychological disorders. Some counseling literature, which is typically more attuned to issues of development relevant to college students, goes so far as to conceive client problems themselves as values issues (Rokeach & Regan, 1980).

Values interventions may also be particularly appropriate for the college student population where life direction and values are typically in flux. There is a larger cultural opportunity in terms of values work with college students since they have many years in which any sustainable contributions to health can benefit them, and their well-being in the area of values can benefit the culture as they take on roles in health care organizations, schools and government offices.

One study of values intervention from an ACT perspective has been conducted with college students in the area of academics. Chase (2010) randomized psychology majors to an online presentation of values from an ACT perspective followed by goal setting, to goal setting alone, or to a wait list. Students in the values plus goal setting condition improved their cumulative grade point average over the next semester by about .15 points (on the usual 4 point scale). The next semester, those in the wait list received the same intervention and saw the same improvement.

College counseling centers may provide another productive environment for innovative interventions around values work; college campuses provide a wide variety of resources in terms of classes, athletic and social organizations for students to explore valued areas of living. A review of counseling center intakes forms available on the internet reveals a dominant focus on presenting problems and symptoms, the degree to which these concerns are interfering with areas of functioning, history of mental illness and suicidality. While attention to these areas may be appropriate, there may be an implicit message in not addressing some inquiry to other aspects of a human being. This focus primarily on psychological illness may promote the conceptualization of treatment as related to symptom removal in clients that ACT research suggests could exacerbate

symptoms. It seems appropriate to examine student's sense of alignment with their own values system and attend to any possible interaction with symptoms, especially given that a student population is almost certainly dealing with issues of developing identity. Research into self-fulfilling prophecies and outcome expectations also suggests it is likely that helping clients identify with their values rather than their problems would be beneficial in terms of treatment retention (Vogel, Wester, Wei, Boysen, 2005).

Brief interventions have been suggested to be helpful with this population. In the 2006 national survey of counseling center directors, directors report that 24.3% of clients only receive one session of therapy and 53% of these students get the help they want in this one session (Gallagher, 2006). Short term individual interventions using motivational interviewing approaches that look at discrepancies between ideals and actual behavior have also been shown to be effective with college students (Michael, Curtin, Kirkley, Jones, & Harris, 2006). These data suggest that a brief values pre-intervention at intake might be a reasonable intervention to empower treatment processes with this population.

The literature on values shows that values work may be able to make powerful differences in a short time, but it does not show that it consistently does so, suggesting that there may be specific conditions that are necessary for values work to be successful. The literature on values from an ACT perspective specifically is limited since values work often occurs in the context of other ACT processes. When removed from that context one study (Villatte & Hayes, 2010) showed that values work is not as reliably helpful but the issue may simply be that values work needs to fit within a broad exploration of clinical difficulties in order to be empowering. One way to test this would be to see if values work from an ACT perspective will increase the impact of clinical

interventions more broadly, without controlling their specific form. That was the goal of the present study.

ACT Based Values Pre-intervention: Research Strategy

The present research study involved the development and testing of a brief values pre-intervention for the college counseling setting as a front end intervention designed to augment a variety of treatment approaches. The pre-intervention was derived from the values portion of Acceptance and Commitment Therapy (Hayes et al., 1999). From an ACT perspective difficult thoughts and feelings are viewed as barriers to meaningful living rather than the focus of treatment in and of themselves. The ACT approach to values in therapy involves recontextualizing presenting symptoms such that clients continue to focus on reinforcing life goals rather than seeing difficult thoughts and feelings as concerns that have to be avoided or resolved so that they can live in a valued manner. However, in the present approach, no specific work was done on acceptance and defusion and participants were then exposed to a variety of specific interventions.

Participants were students presenting for intake at the college counseling center who agreed to participate in the study and fill out a follow-up questionnaires in 12 weeks. In order to examine changes related to the values pre-intervention, participants completed measures of values, purpose, psychological flexibility / experiential avoidance, depression, and general mental health.

The values pre-intervention was developed to be performed with intake in a period of 30 to 45 minutes. Since the time was brief, the goal was to get clients in touch

with their values for the treatment that was to come, so this awareness, rather than just the goal of symptom removal, could direct the coming course of treatment.

Exercises to help clients contact their values were developed and derived from existing Acceptance and Commitment Therapy values exercises. Exercises that did not involve elements of ACT other than values (i.e. defusion) or require understanding of other ACT processes were selected. Exercises were developed with the idea that the values for treatment clients contacted should be easy for them to carry into any type of psychotherapy. The aim was to provide clients with a piece of values work that could be empowering in their work with any therapist they received after intake.

In order to help clients come up with valued goals for treatment, the pre-intervention needed to help clients disambiguate values and symptom removal goals. Since the aim of the pre-intervention was to be a values component alone, no formal defusion or acceptance components which are traditionally a part of ACT values work could be included to aid this process. Exercises needed to be developed in a way that would not require understanding of ACT terminology or unique ACT processes. Values needed to be discussed in a way that would be easy for the client to understand and talk about later with a future therapist who would likely not be using an ACT approach.

One strategy that was used to accomplish this was examining presenting symptoms in terms of the valued areas of living they were interfering with. For instance, if a client's presenting complaint was anxiety, the intervention would look at what valued activities or experiences the client was avoiding because of anxious feelings. This allowed a distinction to be made between the outcomes clients actually valued for treatment and symptoms which they were conceptualizing as barriers to moving towards

these values. For instance, a client might initially answer a question about valued treatment goals by stating they wanted to get rid of anxiety, but further questioning might reveal the client's actual value was relationships and time spent with people.

Another strategy was open-ended exercises looking at client's experiences and exercises using metaphors to recontextualize experience. Exercises which allowed clients to define their values according to their own valued experiences of living were selected. For instance, a question like "when in your life have you been the most fulfilled?" would allow the client to respond according to the client's experience and the therapist and the client could work together to discriminate what values in the life experience the client felt were being fulfilled. Metaphor exercises, such as the hike metaphor discussed in detail in the methods section, which illustrated the difference between value directed and experientially avoidant goals were also developed.

An additional strategy was recontextualizing clients' presenting problems in terms of values. This approach aimed to help clients look at symptoms differently, and possibly even as something that they could use in service of their values. For instance, a client with social anxiety who was conceptualizing this anxiety as a barrier to valued relationships might be asked if anything about the anxiety actually deepened or could be used to deepen the client's relationships.

These strategies were combined to help clients discover what they experientially valued distinct from symptom avoidance goals. This conceptualization was hypothesized to be something that should be compatible with any theoretical orientation and useful if values awareness alone was in fact empowering for treatment.

Specific Aims

The overall goals of the study were to see if including a pre-intervention values session as a part of intake would aid in retention from intake to treatment, would increase subjective client sense of life meaning, and would improve outcome variables after 12 sessions of general clinical interventions. A supplementary aim was to examine the relationship between experiential avoidance and outcome variables.

The specific aims of the study were:

1. To develop a brief Acceptance and Commitment Therapy (ACT) based values pre-intervention that could be utilized in collaboration with other treatment approaches.
2. To examine the impact of adding a brief pre-intervention from this approach to the normal intake procedure.
3. To examine the impact of the proposed pre-intervention on process and outcome variables.

Hypotheses

1. Participants will show correlations between higher levels of valued action (VAQ) and lower levels of avoidance (AAQ2) , higher levels of valued action (VAQ) and higher levels of subjective experience of life purpose (PLT), and higher levels of valued action (VAQ) and lower levels of depression (BDI) and health issues (GHQ) at baseline.
2. Participants in both conditions will show higher levels of valued action (VAQ) and purpose in life (PLT) and lower levels of depression (BDI) and health issues (GHQ) from initial assessment to follow-up assessment.
3. Participants in the ACT- values pre-intervention condition will be more likely to return for treatment following initial intake.
4. Participants in the ACT- values pre-intervention condition will report improved mental health (BDI and GHQ) relative to controls at follow up.
5. Participants in the ACT-values pre-intervention condition will report greater changes in values alignment and in subjective experiences of life meaning relative to controls at follow-up.

Method

This study was conducted with permission and assistance from Counseling Services at the University of Nevada, Reno.

Participants and Setting

Sixty-eight total participants were included in the study. Participants met the following criteria in order to be eligible for the study:

1. Be over the age of 18
2. Be clients presenting for non-crisis intake at the University of Nevada, Reno counseling center
3. Willingness to complete a 12-week follow-up

Recruitment

Participants were recruited from clients attending intakes at the university counseling center. Clients were assigned to either a standardized counseling center intake or a standard intake with a values pre-intervention added to the intake based on schedule when they called the counseling center to request an intake. When clients filled out their initial paperwork they were offered the opportunity to participate in a study looking at long term differences in outcome between intake procedures. If interested, participants were asked to complete a brief series of questionnaires. In addition to the standard counseling center intake, participants in the values condition received a 30-45 minute values pre-intervention that was integrated into their intake process. The values pre-intervention involved a rationale for the importance of the client's values in the therapeutic process, values questions and experiential values exercises derived from the ACT manual. The pre-intervention provided the basis for participants to examine their

values and connect them to what they wanted to pursue in therapy.

Values Pre-intervention

The values pre-intervention was performed by therapists who regularly performed intakes at the counseling center and who had had at least some previous experience with ACT. In addition, the therapists performing the pre-intervention had at least 3 hours of training in the pre-intervention, and had regular access to and meetings with the study co-investigator for questions or concerns related to implementing the pre-intervention. Issues related to treatment confidentiality, the counseling center setting, possible treatment interference and human subjects regulations prohibited recording values pre-interventions, so treatment adherence was not evaluated.

