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### Personal Growth Initiative and Valuing Personal Growth in a Sample of Patients Treated in an Acute Psychiatric Setting

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SUFFOLK UNIVERSITY

PERSONAL GROWTH INITIATIVE AND  
VALUING PERSONAL GROWTH  
IN A SAMPLE OF PATIENTS TREATED IN  
AN ACUTE PSYCHIATRIC SETTING

A DISSERTATION SUBMITTED TO  
THE FACULTY OF THE COLLEGE OF ARTS AND SCIENCES  
IN CANDIDACY FOR THE DEGREE OF  
DOCTOR OF PHILOSOPHY

DEPARTMENT OF PSYCHOLOGY

BY

SARA B. DANITZ

BOSTON, MASSACHUSETTS

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## **Abstract**

The role of personal growth in psychological functioning has been emphasized throughout the history of psychology (e.g., Erikson, 1950; Ryff, 1989a; 1989b). Recently, Robitschek and colleagues (2012) proposed that personal growth initiative (PGI) is a developed skill set that supports intentional and active engagement in growth processes. Although PGI has previously been found to be positively associated with measures of psychological well-being and negatively associated with indices of psychological distress, to date this research has been limited by the frequent use of cross-sectional designs and non-clinical (primarily student) samples. Further, the importance of valuing personal growth (VPG), posited to be a key component of PGI, has gone unstudied. These personal growth variables are particularly relevant to explore in a clinical population, since they may be important predictors of response to psychotherapy, they may be malleable, and as such, appropriate targets for therapy.

This study examined PGI and VPG longitudinally in a clinical population, in order to determine their relationship with psychological distress and well-being. The current study also examined whether treatment response was predicted by PGI and VPG, whether PGI and VPG change as a function of treatment, and if so, whether the cultivation of personal growth variables predicted response to treatment. Two hundred and sixty nine patients in an acute psychiatric setting filled out measures of PGI, VPG, and psychological functioning at admission and discharge from treatment in a partial hospitalization program.

Both PGI and VPG were significantly and negatively associated with depression and significantly and positively associated with psychological well-being at baseline. Baseline personal growth variables did not predict changes in depression, well-being or clinical global improvement at treatment discharge. Personal growth variables significantly increased from baseline to post-treatment, and changes in personal growth variables over the course of treatment were correlated with changes in depression and well-being, as well as clinical global improvement. Moreover, changes in PGI and VPG significantly predicted changes in depression and well-being over and above the previously established predictors of treatment credibility and expectancy (Webb, Kertz, Bigda-Peyton, & Björgvinsson, 2013).

Results from this study expand our understanding of the construct of personal growth and potentially inform interventions aimed at enhancing psychological functioning. The results of this study suggest that personal growth is a relevant construct to explore in the context of psychotherapy, and that valuing personal growth is an important part of this construct. Findings provide implications for personal growth as a potential mechanism to enhance psychological functioning. Future directions should include assessing personal growth variables at multiple time points over the course of treatment in order to examine mediation, as well as following treatment discharge. Replicating findings and examining personal growth variables in different clinical contexts should be researched as well.

# CHAPTER ONE

## INTRODUCTION

### **Defining the Construct of Personal Growth**

Throughout the history of psychology, scholars have emphasized the key role personal growth plays in psychological wellness. Erikson's (1950) emphasis on continued growth throughout the lifespan, Rogers's (1961) view of the fully functioning person, and Maslow's (1968) conception of self-actualization all underscore the importance of engaging in the process of striving over reaching an ideal endpoint (Prochaska & Norcross, 1994). Although these historical perspectives have contributed to the development of theory on the centrality of personal growth in psychological functioning, they have arguably had limited impact on the accumulation of empirical support, since by and large they have not provided an adequate operational definition of the construct (Ryff, 1989b).

Ryff (1989a) sought to integrate previous perspectives into a parsimonious summary of psychological well-being that identified personal growth as one of six core dimensions of psychological being (i.e., self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, personal growth). Ryff conceptualized personal growth as an aspect of optimal functioning that involves one's need to expand and grow as a person, continuously develop, realize one's potential, and actualize oneself. In an attempt to measure this construct, Ryff (1989b) had three "item writers" generate potential items by instructing them to write self-descriptive statements that fit with theoretically-informed definitions of each dimension and that could be

applicable to adults of any age and sex. These items were then administered to a sample of adults ( $n = 321$ ) along with pre-existing measures of psychological well-being. This newly constructed measure of personal growth demonstrated both high internal consistency and test-retest reliability (as did the overall measure of psychological well-being and the other five subscales). However, interestingly, the personal growth subscale was not found to be strongly associated with prior indexes of positive functioning. Although this could reflect problems with the validity of the measure, Ryff interpreted this finding to mean that personal growth is a unique construct that has not been fully tapped into by existing instruments (1989b). Regardless, Ryff's measure of psychological well-being continues to be widely used in the rapidly growing literature on psychological well-being (e.g., personal strivings; Emmons, 1986).

Almost a decade later, in an attempt to move the understanding of personal growth forward, Robitschek developed a program of research focused specifically on understanding the means by which personal growth occurs. Robitschek (1998) argued that three processes can stimulate growth: processes that are developmental (i.e., generally without awareness of the individual, such as a child who develops moral reasoning without being aware of it occurring), environmental (i.e., generally within awareness of the individual, but happening despite the individual's resistance to this growth, such as a widow who becomes more self-sufficient following the loss of her spouse but feels resistant to this since she sees it as a betrayal of the spouse), and intentional (i.e., individual is fully aware and is actively engaged in the process, such as someone who decides he is not satisfied with his career choice and willingly engages in self-exploration in order to find a better match). The latter growth process, intentional

personal growth, is the focus of Robitschek's work. Robitschek argues that the processes that stimulate growth are crucial, and the former two processes that are not intentional are significantly negatively related to psychological well-being (1999). It is possible that people are unable to sustain changes when growth is unintentional, especially when dealing with stressors (Robitschek et al., 2012). Ryff's theory ultimately fails to make this essential distinction about the means by which growth occurs. Thus, both Ryff's theory and measure is problematic, which points to the need for a new theory and measure of personal growth.

Robitschek (1997) coined the term Personal Growth Initiative (PGI) to encompass the aforementioned active and intentional engagement in the process of personal growth. She argues that PGI encompasses both cognitive and behavioral components. The cognitive components, reflective of self-efficacy, include beliefs, attitudes, and values that support personal growth, whereas the behavioral components involve taking actions aimed at enhancing personal growth (Robitschek, 1998). Robitschek's conceptualization of PGI is informed by Prochaska and DiClemente's (1992) Preparation Stage of Change, which involves a readiness for change that is both attitudinal and behavioral.

The PGI Scale (PGIS; Robitschek, 1998), informed by this theory, was originally developed to evaluate the outcome of a life/career renewal program. Robitschek theorized that stress experienced in an environment that is conducive to exploring the self and problem solving would facilitate personal growth (1997). Program instructors and course directors created the initial pool of items by brainstorming statements in line with achieving the life/career renewal program's objectives, which included understanding the process of change, clarifying values, setting goals, and developing plans of action for the

future. Although the items generated were initially grouped into five subscales (Purpose, Self-Confidence, Transition, Balance, and Pattern), when the measure was administered to a sample of adults ( $n = 167$ ), fit indices suggested a one-factor model of PGI (Robitschek, 1998).

In order to test her theory that PGI is specifically related to growth that is intentional and in one's awareness, Robitschek (1999) assessed the extent to which individuals could identify the means by which they achieved psychological well-being. Specifically, participants were presented with five of the six domains of psychological well-being proposed by Ryff (the sixth domain, personal growth, was omitted because of its overlap with PGI) and asked to rate the extent to which they arrived at each domain of well-being via three distinct paths: growth that was unintentional and out of the participant's awareness (such as growth that is developmental; i.e., "I don't know how I ended up at my place on this continuum. It just happened"), growth that was unintentional but in the participants awareness (i.e., "I remember one or more situations which influenced this area but I didn't intentionally learn/grow from it"), and growth that was aware and intentional ("I remember one or more situations in which I intentionally tried to grow in this area"). As predicted, PGI was significantly and positively related to growth that was intentional and in awareness and was negatively related to the other two types of growth (Robitschek, 1999). Moreover, PGI, and the aware and intentional ways of growing, were positively and significantly related to psychological well-being whereas growth that was unintentional and out of awareness, and growth that was unintentional and in awareness were negatively associated with well-being. Although Robitschek interpreted these findings as supportive of her theory, it should be noted that the measure

of psychological well-being used in the study was specifically constructed for the study and the internal consistency of the scale was modest (Cronbach's alpha = .64).