The values pre-intervention was designed to work with clients to examine their values with respect to current behavior, involved clients in values clarification exercises, then revisited presenting symptoms with respect to the client's stated values and supported clients with respect to their conception of valued living. A bank of exercises that therapists could tailor to their individual client was provided to values intake therapists with the idea that therapists would be able to work flexibly with a variety of client presentations and concerns.

The values-based pre-intervention used included the following components:

1. Inquiry into client values with respect to current behavior. Intake therapist did a brief assessment of clients' values in terms of verbal reports of important areas of living with which clients reported symptoms interfered. Therapist also assessed current

activities and behavior with regard to those areas.

2. Values exercises. Intake therapist gave a brief rationale for the importance of client's values in psychotherapeutic work, emphasizing the idea of values as empowering the therapeutic process and valued living as the goal of therapeutic work. The therapist worked with the client on a variety of metaphors and experiential values clarification exercises derived from Acceptance and Commitment Therapy in order to provide the basis for the client to determine their own values and connect them with what they wanted to pursue in therapy. Exercises were open-ended interventions that allowed clients to define their own values according to their own valued experiences of living.

3. Recontextualization of presenting problems in terms of client values. Intake therapists assessed the extent to which the client considered symptoms related to presenting problems to interfere with experientially contacted life values. The therapist worked with the client on the development of a conceptualization of current symptoms in terms of the way they were functioning as barriers to clients' experientially based life values as presented to the therapist.

The exercises following are the complete list of those used:

General ACT Values Introduction

1. **What are you really looking for in therapy?** "If you ask many people what they want in life, including people in therapy, they will say they want to be happy. If it's their therapist asking, people may also say they want some kind of symptom to go away so they can be happy, but often people have a particular idea of what will make them happy that they think their symptoms prevent them from having access to." Clients were asked to consider the symptoms that had them come to therapy and how they saw those symptoms as having limited their experience of living as they would choose to.

Values Choice Exercises

2. **Values in Therapy. "**Given what you say, it sounds like what you would most like out of therapy is not just to be rid of symptom x (i.e. anxiety, depression), but (therapist discussed whatever client discussed as meaningful pursuits client saw symptoms as having limited)."
3. **Hiking metaphor.** This exercise introduced values as related to the experience of living. "Imagine you are going to go on a 20 mile hike. You pack the things you need, dress for cold weather, and put on your hiking shoes. You hike for a few minutes, and then a man comes in a helicopter and asks you where you are going. You tell him your destination, and he delivers you there. How would you respond to that? You might protest that you were trying to go on a hike and he might say 'but you got there faster this way, and you avoided the cold.' You go hiking because you enjoy the process, not just to get to the end of the trail. Although we may have some goals in life, valuing is about the experience we get of a particular

pursuit and part of the experience may involve some rough terrain or cold along the way. If we just took a helicopter to the end goals of our lives, we would miss a lot of living. In your therapy, we want you to be able to think about how you want your hike to go so you can enjoy it and not just focus on getting to the end of the trail quickly or dealing with the cold. In order to help with that, I'm going to ask you to consider some questions about what you find meaningful in your life."

4. **What has been the most meaningful moment of your life so far? "**Close your eyes for a few minutes and reflect on some of the times in your life that have been most important to you. Imagine you have photographs of some of the moments of your life you consider to be the most meaningful. Start with your earliest memory, then a memory from when you were beginning school, then a memory from when you were a teenager. Think of a moment from a year or two ago, then a moment in the last few months. If there has been one moment in your life so far that has made everything in your life worth it, what would it be?" Therapist and client discussed client's answers with respect to client's values.
5. **What if this all turned out to be a dream?** "Imagine the last day you had where the symptoms you came to therapy to reduce really occurred as interfering with your life for you. It could be yesterday or it could be a while ago. Go through the events of the day, making a note of any particular incidents that really bothered you. Now that you've done that, I want you to imagine that that day actually never happened. I want you to imagine that that day was instead a dream, and now you have the opportunity to live that dream day again lucidly, with the awareness that the day is a dream. Imagine that the same things will happen on that day, but that you can choose your response to those events with the knowledge that you are dreaming."
6. **What do you want your life to stand for?** "I want you to close your eyes and relax for a few minutes. Now I want you to imagine that by some twist of fate you have died and are able to attend your own funeral in spirit. You are watching and listening to eulogies performed by family, friends, and coworkers. Visualize these people and have them say what you would want them to say about you and how you lived your life."
7. **If anything were possible.** "If anything were possible for you in therapy, what would you want?" Therapist discussed the question with client and the values that were involved in whatever client detailed.

Recontextualization of Client Problems in Terms of Client Values

8. **A Valued Path to Change.** "From what you've said so far, it sounds like what you really want in life right now is (therapist goes over the picture of valued living client has expressed so far and invites client feedback about this picture). This is a great thing for you to bring into your therapy so you can work on some of the concerns you talked about today in terms of what you really want". (Therapist went over client's symptoms in terms of barriers to valued living as client discussed them and invited feedback from client).
9. **Metaphor. Living to avoid pain versus living for meaningful experience.** Therapist tailored an ACT consistent interpretation or metaphor casting client

> symptoms as things that could actually empower their particular description of valued living. “So it sounds like because you’ve been anxious around people you haven’t really been exploring your potential to become connected to others. What if it were possible that your anxiety wasn’t a problem, but rather was actually a great gift? I’m finding it hard to imagine that you would want me to be a person who had never experienced anxiety. It could be that the shell you’ve been wanting to protect you from anxious feelings would also keep you from being as sensitive to others? That might be a great gift. If your personal therapy work became about your desire to connect with others rather than to get rid of your anxiety, what would be different for you?”

Instruments

The existing instruments used in the study are shown in Appendix A.

Values Alignment Questionnaire (VAQ). The VAQ is a 4-item self-report measure designed to assess alignment with personal values using a 7-point Likert scale. Alpha in this study was found to be .67 ($\alpha = .67$) which is just under the limit usually expected for self-report instruments but is adequate for extraordinarily short questionnaires. The VAQ was developed for the study given the lack of values measures with a process focus to assess participants’ sense of alignment with their own values. The ACT model of values as a direction and a process distinct from outcomes produced a need for a process measure that disambiguated values and goals. The language of the VAQ was designed so as to orient participants to values as a process of how they are living rather than the attainment of any specific goal. Because the VAQ is new to this study it will be described in the text. The instructions for the VAQ were as follows:

> Many people have some idea of what matters the most to them in their lives, but find they get off track about some of these things in the course of day to day living. Give some honest consideration to how you are living. Please note that

> what you are rating is how you are living with respect to what you consider important in these areas, not your achievement of particular goals. You don't need to consider if you have particular things you want in these areas, only if you feel like you are living on track in terms of ***who you are being*** in your life.
>
> For instance, in the area of relationships you may behave lovingly with those you care about even when it is difficult. Maybe you are the kind of friend that friends know will really be there for them in times of need. Maybe you don't have a romantic partner right now, but you talk to people you might be interested in even when you feel nervous. Even if you don't see your relationships as ideal, you might mark "I am my own hero" because you are ***living*** in accord with your values and you feel good about how you are behaving.
>
> On the other hand, you might have a great deal of financial success at a job, but you might not enjoy the process of the work itself and you might feel like you don't try very hard, even though you value doing your work well. In this case, you might mark "I am often unfulfilled" because you are not living in accord with what you value.

Participants were then asked to indicate how they were living in the following life areas: work/education, leisure (i.e. hobbies, fun, rest, laughter), personal growth/health (i.e. spirituality, creativity, self-care, nutrition, exercise, physical health), and relationships (i.e. daily interactions, relationships with friends, family, co-workers). In each area values were rates on the following scales; 1. I am my own hero; 2. I am frequently inspired with how I am living; 3. I am generally satisfied with how I am living; 4. I am somewhat satisfied with how I am living; 5. I am somewhat unsatisfied with how I am living; 6. I am often unfulfilled by how I am living; 7. I am really not living in line with what I consider important.

Acceptance and Action Questionnaire (AAQ-II; Hayes, et al., 2004). The AAQ (Hayes et al., 2004) is a 9-item self-report measure designed to measure experiential avoidance utilizing a 7-point Likert scale (1=never true, 7=always true) with lower scores indicating

greater acceptance and higher scores indicating greater experiential avoidance. The AAQ has been found to have satisfactory internal consistency (α = .70) and convergent, discriminant, and concurrent validity. Alpha in this study was .86 (α = .86). Research has demonstrated that more experientially avoidant scores are associated with greater psychological distress (Hayes et al., 2004).

Beck Depression Inventory (BDI-II; Beck, Steer, & Brown, 1996). The BDI-II is well known 21 item instrument widely utilized for measuring depression with established reliability and validity (α = .85). Its items relate to symptoms of depression including hopelessness and irritability, guilt or feelings of being punished, physical symptoms such as fatigue and weight loss and lack of interest in sex. It has been used in a wide variety of settings by healthcare professionals and researchers. The BDI-II was a secondary outcome measure.

General Health Questionnaire (GHQ). The GHQ (Goldberg, 1972) is a widely used 12-item, 4-point Likert type scaled self-report questionnaire that asks respondents if they have experienced particular symptoms or behaviors recently. It is brief, simple and its use as an outcome measure for general health, including mental health and stress, is well established. It has been frequently used in a wide variety of settings and with a wide variety of cultures. The GHQ was the primary outcome measure.