Over time, Robitschek has modified both her theory and operational definition of PGI. Rather than continuing to view PGI as a process or orientation towards growth, Robitschek now describes it as a developed skill-set, which encompasses both the global inclination to intentionally improve oneself and the specific skills needed to do so (Robitschek et al., 2012). Robitschek and colleagues posit that these skills are transferable across life domains and that they can be targeted and enhanced in response to an intervention (2012). Robitschek has continued to emphasize the importance of intentional self-change. Specifically, she argues that a tendency toward intentional self-change is distinctly different from the simple recognition that change is inherent in human development and that this stance allows people to better sustain changes, particularly when dealing with stressors (2012).

As the PGIS was initially developed by program instructors to specifically assess the impact of a life/career renewal program, Robitschek and colleagues (2012) argued that it might not adequately capture all of the dimensions of the evolving PGI theory. For example, although Robitschek theorizes that PGI includes both cognitive and behavioral components, the original PGIS was a unidimensional scale that did not adequately tap into these domains. In order to potentially address these limitations, Robitschek and colleagues (2012) recently developed the multidimensional Personal Growth Initiative Scale-II (PGIS-II).

As a first step in the process of measure development, Robitschek and colleagues (2012) expanded their description of the cognitive components to PGI to include

expectations about change process, metacognition about intentional personal growth, knowledge about the change process, and valuing of personal growth. They further defined the behavioral components as seeking out opportunities for personal growth and following through on plans for intentional personal growth. Consistent with scale development best practices by Worthington and Whittaker (2006), Robitschek and colleagues next generated items that they believed tapped into these constructs. These items were piloted for clarity, and administered to a large sample of undergraduates ( $n = 632$ ) in order to assess the factor structure and identify and eliminate weak items.

Four exploratory factor analyses were conducted on one half of the sample. Although 13 factors initially emerged in the first EFA with eigenvalues over 1.0, the scree plot suggested a break in slope around Factor 6. The themes of these six factors were Intentional Behaviors, Planfulness, Using Resources, Readiness for Change, Knowledge about the Growth Process, and Valuing the Process of Change (Robitschek et al., 2012). The next seven factors demonstrated mixed content and were not retained.

A subsequent EFA on the 25 items that loaded on the first six factors was performed and yielded five factors. The fifth factor was made up of five items that either loaded on one of the other four factors or that were deemed redundant or irrelevant. Thus, all but one of the five items were dropped and a third EFA was conducted on the remaining 21 items. This EFA revealed four factors that had eigenvalues greater than 1.0. Factor 1 appeared to have mixed content, tapping into Intentional Behavior and Valuing Personal Growth. The authors chose to drop the items tapping into valuing personal growth, arguing that despite the potential importance of valuing personal growth to success in achieving personal growth, items tapping into *attitudinal* rather than an

*active personal growth* were less relevant to the newly constructed measure.

A fourth EFA on 17 items yielded the current four factor, 16-item measure.

These factors include: Readiness for Change (i.e., knowing when one is ready to change in a certain way), Planfulness (i.e., ability to plan a specific process of change), Intentional Behavior (i.e., engaging in certain behaviors that facilitate the growth process), and Using Resources (i.e., actively seeking out and utilizing external sources to grow). Robitschek and colleagues concluded that the Planfulness and Readiness for Change subscales capture the cognitive skills sets of PGI, while the Using Resources and Intentional Behavior subscales represent the behavioral skill sets of PGI.

This four-factor structure was validated via confirmatory factor analysis on the remaining half of the sample. Further, the solution has been confirmed in samples of European undergraduate students (Weigold, Porfelli, & Weigold, 2013), and international student samples (e.g., Yakunina, Weigold, & Weigold, 2013). Moreover, the PGIS-II has been shown to have adequate concurrent and discriminant validity and test-retest reliability (Robitschek et al., 2012). However, one clear shortcoming of this measure is that it fails to capture the conceptually important construct of valuing personal change that was a key component of Robitschek and colleagues' (2012) theory of PGI. Although other researchers have continued to hypothesize that valuing the personal growth process is a salient feature of intentional growth (e.g., Sharma & Rani, 2013), there is no research to support this premise because the construct is not measured within the PGIS-II.