Purpose in Life Test (PILT; Crumbaugh & Maholick, 1981). The PILT is a 20–item scale designed to assess the subjective perception of meaning in life. The scale has been used

most frequently in studies looking at relationships between psychological symptoms and subjective experience of valued living. Its items were derived Frankl's (1992) theory of meaning. Items are rated on 7–point Likert-based scale. Items include a range of responses to one anchor phrase, such as "In thinking of my life, I . . .", with possible responses ranging from 1 (*often wonder why I exist*) to 7 (*always see a reason for my being here*). The PILT has acceptable reliability (α = .91) and validity (Zika & Chamberlain, 1992).

Treatment Follow-up Measure. An 8-item measure of subjective evaluation of treatment specific to the study asked clients about their experience of their intake procedure, its impact on their willingness to continue treatment, and the treatment they received. The measure was administered as an online questionnaire with drop down menus. Question 1. asked "Which of the following best describes your experience of intake at counseling services" and gave the response options of "My initial intake session satisfied all of my treatment needs," "I continued to attend individual or group therapy following my intake session," and "My initial intake session did not satisfy my treatment needs and I did not return to counseling services." It was followed by seven "yes / no" questions:
2. Did your intake procedure make you more interested in receiving further counseling services?; 3. Did your intake procedure help you clarify what you wanted out of therapy?; 4. Did you feel your initial intake session helped you at all with the problems that had you seek therapy?; 5. Did you change some of your ideas about what is important to you in life as a result of your intake procedure?; 6. Do you feel like the therapy you have received (including any therapy following intake) has had a significant impact on the

problems that had you seek therapy?; 7. Do you feel like the therapy you have received (including any therapy following intake) has changed some of your ideas about what is important to you in life?; and 8. Do you feel like the therapy you have received (including any therapy following intake) is helping you live a meaningful life in addition to dealing with the problems that had you seek therapy?

Treatment Manipulation Check. In order to assess whether the pre-intervention had the effect of linking therapy goals to values, intake therapists asked participants in both groups were asked what two things they most wanted out of therapy at the conclusion of intake. Intake therapists were trained to use the same verbal question with identical phrasing with each participant in order to better anchor responses. Responses were recorded word for word by intake therapists, and later assessed by raters. Raters were three ACT trained therapists and were blind to treatment condition; all were familiar with the study and study procedures but only one was involved in the actual study. Interrater reliability was .92 (95% CI [.87, .95]). Responses were scored based on a scale of 1 to 5 for values orientation versus avoidance orientation. The scale had verbal anchors with each number; 1 was a response clearly directed towards a valued area, 2 was a possibly or marginally value directed response, 3 was a neutral or unclear nature response, 4 was a possibly or marginally avoidance directed response, and 5 was a avoidance directed response. A a total score between 2 (two most valued responses) and 10 (two most avoidant responses) was calculated. In cases where participants gave only one response their score was doubled to arrive at a total score.

Table 1: Timeline of Assessments

Measure	Intake Baseline	12 Week Follow-up
Values Alignment Questionnaire (VAQ)	X	X
Acceptance and Action Questionnaire (AAQ)	X	X
Beck Depression Inventory (BDI)	X	X
General Health Questionnaire (GHQ)	X	X
Purpose in Life Test (PILT)	X	X
Treatment Follow-up Measure		X

Treatment and Assessment Process

Participants were asked to complete an initial assessment at intake and a follow-up assessment 12 weeks following intake. After their initial assessment and assignment to intake as usual or pre-intervention values intake, participants received treatment as usual at the counseling center. This consisted of assignment to group or individual therapy, and sometimes a brief wait before a group commenced or an individual therapist was assigned. The length of therapy varied from 1 session to the full 12 sessions available before follow-up and some participants were still continuing therapy at the time of follow-up.

Some specific data about participants' treatment experiences was not available due to human subjects research limitations which did not allow access to clients' private records. The number of sessions and type of therapy (group or individual) clients

attended was available from records other than clients' private files so this was obtainable.

It was not possible to monitor treatment content but the counseling center staff consisted of a range of therapists who were trained in a variety of treatment modalities and had a range of educational backgrounds. Therapists included interns in social work and clinical psychology as well as professional therapists. Therapists had educations including doctorates in educational, counseling and clinical psychology and masters degrees in social work and marriage and family therapy. Intern level therapists generally had an amount of education approximately consistent with at least the level of a masters degree although all were still completing their masters or doctoral degrees. Most therapists described themselves as generalists with regard to population and most had considerable experience with college populations. Orientation backgrounds were diverse, including cognitive behavioral, family systems, interpersonal and psychodynamic approaches. Most therapists did not identify with a particular approach exclusively. Some therapists had previous exposure to ACT or training in ACT, but some did not and most therapists would not have identified ACT as one of their primary therapeutic approaches.

One factor that was consistent across therapists was a pressure to see clients briefly when possible due to escalating demands for services and shortages of staff. Administration pressures to not maintain a waiting list were also a factor. Limiting sessions to a range of 6-12 weekly meetings was considered desirable and therapeutic techniques were likely shaped accordingly.

One source of information about what specific approaches were being used was group approaches, since these were openly discussed to facilitate appropriate referrals. In

the past the counseling center had run a wide variety of groups in terms of both content focus and theoretical approach, but in the face of increasing demand some recent changes were made shortly after the commencement of this study. The majority of counseling center groups at this time were general groups titled “Take Control of Your Life” and were aimed at problem-focused interventions and developing coping skills and strategies for dealing with presenting concerns. Approximately 18% of study participants received group treatment, either alone or in conjunction with individual therapy, which was primarily composed of these groups at the time of the study.

Although more of the study participants received individual therapy at the counseling center, individual therapy was being affected by the same pressures as group therapy, and although there was no data on specific techniques used by individual therapists, it seems very possible increasing amounts of problem focused, coping and skills based work was being done. Therapists were also being asked to pick up their own intake clients or refer them to group (apart from therapists in the study, since this could have contaminated results). Therapists saw at least one and often more than one intake weekly depending on work hours, so this could result in 1 to 4 new clients a week in case loads that typically were 5-20 clients a week depending on therapist hours. This meant that therapist workloads would be increased if clients were not either referred to group treatment, as described above, or given brief therapy. If therapists were receiving too many new individual clients, it was suggested that they try to see clients for 3 sessions of individual intervention then refer them to groups. Although we do not have data about the approaches that were used by individual therapists, we can make some educated guesses about what therapeutic approaches might have been possible in this environment, as will

be done later in the paper when the results are discussed.

After 12 weeks of treatment as usual, participants were asked to complete a follow-up measure. Participants were able to complete follow-up questionnaires via the internet, so no in person contact was necessary following their initial participation in the study. Participants received an email reminder of their follow-up 1 week prior to the date they were eligible to complete follow-up measures, then another email on the actual day of their follow-up. Participants were requested to provide a variety of contact data to ensure adequate participant retention, including: email address, primary address, alternative address, home, work, and mobile phone numbers. Participants who did not complete their follow-up assessment on time were contacted using this information until their follow-up was completed.

Analytic Strategy

Results were analyzed initially using independent samples t tests to assure homogeneity between study drop outs and completers. T tests were also conducted to assess for any possible differences between the composition of the control group and the pre-intervention group on baseline study measures. Baseline tests of the theoretical model supporting the Valued Action Questionnaire and suggesting a relationship between values, experiential avoidance and depression were also performed. A chi square test was conducted to see if participants were more likely to return for treatment following the values pre-intervention.

A mixed model repeated measures approach (MMRM) that treated time as a categorical factor was used to analyze changes over time in both process and outcome

measures and examine possible statistically significant differences between the values and control groups in the study. An unstructured covariance model was initially used in the MMRM analysis (with parameters for variance at each time point and for the covariance between the two time points) followed by a compound symmetry model (which assumed the same variance at each time point). The compound symmetry model was used if there was no significant difference in the fit of the restricted and unstructured covariance structure as determined by comparison of models through the restricted log-likelihood. MMRM is advantageous because it uses all data for all subjects and fits well with intent to treat analyses. MMRM models reduce somewhat the analytic problems associated with missing data by taking into account missingness and fixed variables which provides more accurate results than standard analyses of variance (ANOVAs), analyses of covariance (ANCOVAs), or repeated measures (RM) models which require that all missing data are missing completely at random, which is generally not a plausible assumption.

Denominator degrees of freedom for the fixed effects test statistics were based on the Sattherthwaite approximation. Effect sizes (converted to Cohen's *d*), for *F*-tests were derived as suggested by Rosenthal and Rosnow (1991; see also Verbeke & Molenberghs, 2000). Effect sizes for specific MMRM contrasts were calculated as specified by Wackerly, Mendenhall, and Scheaffer (2008) Effect sizes are discussed using the cutoffs suggested by Cohen (1988). Tests with $p < .10$ were interpreted and were termed "marginally significant".

Results

Attrition

68 participants completed the initial intake measures, 32 in the values condition and 36 in the control condition. Of these 68, 56 (82%) completed the 12 week follow-up. In all of these cases, contact was unable to be made with the participants, either because no response was received to email contact and there was no additional contact information or because none of their contact information was valid at the time of follow-up. 10 of these 12 participants continued psychotherapeutic treatment after their initial assessment and 2 dropped out of treatment. There were 6 assessment non-completers in each condition for a total of 26 (81%) completing in the values condition and 30 (83%) completing in the control condition. Of the 12 assessment dropouts, 9 were Caucasian and 3 were of other ethnicities, 8 were between the ages of 18 and 25 and 4 were between the ages of 26 and 40, 8 were referred to individual therapy and 4 were referred to group therapy, 9 were female and 3 were male. Overall this is representative of the total sample demographics. Independent samples t tests were performed to assess for possible differences between the assessment dropouts and participants completing the study on study measures at baseline. There were no statistically significant differences between assessment dropouts and completers on any of the study measures at the pre-assessment (see tables 2 and 3).

Table 2: Comparison of Completer and Dropout Obtained Means at Baseline

	Dropout status	N	Mean	Std. Deviation
Pre AAQ2	completer	56	41.13	11.35
	dropout	12	43.58	10.46
Pre Values	completer	56	15.80	4.01
	dropout	12	17.08	4.06
Pre PLT	completer	56	87.36	15.66
	dropout	12	89.83	18.79
Pre GHQ	completer	56	28.89	7.62
	dropout	12	31.33	6.73
Pre BDI	completer	53	19.45	11.61
	dropout	11	16.00	11.67

Table 3: Independent Samples Test for Means of Dropouts at Baseline

	t-test for Equality of Means		
	t	df	Sig. (2-tailed)
Pre AAQ2	-.69	66	.49
Pre VAQ	-1.00	66	.32
Pre PLT	-.48	66	.63
Pre GHQ	-1.03	66	.31
Pre BDI	.90	62	.37

Final Sample

The final sample of 56 participants completing the 12 month follow-up measures was primarily Caucasian, approximately two thirds female and in their early twenties. Non-Caucasian groups were somewhat better represented in the values group than the control group, but otherwise the two groups were comparable.

Table 4: Demographic Characteristics by Treatment Condition

	Treatment condition	
	Control (N=30)	Values (N=26)
Age (Mean)	23.72	22.84
Ethnicity (%)		
Caucasian	N=24, 80%	N=17, 65%
Hispanic	N=1, 3%	N=4, 15%
Asian	N=4, 13%	N=3, 12%
Other	N=1, 3%	N=2, 8%
Gender		
Male	N=8, 27%	N=8, 31%
Female	N=22, 73%	N=18, 69%

Baseline Measures

Preliminary analyses were performed to assess for any possible differences between the control and values group at baseline. The measures examined include the BDI, GHQ, AAQ, PLT, and VAQ. Two-tailed t-tests were performed on each measure and no significant differences were found between groups at baseline.

Table 5: Baseline Scores for Study Measures by Condition

	Completors	Mean	Std. Deviation
Pre AAQ2	Control	41.43	12.41
	Values	40.77	10.22
Pre VAQ	Control	16.20	3.73
	Values	15.35	4.34
Pre PLT	Control	87.97	16.74
	Values	86.65	14.61
Pre GHQ	Control	28.50	8.02
	Values	29.35	7.28
Pre BDI	Control	20.63	13.58
	Values	18.23	9.25

Table 6: Baseline Between Group Comparisons for Study Measures

	t-test for Equality of Means	
	t	Sig. (2-tailed)
Pre AAQ2	.216	p=.829
Pre VAQ	.793	p=.431
Pre PLT	.310	p=.758
Pre GHQ	-.411	p=.683
Pre BDI	.749	p=.457

Baseline Tests of Model

Correlations between study measures related to the theoretical model in question were analyzed using Pearson bivariate correlations (a test of hypothesis 1). The Valued Action Questionnaire was created for use in this study, so the correlation of this measure with theoretically related measures was examined. The VAQ was designed as a values measure that would be theoretically consistent with Acceptance and Commitment Therapy, so the correlations with the Acceptance and Action Questionnaire (AAQ2) and Purpose in Life Test (PLT) were both examined. Significant levels of correlation with both AAQ2 measures of avoidance (.575, with lower levels of avoidance associated with higher levels of valued action) and PLT levels of subjective experience of life purpose (.742) were found (hypothesis 1 was confirmed).

As is shown in Table 7, higher scores at baseline on the values measures (VAQ and PLT) were also found to be associated with lower depression scores (BDI), consistent with past research linking values and depression (hypothesis 1 was confirmed). Decreased experiential avoidance (AAQ2) was also associated decreased depression (BDI), consistent with past studies. All correlations were significant at the .01 level on a two-tailed test and are large by Cohen's conventions These correlations support not only the applicability of the measure, but also the theoretical relationship that Acceptance and Commitment Therapy would predict between valued action, sense of life purpose, reduced experiential avoidance and reduced depression.

Table 7: Correlations of Study Measures at Baseline

		Pre VAQ	Pre PLT	Pre AAQ2	Pre BDI
Pre VAQ	Pearson Correlation	1	.742**	.575**	-.53
	Sig. (2-tailed)		.000	.000	.000
	N	68	68	68	64
Pre PLT	Pearson Correlation	.742**	1	.598**	-.67
	Sig. (2-tailed)	.000		.000	.000
	N	68	68	68	64
Pre AAQ2	Pearson Correlation	.575**	.598**	1	-.68
	Sig. (2-tailed)	.000	.000		.000
	N	68	68	68	64

**. Correlation is significant at the 0.01 level (2-tailed).

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Treatment dropout

A Chi Square was conducted to see if participants in the values pre-intervention condition were more likely to return for treatment following initial intake (a test of hypothesis 3). 26 out of 32 participants (81%) in the values condition and 32 out of 36

participants in the control condition (89%) returned for treatment following intake. Participants in the values intakes were found to be no more likely to return for treatment following intake than participants in the control condition.

Table 8: Chi Square for Participants Returning for Therapy

	Treatment condition
Chi-Square	.235[a]
df	1
Asymp. Sig.	.628

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 34.0.

Check on the Manipulation

The manipulation check rated the participants' therapy goals for their degree of values orientation versus avoidance orientation. In the control condition, this measure amounts to a general measure of avoidance versus approach therapy goals. Among control participants it correlated r (35) = -.37, p = .027 with the GHQ and r (35) = .34, p = .058 with the BDI, indicating some convergent validity for the measure since more avoidant purposes should by ACT theory predict lower general mental health and higher depression.

The mean for the control condition was 5.80 (SD = 1.97) while for the values intervention it was 5.19 (SD = 1.42) which is slightly more in the direction of values based responses. A score of 6 is a neutral score on this measure, indicating that both groups were slightly more in the positive values than avoidant purposes direction at intake. To test whether the manipulation impacted the degree to which the purpose of therapy was thought to be avoidant or linked to positive values, an independent samples

Mann Whitney U test was performed. This test examines whether the distribution of answers was the same in the control and values pre-intervention condition. There was a marginally significant difference between conditions, U (66) = 401, SE = 76.3, z = -1.86, p = .064, two tailed. The median value on this measure overall was 6, a neutral score. In the control condition 11 of 35 participants (31%) were below this median (that is, in a positive values direction), while in the values pre-intervention condition 17 of 31 participants (55%) were below the median. Thus the check on the manipulation suggested that the pre-intervention has its intended effect to a degree although the effect was not strong (there is disagreement about how to calculate an effect size from the Mann-Whitney U, but the effect size for a parametric t test on these data was .36, a small effect).

Between Group Changes in Process Measures

Mixed model repeated measures (MMRM) analyses were performed on the VAQ AAQ, and PLT to examine changes in values alignment and subjective experiences of life meaning in the values condition relative to the control condition at follow-up (a test of hypothesis 5). In both cases a model using compound symmetry covariance assumptions best fit the data. The adjusted means are shown in Table 9. On the VAQ there was a significant effect for time, F (1, 63.28) = 9.60, p = .003, but no effect for condition , F (1, 62.08) = .001, p = .98, or the time by condition interaction, F (1, 63.28) = .07, p = .80. On the AAQ there was a significant effect for time, F (1, 62.34) = 9.71, p = .003, but no effect for condition , F (1, 64.82) = .001, p = .98, or the time by condition interaction, F (1, 62.34) = .00, p = .99. Similarly, on the PLT there was a significant effect for time, F

(1, 63.97) = 10.77, p = .002, but no effect for condition , F (1, 61.64) = .15, p = .70, or the time by condition interaction, F (1, 63.97) = .84, p = .36.

Table 9: Adjusted Means for Process Measures

Source	**Pre**		**Post**	
	Mean	SE	Mean	SE
VAQ (total)				
Control	16.11	0.68	18.27	0.74
Values	15.94	0.72	18.49	0.80
PLT				
Control	86.86	2.97	101.31	3.31
Values	88.84	3.15	96.99	3.49
AAQ2				
Control	41.53	1.81	47.15	1.98
Values	41.59	1.92	47.22	2.13

Note. N for analysis of PLT , VAQ, & AAQ 2= 68.

Although no significant difference between groups was found on the valued action or purpose in life measures, change on process measures from pre to follow up was highly correlated with change in depression scores from pre to follow up. Change scores on the BDI correlated highly with change scores on processes measures: r (52) = -.69 for the PLT, r (53) = -.53 for the VAQ, and r (53) = -.62 for the AAQ. All of these correlations are large and significant at $p < .001$ on a two-tailed test. There were no significant differences between conditions when these correlations were calculated by

treatment assignment.

A similar pattern of correlation was shown between change scores on the GHQ and change scores on processes measures: r (55) = .59 for the PLT, r (55) = .56 for the VAQ, and r (55) = .53 for the AAQ. Again all of these correlations are large and significant at $p < .001$ on a two-tailed test. There was no significant difference between conditions when these correlations were calculated by treatment assignment and then compared.

Consistent with previous research, higher change scores on values measures were also correlated with reductions in scores on the BDI item addressing suicidal wishes. The suicidal wishes item on the BDI correlated -.375 with the VAQ and -.625 with the PLT. These correlations were significant at the .01 level on a two-tailed test and were also large by Cohen's conventions.