### **Correlates of Personal Growth**

A large literature supports the association between PGI and a broad array of positive personality attributes, such as assertiveness (Robitschek et al., 2012), self-

efficacy (Ogunyemi & Mabekoje, 2007), and hardiness (Yakunina, Weigold, Weigold, Hercegovac, & Elsayed, 2013). Studies have also demonstrated a relationship between PGI and psychological health and well-being using multiple indicators including happiness, self-acceptance, life satisfaction, and emotional, psychological, and social well-being (Robitschek & Keyes, 2009) across a variety of samples including community adults (Klockner & Hicks, 2008), college students (Hardin, Weigold, Robitschek & Nixon, 2007), international students (e.g., Yakunina, Weigold, & Weigold, 2013), and women who have recently developed a hearing disability (Kashubeck-West & Meyer, 2008).

Five studies have examined the relationship between psychological difficulties and PGI using the *original* version of the PGIS. PGI was found to be negatively associated with general psychological distress (Ayub & Iqbal, 2012; Ogunyemi & Mabekoje, 2007), trait anxiety (Weigold & Robitschek, 2011), social anxiety, negative affect (Hardin et al., 2007), depression and post-traumatic stress symptoms (Blackie, Jayawickreme, Forgeard, & Jayawickreme, 2015). However, none of these studies used clinical samples. In fact, only one study to date has examined PGI in a clinical population. Sultan (2011) found that patients diagnosed with depression reported lower levels of PGI than a comparison sample of patients diagnosed with diabetes. However, this study, along with the other five cited above, used the original PGI, which was developed for a very narrow purpose and thus does not tap into the proposed multidimensional components of PGI.

More recently, five studies have demonstrated an association between PGI and psychological functioning using the PGIS-II. Sharma and Rani (2014) found that PGI

and psychological well-being, measured with the Psychological Well-Being subscale of the Mental Health Continuum-Short Form (MHC-SF; Keyes, 2009), were positively associated in a large sample ( $n = 960$ ) of university postgraduates in India. The relationship between PGI and psychological well-being (as measured by the Schwartz Outcome Scale, SOS-10; Blais et al., 1999) was also established in two samples of international students (Yakunina, Weigold, & Weigold, 2013; Yakunina, Weigold, Weigold, et al., 2013<sup>1</sup>).

The four subscales of the PGIS-II, and not the total score, were examined in relationship to psychological distress (as measured by the Depression Anxiety and Stress Scale [DASS; Lovibond & Lovibond, 1995] and the Positive and Negative Affect Schedule [PANAS; Watson, Clark, & Tellegen, 1988]) in a recent study with college students (Weigold et al., 2013). Three out of the four PGI subscales (i.e., Readiness for Change, Planfulness, and Intentional Behavior) were associated with psychological distress in the expected directions. Further, PGI factors accounted for 49% of the variance in psychological functioning. In a similar study, the relationship between the four subscales of the PGIS-II (and not the total score) and depressive symptoms (as measured by the 12-item version of the Center for Epidemiologic Studies Depression Scale [CES-D; Radloff, 1977]) was examined in a sample of adolescents and adults in living in Belgium (Luyckx & Robitschek, 2014). Each PGI subscale was significantly negatively associated with depressive symptoms.

Although these studies provide a first step to understanding the relationship

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<sup>1</sup>It is not entirely clear whether the sample used in this study (Yakunina, Weigold, Weigold, et al., 2013) is completely independent from the Yakunina, Weigold and Weigold (2013) sample, or if there is some overlap in participants.

between PGI and psychological distress, there are a number of methodological limitations that need to be addressed. Several studies used the original version of the PGI, (Blackie et al., 2015; Hardin et al., 2007; Ogunyemi & Mabekoje, 2007; Sultan, 2011; Weigold & Robitschek, 2011) which does not adequately capture the current conceptualization of PGI. Of the studies that use the most recent measure of PGI, nearly half of them (Luyckx & Robitschek, 2014; Weigold et al., 2013) fail to examine the PGI total score in relation to psychological functioning, which provides the most complete representation of the multifaceted personal growth construct. Additionally, no studies have looked at PGI (as measured by the PGIS-II) in a longitudinal study as a predictor of psychological distress. Therefore, little is known about the extent to which PGI predicts psychological distress over time. Finally, only one study has examined PGI in a clinical population and it used the original PGIS (Sultan, 2011).