All of these correlations are useful findings given the current state of the literature around values as they support the conception of values as a useful construct in addressing mental health variables. They also support the utility of the VAQ as a values measure in future studies.

Between Group Changes in Outcome Measures

The GHQ and BDI were examined using mixed model repeated measures ANOVAs as they were hypothesized to be the outcome measures in the study. The measures were examined first to see if the mental health of participants in the study improved over the course of therapy (hypothesis 2), and then to see if the participants in the values pre-intervention condition reported improved mental health at follow-up

relative to controls (hypothesis 4). The GHQ was viewed as the primary outcome measure because it is the broadest measure of general mental health. The BDI was examined similarly as a secondary outcome measure.

The adjusted means are shown in Table 10. For the GHQ an MMRM analysis with unstructured covariance assumptions best fit the data. There was a marginally significant effect for time, F (1, 66.09) =3.70, p = .059, but no effect for condition , F (1, 66.55) = .06, p = .80, or the time by condition interaction, F (1, 66.09) = 1.84, p = .18. For the BDI an MMRM analysis with compound symmetry covariance assumptions best fit the data. There was a significant effect for time, F (1, 58.27) = 11.61, p = .001, but no effect for condition , F (1, 63.60) = .08, p = .78. The time by condition interaction was marginally significant, F (1, 58.27) = 2.96, p = .091, effect size = .45, a small effect. The interaction was dismantled with contrast tests at pre, follow up, and on the change scores between and within conditions. There was no significant difference between conditions at baseline (mean difference = 2.22, SE = 2.76, t (106.16) = .80, p = .42), or at follow up (mean difference = -3.50, SE = 2.93, t (110.57) = -1.19, p = .24), but there was a significant and small difference in pre to follow up changes in the BDI (mean difference = 5.72, SE = 3.32, t (58.27) = 1.72, p = .091, 95% CI: -.93, 12.37, effect size = .45). In the control condition depression improved significantly from pre to follow up (mean difference = -8.52, SE = 3.32, t (60.08) = -3.71, p < .001, 95% CI: -13.12, -3.92, effect size = .68) but this was not the case for those participants in the values pre-intervention condition (mean difference = -2.80, SE = 2.40, t (56.64) = -1.17, p = .25, 95% CI: -7.61, 2.00, effect size = .22)

Table 10: Adjusted Means for Outcome Measures

Source	Pre		Post	
	Mean	SE	Mean	SE
BDI				
Control	20.03	1.92	11.50	2.00
Values	17.81	1.99	15.00	2.15
GHQ				
Control	28.58	1.03	31.69	1.15
Values	30.16	1.1	30.76	1.21

ACT is viewed as an empirically supported treatment for depression by Division 12 of the American Psychological Association, but ACT contains several elements. Values work is among the more unique elements of ACT, and indeed this element has been adopted by modern forms of the best validated psychosocial treatment for depression, behavioral activation (Kanter, Busch, & Rusch, 2009). The present study provides a unique opportunity to assess whether values work alone accounts for the benefit of ACT or whether values work is effective primarily in the context of the larger

ACT model. One of the better ways to ask this question without systematic contamination by other ACT processes is to do a values front end and then to combine it with general clinical and counseling methods, as was done in the present study. Thus, a second analysis was conducted with all participants with scores above 13 on the BDI-II at baseline (that is, those who were at least mildly depressed upon their entry into the study).

An MMRM analysis with a compound symmetry covariance structure best fit the data and showed an effect for time, F (1, 34.17) = 45.27, $p < .001$, no effect for condition , F (1, 36.76) = .58, p = .45, an a significant and large time by condition interaction, F (1, 34.17) = 8.22, p = .007, effect size = .98. Adjusted means are shown in Table 11. Unfortunately, there was a significant and medium difference between conditions at baseline (mean difference = 7.25, SE = 3.27, t (57.49) = 2.22, p = .031, 95% CI: .70,13.79, effect size = .71, a medium effect), which makes interpretation difficult. There was no difference between follow up BDI scores for those entering the study in the depressed range (mean difference = -2.91, SE = 3.45, t (61.48) = -.84, p = .40, 95% CI: -9.80, 3.99, effect size = .29, no effect), but there was a significant and large difference in pre to follow up changes in BDI (mean difference = 10.15, SE = 3.54, t (34.17) = 2.87, p = .007, 95% CI: 2.96, 17.35, effect size = .97).

Table 11: Adjusted Means for High Depression Group on BDI

Source	**Pre**		**Post**	
	Mean	SE	Mean	SE
BDI				
Control	29.72	2.40	12.73	2.51
Values	22.48	2.22	15.64	2.36

Like regular repeated measures, when MMRM tests a time by treatment interaction differences in both pre and follow up values enter into the interaction. HLM analyses adjust for pre-score differences, as might be done in analysis of covariance, but HLM analyses on the present data did not converge and thus were not legitimate. For that reason a supplementary analysis of covariance was conducted on follow up BDI scores, using the baseline BDI as a covariate, in an attempt to adjust for the pre-treatment differences. It showed a marginally significant result for condition, F (1, 31) = 4.03, p = .054, effect size = .71, a medium effect). If, however, baseline levels of the key process variables were as entered as covariates (AAQ, PLT, and VAQ), the effect of condition was significant and large, F (1, 28) = 6.83, p = .054, effect size = .93) with an adjusted BDI mean score at follow up of 8.48 (SE = 2.78) for those in the control condition and

19.46 (SE = 2.59) for those in the values condition. Thus, it appears that the combination of pre-therapy values work and general clinical intervention methods as occurred in the Counseling Center undermined the impact of treatment for those in the depressed range upon entry into treatment. This suggests that the beneficial impact of ACT on depression that has been documented in many studies (e.g., Blackledge & Hayes, 2006; McCracken et al., 2005; Muto, Hayes, & Jeffcoat, in press; Páez, et al., 2007; Vowles & McCracken, 2008; Woods et al., 2006; Zettle & Hayes, 1986; Zettle, Hayes, & Rains, in press; Zettle & Rains, 1989) cannot be accounted for by values work as an isolated element, but rather requires that values work be done in combination with the other elements of the model.

A similar set of analyses for those above clinical cutoffs for the GHQ showed no differences as compared to the main analysis. Thus this effect appears to be particularly focused on those who were depressed upon entry to the study.

Secondary Outcome Variables and Additional Analyses

At follow-up participants were asked about their experience of therapy and of the value of the intake. Participants were asked if they were interested in receiving further counseling following intake, if they felt they clarified what they wanted out of therapy at intake, if they received help with the problems that had them seek therapy at intake, and if they changed their ideas of what was important to them at intake. Participants were also asked if their therapy experience following intake was helping them live a meaningful life in addition to helping them with the problems that had them seek therapy. These questions were categorical and thus will be reviewed item by item.

19 out of 29 control participants (66%) indicated being interested in further

counseling following intake while 18 out of 26 participants in the values condition (69%) expressed an interest in further therapy following intake. 18 out of 29 participants in the control condition (62%) indicated their intake helped them clarify what they wanted out of therapy, while 17 out of 26 participants in the values condition (65%) indicated their intake was helpful in making these distinctions. 19 out of 29 participants in the control group (66%) indicated their intake helped them with the issues that had them seek therapy while 15 out of 26 participants in the values condition (58%) felt their intake was useful in this manner. 13 out of 29 participants in the control condition (45%) indicated changing their ideas of what was important in life as a result of their intake while 10 out of 26 participants in the values condition (38%) indicated such a change. 21 out of 29 participants in the control condition (72%) reported feeling that therapy overall was helping them live a meaningful life at follow-up, while 19 out of 26 participants in the values condition (73%) reported that they had been helped in this way by therapy. None of these items showed a statistically significant difference between conditions, using a Chi square to evaluate the results.

There is very limited research into isolated values interventions; most of the values literature is correlational or addresses self-concept related variables that may be conflated with values themselves as outcome variables. Since this was an initial exploratory study, additional analyses were performed to examine possible relationships between variables as directions for future research.

One such analysis that yielded outcomes that may be of interest in future studies was of a subgroup of participants who received the values pre-intervention at intake and filled out post questionnaires, but did not receive additional psychotherapy following the

pre-intervention at intake. Although there were only 6 such participants, this group showed effects approaching significance on both the Purpose in Life and Valued Action Questionnaire at follow-up, and the Cohen's d for the trend in this small group represents a large effect size. It wasn't possible to empirically test whether or not these changes resulted from the values pre-intervention in the study as there was no comparable group to examine in the control condition. Only 2 participants in the control condition who did not receive further psychotherapy after intake completed follow-up and they both had remarkably high depression scores at baseline that made them difficult to compare with the values condition group. 5 out of these 6 participants did also indicate on their therapy follow-up questionnaire that they believed they experienced improvement of some kind out of their values intake procedure. These results do suggest that the brief values pre-intervention affected values and are remarkable given the lower power of the analysis.

Table 12: Values Intake Only Group Paired Samples Test[a] for Values Measures (n=6)

	Paired Differences		
	t	Sig. (2-tailed)	Cohen's d
Pre PLT – Post PLT	-1.927	.112	1.2
Pre VAQ – Post VAQ	-1.658	.158	1.1

a. Did client attend therapy or not = No

These findings are particularly interesting in light of the earlier findings. The values pre-intervention did initially produce less avoidant therapy goals, but did not change values measures at follow up. Values measure changes correlated with depression changes in the expected direction, but the values pre-intervention led to significantly poorer depression outcomes among those who were depressed (and marginally significant weaker results for the entire group. The different pattern seen in those who did not attend therapy suggests that the values pre-intervention did have some benefit provided it was not combined with treatment as usual. If that is correct it suggests that there was an undesirable interaction between the values pre-intervention and the course of treatment to follow.

Discussion of Findings

Although values and existential concerns are frequently referenced in the therapeutic literature, there is a limited amount of empirical research in the area and even limited agreement on the definition of values. There is considerable discussion of values in the counseling literature, probably due to the developmental perspective of counseling

and the frequent utilization of counseling approaches in college counseling, where some factors related to life changes may make values issues particularly important. Current empirical research on values and college counseling, however, is limited to correlational research on the relationship of values, depression and suicidality and values measures have not supported good empirical research in the area.

College counseling centers are dealing with an increasingly serious range of concerns and in many cases with decreasingly adequate resources and there is some indication that issues such as values may be receiving less attention in the wake of more severe student presentations. The goal of the present study was to develop a brief Acceptance and Commitment Therapy based values pre-intervention that could be utilized to enhance other treatment approaches. The study also aimed to evaluate the impact of this values pre-intervention relative to a no pre-intervention control condition on treatment retention, values, and outcome variables including depression and general health following a course of treatment.

Development of Pre-intervention

The values pre-intervention was designed using values focused exercises derived from Acceptance and Commitment Therapy theory or specific Acceptance and Commitment Therapy exercises with the aim of enhancing the outcomes of the course of treatment as usual that followed intake. The values pre-intervention included an examination of clients' values relative to their current behavior, values pre-intervention exercises, and a recontextualization of treatment relative to client values. The counseling center setting and intake context allowed for only 30-45 minutes of values work with

participants. The goal of the intervention was to provide clients with a more empowering context for treatment, in which clients could approach psychotherapy from a broader mindset than the elimination of difficult feelings, and instead work in the context of moving towards the things that were really important to them in life. The pre-intervention was designed with the intention of leaving clients with a sense of their values to enhance and inspire the treatment to come. Although the intervention may have been effective in regard to raising awareness of values and creating a larger context for treatment goals, this effectiveness may not have translated into effective treatment outcomes.

Development of Values Alignment Questionnaire

One factor that has limited useful research in the area of values to date has been a lack of systematic measures, so this study developed a measure consistent with the ACT approach to values and used it alongside one of the most frequently used values measures in the general literature. The measure showed adequate alpha, especially for a measure of its brevity and type, as it was only 4 questions long and each question addressed a different area of valued living. The measure was unique in its process, rather than goal, focus in order to better fit with an ACT model of values. The measure appeared to function well in the study. Valued living was correlated with a sense of purpose in life and inversely correlated with experiential avoidance; in baseline higher levels of valued living correlated with decreased depression; change scores in valued living predicted depression and general mental health changes. All of this fits with an ACT conception of values. These correlations also support the applicability of the VAQ measure.

Baseline Models

As was just mentioned, correlations between lower valued living scores, lower purpose in life scores, higher avoidance scores and higher depression scores at baseline all supported the ACT theoretical model of values and were also consistent with past values research. These correlations were further supported by the purpose in life measure used in the study, which originated outside of the ACT tradition per se but was highly correlated with the ACT measure of values used in the study and showed similar correlations with other process and outcome measures to the VAQ. Depression and experiential avoidance were also correlated, consistent with the ACT model and past ACT research. These correlations at baseline suggested this population was a good fit for the ACT conception of values and the ACT theoretical model.

Manipulation Check

A check on the pre-intervention values manipulation was performed in order to assess whether the pre-intervention had the effect of linking therapy goals to values. Participant responses were rated for values orientation versus avoidance orientation.

Correlations were found between these ratings and the GHQ and BDI scores in the control condition. These results provide some support for this manipulation check, since higher scores should indicate more avoidance and less values orientation in psychotherapy goals. Comparisons between the pre-intervention and control condition on this check did also suggest some increased values orientation and decreased avoidance in psychotherapy focuses among pre-intervention participants.

Although the ratings did suggest increased values orientation among pre-intervention participants, the median ratings were still relatively avoidance oriented even in the pre-intervention group. This suggests that although the pre-intervention may have had an impact, participants in the pre-intervention were not changing their treatment orientation from an avoidance focus to a values focus but were rather showing somewhat less avoidance. The exposure to the values work does appear to have had an effect visible in the manipulation check, but the impact does not appear to have extended to a total reformulation of treatment goals.

Treatment Retention

One aim of the pre-intervention in the study was to increase treatment retention from intake to the first session of treatment. No significant difference in the likelihood that participants in the values pre-intervention condition would return for intake relative to controls was found. Participants in the pre-intervention condition who did not return for treatment, however, did display considerable movement on values measures. The n was very small, but this result may suggest that values alone may not be enough to positively affect treatment retention; other factors may be important in conjunction with values or values may not be an important mechanism in returning for future treatment.

Change Processes and ACT Model

Analyses were performed to examine changes in experiential avoidance, values alignment, subjective experiences of life meaning and depression. Findings around the ACT model of values were consistent with baseline; change on process measures was

highly correlated with change in depression scores. Similar correlations between changes on the process measures and change on the GHQ measure of general health were also found.

These correlations in change scores provide additional support for the utility of the ACT model of values and, given the significant relationships between values and depression and suicidality found in this and previous studies, this is a significant finding worthy of continued efforts at refining effective values work. These findings also provide further support for the utility of the VAQ as a values measure in future studies.

Pre-intervention and Processes

Although the ACT model was supported by analyses of correlations between change scores, the pre-intervention did not appear to have had a differential effect on process measures, which included values and avoidance measures. Analyses were performed to examine changes in process measures in the values condition relative to the control condition at follow-up. Effects were found for both groups on values and avoidance measures over time, but no differences were found between condition or between condition over time.

This result needs to be harmonized with the fact that the manipulation check showed some impact, and a small group of pre-intervention participants not receiving treatment following seemed to show movement. There are a number of possibilities. The interventions may not have had a lasting impact, and participants who sensed that effect might have been more likely to choose to stay in treatment. It could also be that treatment as usual interacted with intervention. We will discuss this possibility in more detail

below.

Outcomes

Participants improved on measures of general health and depression over time. Results were examined to see if the pre-intervention group would display improved mental health over time relative to the control group. On the measure of depression, a marginally significant interaction between time and condition were found in favor of the control group. This alone was a striking result, as the values exercises in the pre-intervention were derived from ACT, a well-supported treatment for depression.

Analyses also examined the participants who entered the study with clinically significant depression scores found a significant and large interaction between time and condition for change scores, but differences in baseline conditions in the groups complicated interpretation of these results. Additional analyses including baseline levels of key process variables as covariates were performed to attempt to adjust for these baseline differences and showed large effects for condition, providing some additional evidence that the poor outcomes for the values pre-intervention condition may not have been an artifact.

The values pre-intervention and counseling center treatment combination appears to have actually undermined treatment for depression for those already in the depressed range at baseline. This suggests that the positive results with ACT for depression in other studies cannot be attributed to values work alone, and that in fact values work without other supporting factors may even have a negative effect on depression. The findings for the GHQ, the primary process measure in the study, were not significant (although they

were in the same direction) suggesting that these results may be particularly strong in the area of depression in those already dealing with clinically significant depression.

The findings in the subgroup of participants who received the values pre-intervention at intake and filled out post questionnaires, but did not receive additional psychotherapy following the pre-intervention, provide additional information. Although there were only 6 such participants, 5 of the 6 had clinically significant depression scores and this group showed large effect sizes and effects approaching significance on both values measures at follow-up. Although there was no comparable group to examine in the control condition, these results combined with the information that 5 out of these 6 participants indicated that they believed they experienced improvement of some kind out of their values intake procedure are suggestive. This provides some very limited evidence that the values pre-intervention may have had a positive impact on initial purpose and values. However, since these participants voluntarily withdrew from treatment it could also merely reflect a selection effect. For example, those spontaneously improving for reasons other than the intervention may have chosen not to continue with therapy.

If the values pre-intervention participants were initially affected by the values work, it was not so dramatically that their orientation toward the purposes of therapy changed drastically (the effect size on the manipulation check was .36, which is small). Responses to the manipulation check were just barely in the positive values direction in the values group ($M = 5.16$, with 6 meaning neutral and 2 meaning entirely in the positive values direction). It could simply be that the value intervention had longer term iatrogenic effects despite this initially small but positive effect (known to be positive since lower scores on the manipulation check were associated with less

psychopathology). Conversely if the initial difference detected by the manipulation check was sustained and potentially important in the course of treatment itself (which we cannot know since additional measures were taken only at follow up) it could be that the values work became inert or harmful only when combined with treatment as usual following the intake.

It seems worthwhile to speculate on that possibility. If that did occur, how would it have occurred? One possibility is that values work raised the bar for treatment but if therapy itself was not especially effective participants may have blamed themselves. Similar effects have been shown elsewhere. For example, self-help books sometimes have an iatrogenic effect due to raised expectations followed by poor outcomes and then self-blame (see Rosen, Glasgow, & Moore, 2003 for a review).

Another possibility is that the less avoidant goals suggested in the pre-intervention were not supported by therapists, which could have led to a sense of personal failure and relatively poorer depression outcomes. A similar thing could have happened if therapists were unwilling or unable to accommodate a greater values focus in treatment. Clients could have felt more aware of their values or more interested in doing more values focused work, but received treatment that was not in line with this focus.