### **The Importance of Personal Growth in a Clinical Population**

Despite the fact that PGI appears to be associated with psychological distress in normative samples, this association has yet to be studied in a clinical sample. Although the results from studies conducted with college student samples are commonly assumed to generalize to clinical populations, students may possess unique characteristics that influence findings (Henrich, Heine, & Norenzayan, 2010). For example, research suggests that the relationship between trait mindfulness and substance use behaviors differs in both magnitude (Karyadi, VanderVeen, & Cyders, 2014) and direction (Bowen & Enkema, 2014) between college student and clinical samples.

It may also be helpful to study PGI in a clinical context to determine whether it is an individual difference variable that can predict response to treatment. Recently, there

has been a call for increased research examining the role of patient variables in therapy (Bohart & Wade, 2013). Although the extant literature is relatively small in scope, several reviews suggest that patient variables make a strong contribution to treatment outcome (Bohart & Wade, 2013; Orlinsky, Grawe, & Parks, 1994; Orlinsky, Ronnestadt, & Willutski, 2004). Several researchers estimate that whereas therapy factors account for 13% of variance in outcome, patient factors could account for as much as 40% (Lambert, 1992) to 87% (Wampold, 2001) of the variance in outcome. Information on the predictive power of specific patient variables could have important implications for clinical practice and could potentially be used to individualize treatment and to match patients to therapy (Bohart & Wade, 2013).

Over the years, the examination of patient factors has moved from more stable demographic and disorder-related characteristics to a wider range of individual difference variables that may be amenable to change (Clarkin & Levy, 2004). Variables that impact the quality of the patient's participation in therapy (such as PGI) may be the most important determinant of treatment response (Orlinsky et al., 1994), perhaps even more useful than DSM-based diagnoses (Clarkin & Levy, 2004). Therapists who attend to patient strengths during the first session (which could be guided by the knowledge of which strength variables are most predictive of outcome), rather than honing in on specific problems, appear to be more successful (Gassmann & Grawe, 2006). To date, there are a number of such personal patient strengths such as openness to emotional experiencing, psychological mindedness, and motivation for change that positively impact patients' involvement in their therapy (Bohart & Wade, 2013; Norcross, Krebs, & Prochaska, 2011).

PGI may be an important patient variable in that it may affect the way that patients appraise, understand and approach their psychological difficulties. Those who are high in PGI view challenges as opportunities for personal growth (Luyckx & Robitschek, 2014); thus, they may have more favorable attitudes towards seeking psychological treatment (Ojedokun, 2011). Patients who are relatively higher in PGI may take a more active approach to dealing with stressors given the research linking PGI and problem-focused coping (Weigold & Robitschek, 2011).

In addition to being a potential moderator that could impact treatment outcome, personal growth may be a construct that can be cultivated and directly targeted through psychotherapy. There is a need for increased research on identifying the key components of effective treatment (i.e., agents/mechanisms of change) that may be common factors across psychological interventions (Kazdin, 2007; Lambert & Ogles, 2004). Information on mechanisms of action in interventions have important implications for improving treatment efficacy and outcome (Kazdin, 2007). Thus, research is needed to explore change in personal growth over the course of treatment.

Interventions targeting PGI have been examined in two studies to date, although one of these used the *original* version of the PGIS (Meyers, van Woerkom, de Reuver, Bakk, & Oberski, 2015), and both studies were conducted with non-clinical student samples (Thoen & Robitschek, 2013). In a study utilizing the original version of the PGIS in a sample of graduate students from a Dutch university, a strengths-focused intervention increased PGI from pre- to post-intervention (Meyers et al., 2015). Moreover, with the addition of two assignments following the end of the intervention, these results were maintained at 3-month follow up. Further, in a study of

undergraduates enrolled in an introduction to psychology course, a program including psychoeducation about the change process, insight into one's emotional state and current circumstances, engagement in growth activities, and setting goals and plans of action for the future increased self-reported PGI (as measured by the PGIS-II, 1 week following the intervention; Thoen & Robitschek, 2013). However, the effects of psychotherapy on PGI in a clinical population has yet to be examined. If patients experience an increase in PGI as a function of participating in therapy, it may enhance their mental health and serve as a protective factor against the reoccurrence of symptoms of psychological distress.