The study utilized an Acceptance and Commitment Therapy approach to values, given the considerable past empirical support for this therapeutic approach with a variety of conditions. One of the limitations of this approach may have been the lack of a full ACT preparation, particularly given that most ACT research involves this more complete ACT preparation. It is possible that the ACT conception of therapeutic goals may be inconsistent with the therapeutic assumptions of some approaches to psychotherapy

which participants may have received following their initial intake. Clients may have gotten in touch with values at intake only to go on to receive therapy that did not support integrating this work usefully, as more recent research has indicated is possible with ACT approaches to values.

This interaction is suggested by the comparatively smaller change in depression scores in the pre-intervention group, in spite of the apparent effect of the pre-intervention on values. Given the small n in the study and the brevity of the ACT values pre-intervention, even some cases with this lack of support for continuing values work could have introduced a problematic level of variability for assessing the value of the initial pre-intervention values work in participants who received therapy following intake.

Although we do not have data about specifics of the treatment participants received at the counseling center, we do know that the counseling center was under increasing pressure to not maintain a wait list for psychotherapy. One result of this was that shortly after the commencement of this study there was a push to refer as many clients as possible to general groups that emphasized skills training and coping methods. Although such a group need not be ACT inconsistent, it does seem remarkable that most of the groups themselves were titled “Take Control of Your Life”, a statement that could have been scored as avoidant on the values manipulation check in the present study if it referred to control over experience and not behavior linked to positive purposes.

There was also an increased push for brief therapy in the Counseling Center. If that affected the availability of the therapist for values work, this could also have been a factor in outcomes. Although we do not have data on specifically what happened in treatment as usual in individual therapy, we can combine what we know about the

environment around therapy in the Counseling Center at the time of the study and what was being done in groups at the time and come up with some conjectures.

If brief strategies dealt more with managing difficult feelings or getting clients to a place where they could be discharged, they may have been a poor match for the study intervention. The ACT model of values, which was supported by baseline data and change score correlations, is a model that dignifies approaching and accepting difficult emotional experiences when they are on the way to a valued life. Given limited time with clients, the inclination of therapists may have been approaches more like teaching strategies to manage difficult feelings. This kind of an approach is culturally mandated and not at all uncommon in psychotherapy, and might be particularly supported by an atmosphere of pressure in which therapists themselves may be struggling to manage difficult feelings around the treatment environment.

Especially given that the majority of therapists at the Counseling Center would not identify ACT or related approach as their primary treatment approach, it seems very possible that if a client presented with difficult emotional experiences in a pressured treatment environment, therapists might focus on these difficult emotional experiences as the problem, exactly as clients themselves may do when they present in therapy, rather than take the broader values approach suggested to be useful by ACT research. If emotionally avoidant strategies mandated by the therapist were the source of a negative interaction with the values pre-intervention in the study, this is could have important implications for future values research and the construction of values work in psychotherapy. In particular it would suggest that values work is not necessarily a short cut in psychotherapy. Part of the impetus for the present study was the increased

pressures in college treatment environments, but therapists may need protection from some of these same pressures in order to respond appropriately to a values focused course of treatment.

Limitations

Study limitations may have played a considerable role in study findings. Although the values pre-intervention did not demonstrate significant effects for enhancing psychotherapy at 3 month follow-up and results suggest it even impeded the positive effects of therapy on depression, there are many unknown factors involved in these results. The most important limitation may have been that human subjects and setting limitations did not allow for control of the amount or type of therapy participants received following their intake procedure, so this may have introduced additional variables that influenced outcome in participants not in this small group. It seems possible that the combination of treatment following the pre-intervention and the pre-intervention could be the source of some of the findings, but without more knowledge of the specific treatments involved following pre-intervention limited conclusions can be drawn about exactly what may make values work unhelpful, or what might be the necessary context of useful values work.

The likely factors in intervention following pre-intervention responsible for this result are probably related to individual therapists who may not have worked with clients in a way that supported or utilized the values work at intake. There may have been considerable effects in the interaction of the values work at pre-intervention and subsequent therapeutic work. It is also possible that clients in the control group also may have received an individual therapist who did values work following the intake. These

factors limit the ability to draw general conclusions about values in the present study, or conclusions about the specific factors involved in useful values work.

The pre-intervention in the present study was also very brief, and this may have presented some limitations both generally and particularly in terms of the Acceptance and Commitment Therapy approach. The pre-intervention may have been too brief to have a lasting impact in terms of client values if participants went on to further intervention which did not support their values work. We would expect this continuing support to be important in affecting values related variables such as depression. Acceptance and Commitment Therapy works from the assumption that valued living, rather than reduction of difficult thoughts and feelings, is the desired outcome in therapy and this is the frame in which values exercises were conducted. The brevity of the pre-intervention may not have allowed participants enough time to usefully integrate this approach in their lives if later therapy did not support it as well. We could imagine that, for instance, that our hypothetical client earlier with anxiety got in touch with values around relationships and was matched with a therapist who did more solution-focused work related to controlling the anxiety, and that in this instance the values pre-intervention could even be depressing – the client could be left more in touch with how out of alignment they were with their values around relationships without finding support to improve their relationships. This is a purely hypothetical example, but it does illustrate why we might see even the brief values pre-intervention alone affecting values, but a lack of effect and even a differential effect between the values and control group on depression following a course of therapy. Although most therapists may say that client values are an important part of their therapeutic approach, ACT does have a unique take on what values are, and

it is quite possible that conceptualizations like the one that anxiety could be an access point to deeper relationships are unlikely to be sustained by many therapeutic approaches. Some therapists' approaches may genuinely not support clients in their values and others may quite innocently undermine the unique ACT model.

Conclusions

The study found correlations between measures of depression and values and suicidality and values, consistent with other research and indicating values may be a useful area of future research in terms of reducing suicidality and depression. The study also found significant relationships between values, experiential avoidance, depression and general health, supporting the ACT model of values and the utility of values as a research construct more generally. The study developed an ACT consistent process measure of values that performed consistent with the ACT model.

As compared to the control condition, the values pre-intervention led to marginally significantly less avoidant reasons for therapy before treatment commenced. As compared to the control condition, the values pre-intervention condition did not show a significant difference on pre to follow up changes in general health nor on process measures. Depression did not improve in the values pre-intervention condition, but did in the control condition. This led to a significant interaction between treatment and time for depression outcomes, both for the overall sample and for those who were depressed at baseline. Results on values measures and subjective reports in the participants who received the values pre-intervention but no course of treatment suggested the pre-intervention affected values, but an interaction between the pre-intervention and the

course of treatment to follow rendered the pre-intervention inert or possibly even led to more depressed outcomes.

Although the brevity of the values intervention may have been somewhat limiting, the lack of an integrated course of treatment supporting the values work in the course of treatment following the pre-intervention may have been a major factor. It is not clear from this study what combinations with values may be responsible for the results on depression scores that were particularly pronounced in the already depressed group. The interpretation that values without other supporting work may not be effective, though, is also suggested by more recent research looking at the values component of ACT without the acceptance and defusion components (e.g., Villatte et al., 2010). Simply being aware of one's values is not necessarily therapeutic without the surrounding supportive therapeutic work to integrate this awareness and pursue more valued ways of living, and the current findings suggest that any course of therapy may not be enough to support this work. The small n in the study and the additional variability introduced by the wide variety of therapeutic interventions study participants received following the study pre-intervention limits the ability to draw specific conclusions about what factors may be important in integrating values usefully to empower a full course of treatment.

Directions for future research

The findings of the study do support important relationships between values and depression, values and experiential avoidance, and the ACT model and the importance of the values construct more generally. It is left to discover how values interventions would need to be developed to supplement an already existing course of treatment, or what

kinds or elements of treatments could be usefully combined with values interventions. The present study made use of a values pre-intervention at intake, but could not control for or even assess the content of therapy following intake, and research with better control over these additional factors would allow for more specific conclusions about these combinations. The specific factors that may support effective values work in an ongoing course of therapy are an intriguing area for further research and would be useful to developing future treatments.

Although some ideas were generated about what factors may have been responsible for some of the results on depression measures in the pre-intervention group in the study, the specific nature of the relationship between the course of treatment following pre-intervention, values and depression is unclear. Future studies would also be well advised to consider the possibility of limiting or iatrogenic effects with values work not explicitly supported by a course of treatment that has been validated as compatible. Outcome issues related to values not being powerfully addressed would also be useful to investigate.

Future research would also be advised to address participant characteristics that may indicate the utility of values work. Although the number of participants in the present study was too small to draw empirical conclusions about those who benefited from values work, or if there were particular participant groups for whom values work was iatrogenic, the subjective reports of therapists who implemented the values pre-intervention in the study, which were elicited individually by the study investigator, did indicate that all therapists felt that some individuals benefited and others did not. The general consensus of the therapists implementing the values pre-interventions was that

some participants were not as able to contact values in a way that felt helpful during the brief pre-intervention.

Little is currently known with regard to specific combinations of values and psychotherapy approaches or psychotherapeutic elements, and many approaches to these factors could results in informative work about values and effective treatment. A longer values intervention which might allow participants to more fully benefit from the ACT approach to values or an intervention which was more fully integrated with the course of a controlled therapy could both be useful directions for future investigation.

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Appendix A: Existing Measures

AAQ-2

Below you will find a list of statements. Please rate how true each statement is for you by circling a number next to it. Use the scale below to make your choice.

1	2	3	4	5	6	7
never true	**very seldom true**	**seldom true**	**sometimes true**	**frequently true**	**almost always true**	**always true**

1.	Its OK if I remember something unpleasant.	1	2	3	4	5	6	7
2.	My painful experiences and memories make it difficult for me to live a life that I would value.	1	2	3	4	5	6	7
3.	I'm afraid of my feelings.	1	2	3	4	5	6	7
4.	I worry about not being able to control my worries and feelings.	1	2	3	4	5	6	7
5.	My painful memories prevent me from having a fulfilling life.	1	2	3	4	5	6	7
6.	I am in control of my life.	1	2	3	4	5	6	7
7.	Emotions cause problems in my life.	1	2	3	4	5	6	7
8.	It seems like most people are handling their lives better than I am.	1	2	3	4	5	6	7
9.	Worries get in the way of my success.	1	2	3	4	5	6	7
10.	My thoughts and feelings do not get in the way of how I want to live my life.	1	2	3	4	5	6	7

Beck Depression Inventory

Instructions: This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the one statement in each group that best describes the way you have been feeling during the past two weeks, including today. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement of any group, including Item 16 (changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

1. Sadness
   - 0 I do not feel sad.
   - 1 I feel sad much of the time.
   - 2 I am sad all the time.
   - 3 I am so sad or unhappy that I can't stand it.

2. Pessimism
   - 0 I am not discouraged about my future.
   - 1 I feel more discouraged about my future than I used to be.
   - 2 I do not expect things to work out for me.
   - 3 I feel my future is hopeless and will only get worse.

3. Past Failure
   - 0 I do not feel like a failure.
   - 1 I have failed more than I should have.
   - 2 As I look back, I see a lot of failures.
   - 3 I feel I am a total failure as a person.

4. Loss of Pleasure
   - 0 I get as much pleasure as I ever did from the things I enjoy.
   - 1 I don't enjoy things as much as I used to.
   - 2 I get very little pleasure from the things I used to enjoy.
   - 3 I can't get any pleasure from the things I used to enjoy.

5. Guilty Feelings
   - 0 I don't feel particularly guilty.
   - 1 I feel guilty over many things I have done or should have done.
   - 2 I feel quite guilty most of the time.
   - 3 I feel guilty all of the time.

6. Punishment Feelings
   - 0 I don't feel I am being punished.
   - 1 I feel I may be punished.
   - 2 I expect to be punished.
   - 3 I feel I am being punished.

7. Self-Dislike
   - 0 I feel the same about myself as ever.
   - 1 I have lost confidence in myself.
   - 2 I am disappointed in myself.
   - 3 I dislike myself.

8. Self-criticalness

0 I don't criticize or blame myself more than usual.
1 I am more critical of myself than I used to be.
2 I criticize myself fro all of my faults.
3 I blame myself for everything bad that happens.

9. Suicidal Thoughts or Wishes
0 I don't have any thoughts of killing myself.
1 I have thoughts of killing myself, but I would not carry them out.
2 I would like to kill myself.
3 I would kill myself if I had the chance.

10. Crying
0 I don't cry anymore than I used to.
1 I cry more than I used to.
2 I cry over every little thing.
3 I feel like crying, but I can't

11. Agitation
0 I am no more restless or wound up than usual.
1 I feel more restless or wound up than usual.
2 I am so restless or agitated that it's hard to stay still.
3 I am so restless or agitated that I have to keep moving or doing something.

12. Loss of Interest
0 I have not lost interest in other people or activities.
1 I am less interested in other people or things than I used to be.
2 I have lost most of my interest in other people or things.
3 It's hard to get interested in anything.

13. Indecisiveness
0 I make decisions about as well as ever.
1 I find it more difficult to make decisions than usual.
2 I have much greater difficulty in making decisions than I used to.
3 I have trouble making any decisions.

14. Worthlessness
0 I do not feel I am worthless.
1 I don't consider myself as worthwhile and useful as I used to.
2 I feel more worthless as compared to other people.
3 I feel utterly worthless

15. Loss of Energy
0 I have as much energy as ever.
1 I have less energy than I used to have.
2 I don't have enough energy to do very much.
3 I don't have enough energy to do anything.

16. Changes in Sleeping Pattern
0 I have not experienced any change in my sleeping pattern.
1a I sleep somewhat more than usual.
1b I sleep somewhat less than usual.
2a I sleep a lot more than usual.
2b I sleep a lot less than usual.
3a I sleep most of the day.

3b I wake up 1-2 hours early and can't get back to sleep

17. Irritability
    0 I am not more irritable than usual.
    1 I am more irritable than usual.
    2 I am much more irritable than usual.
    3 I am irritable all the time.

18. Changes in Appetite
    0 I have not experienced any change in my appetite
    1a My appetite is somewhat less than usual.
    1b My appetite is somewhat greater than usual.
    2a My appetite is much less than before.
    2b My appetite is much greater than usual.
    3a I have no appetite at all.
    3b I crave food all the time.

19. Concentration Difficulty
    0 I can concentrate as well as ever.
    1 I can't concentrate as well as usual.
    2 It's hard to keep my mind on anything for very long.
    3 I find I can't concentrate on anything.

20. Tiredness or Fatigue
    0 I am no more tired or fatigued than usual.
    1 I get more tired or fatigued more easily than usual.
    2 I am too tired or fatigued to do a lot of things I used to do.
    3 I am too tired or fatigued to do most of the things I used to do.

21. Loss of Interest in Sex
    0 I have not noticed any recent change in my interest in sex.
    1 I am less interested in sex than I used to be.
    2 I am much less interested in sex now.
    3 I have lost interest in sex completely.

GHQ

We would like to know if you have had any medical complaints, and how your health has been in general, *over the past few weeks*. Please answer ALL questions by circling the answer which you think most nearly applies to you. Remember that we want to know about present and recent complaints, not those that you had in the past.

Have you recently:

1. been able to concentrate on whatever you're doing?

4	3	2	1
Better than usual	Same as usual	Less than usual	Much less than usual

2. lost much sleep over worry?

4	3	2	1
Not at all	No more than usual	Rather more than usual	Much more than usual

3. felt that you are playing a useful part in things?

4	3	2	1
More so than usual	Same as usual	Less useful than usual	Much less useful

4. felt capable of making decisions about things?

4	3	2	1
More so than usual	Same as usual	Less so than usual	Much less capable

5. felt constantly under strain?

4	3	2	1
Not at all	No more than usual	Rather more than usual	Much more than usual

6. felt you couldn't overcome your difficulties?

4	3	2	1
Not at all	No more than usual	Rather more than usual	Much more than usual

7. been able to enjoy your normal day-to-day activities?

4	3	2	1
More so than usual	Same as usual	Less so than usual	Much less than usual

8. been able to face up to your problems?

4	3	2	1
More so than usual	Same as usual	Less able than usual	Much less able

9. been feeling unhappy and depressed?

4	3	2	1
Not at all	No more than usual	Rather more than usual	Much more than usual

10. been losing confidence in yourself?

4	3	2	1
Not at all	No more than usual	Rather more than usual	Much more than usual

(GHQ Continued)

Have you recently:

11. been thinking of yourself as a worthless person?

4	**3**	**2**	**1**
Not at all	No more than usual	Rather more than usual	Much more than usual

12. been feeling reasonably happy, all things considered?

4	3	2	1
More so than usual	About same as usual	Less so than usual	Much less than usual

Purpose in Life Test

1. I am usually:

1 2 3 4 5 6 7
completely exuberant
bored (neutral) enthusiastic

2. Life to me seems:

1 2 3 4 5 6 7
always completely
exciting (neutral) routine

3. In life I have:

1 2 3 4 5 6 7
no goals very clear
or aims at all (neutral) goals and aims

4. My personal existence is:

1 2 3 4 5 6 7
utterly meaningless very purposeful
without purpose (neutral) and meaningful

5. Every day is:

7 6 5 4 3 2 1
constantly new exactly
and different (neutral) the same

6. If I could choose, I would:

1 2 3 4 5 6 7
prefer never to have I would like nine
been born (neutral) more lives just
like this one

7. After retiring, I would:

7 6 5 4 3 2 1
like to do some
of the exciting (neutral) loaf completely for the rest
things I have of my life

always wanted to do

8. In achieving life goals, I have:

1 2 3 4 5 6 7
made no (neutral) progressed to complete
progress whatever fulfillment

9. My life is:

1 2 3 4 5 6 7
empty except (neutral) filled with
for despair exciting good things

10. If I should die today, I would feel that my life has been:

7 6 5 4 3 2 1
very worthwhile (neutral) completely worthless

11. In thinking of life, I:

1 2 3 4 5 6 7
often wonder (neutral) always see a reason
why I exist for being here

12. As I view the world in relation to my life, the world:

1 2 3 4 5 6 7
completely (neutral) fits meaningfully
confuses me with my life

13. I am a:

1 2 3 4 5 6 7
very irresponsible (neutral) very responsible
person person

14. Concerning man's freedom to make his own choices, I believe man is:

7 6 5 4 3 2 1
absolutely free (neutral) completely bound by
to make all limitations of heredity
life choices and environment

15. With regard to death, I am:

7 6 5 4 3 2 1
prepared (neutral) unprepared
and unafraid and frightened

16. With regard to suicide, I have:

1 2 3 4 5 6 7
thought of it (neutral) never given it
seriously as a thought
a away out

17. I regard my ability to find meaning, purpose or mission in life as:

7 6 5 4 3 2 1
very (neutral) practically
great nonexistent

18. My life is:

7 6 5 4 3 2 1
in my hands (neutral) out of my hands
and I am in and controlled by
control of it external factors

19. Facing my daily tasks is:

7 6 5 4 3 2 1
a source of (neutral) a painful and boring
pleasure and experience
satisfaction

20. I have discovered:

7 6 5 4 3 2 1
no mission clear cut goals
or purpose and a satisfying
in life life purpose