### **The Role of Strivings: Valuing Personal Growth**

As noted earlier, several theorists have posited the importance of valuing personal growth as a component of PGI (Robitschek et al., 2012; Sharma & Rani, 2013), despite the fact that items tapping into this construct were ultimately dropped from the PGIS-II. The extent to which an individual values personal growth may be particularly important in a clinical context. Patients who value personal growth may be more open to exploring painful material and learning new strategies than those who see treatment as a requirement for addressing personal deficits. Although there is no research supporting the potential benefits of valuing personal growth to a patient seeking psychotherapy, there is a large literature documenting the role that “valuing” more generally plays in psychosocial functioning.

Much of the research on the mental health benefits of “valuing” that has been published over the past 25 years, focuses on the concept of personal strivings (e.g., Emmons, 1986), measured using a variety of assessment strategies (e.g., The Personal Striving Assessment Packet; Emmons, 1986; The Personal Values Questionnaire;

Ciarrochi, Blackledge, & Heaven, 2006). Personal strivings are defined as important overarching life goals that individuals value and aim to accomplish through their daily behavior (Emmons, 1986), such as promoting happiness and hope to others and accepting others as they are (Emmons, 2005). Personal strivings are ideographic, proposed to reflect, “who a person is trying to be” in addition to what they are “trying to do,” and are thought to bring meaning and purpose to one’s life (Emmons, 2005, p.732). In other words, strivings can be thought of as personal roadmaps that direct one’s daily activities (Chen, Lee, Pehhtel, Gutowitz, & Kirk, 2012). In studies that code the personal strivings expressed by participants, valuing personal growth and health are the most frequently endorsed categories (Emmons, 2003b).

Both personal strivings and values are proposed to have distinct dimensions that may relate to psychological functioning. For example, in their model of psychological flexibility and well-being, Steve Hayes and colleagues (2006) distinguish between values *importance*, or the extent to which particular life directions are viewed as personally meaningful, and *committed action*, or the extent to which one consistently lives with one’s values. This distinction is seen in the Valued Living Questionnaire (VLQ; Wilson, Sandoz, Kitchens, & Roberts, 2010), which measures the extent to which individuals value (*importance*) and live consistently with their values (*behavioral commitment*) separately. Similarly, Emmons and colleagues propose that personal strivings involve the dimensions of *importance* (i.e., how important the striving is in one’s life), *commitment* (i.e., how committed one is to the striving; Emmons, 1986), and *goal-concordance* (e.g., the extent to which one’s behavioral initiatives match their core values; Sheldon & Elliot, 1999). Whereas the dimensions of commitment and goal concordance tap into actions or

*behavioral commitment*, the dimension of *importance* reflects an orientation towards, and identifying of, what matters most to an individual.

Values articulation, or the process of identifying life areas that are most important to one personally (independent of one's actions or behavior), has been demonstrated to lead to a variety of positive outcomes (e.g., Cohen, Garcia, Apfel & Master, 2006). The *importance* of one's personal strivings has been found to be positively related to life satisfaction (Emmons, 1986), progress on the goal, and success at living in accordance to one's values (Veage, Ciarrochi, & Heaven, 2011) and negatively related to conflict amongst other endorsed goals (King, Richards & Stemmerich, 1998). As such, the importance dimension of valuing personal growth may be particularly relevant to explore in a clinical context, as it may be related to treatment outcome and predict patients' actions. However, PGI only taps into the behavioral action dimension of personal growth.

Another critical dimension to valuing relates to the motivation underlying the reasons *why* individuals work towards their strivings and hold certain values as important. The literature supports that, "people are moved to act by very different types of factors, with highly varied experiences and consequences. People can be motivated because they value an activity or because there is strong external coercion." (Ryan & Deci, 2000, p.69). For example, individuals may value personal growth because it makes their life more meaningful, or alternatively because others would be upset if personal growth was not important to them (Ciarrochi et al., 2006). Research has demonstrated the many benefits of holding values for authentic or *intrinsic* reasons, including positive affect and psychological well-being (Ciarrochi, Fisher & Lane, 2011; Dittmar, Bond,

Hurst & Kasser, 2014; Emmons, 2003a; Kasser & Ryan 1996; Sheldon & Kasser, 1998).

As such, it is not necessarily enough to explore whether an individual holds a value as important, since the motivation for holding that value has implications for one's psychological functioning (Emmons, 2003a).

### **Summary**

PGI is associated with psychological functioning. However, there are no studies examining this construct in a clinical sample using a psychometrically established, valid measure of the construct. Moreover, the relationship between *valuing* personal growth (e.g., holding the value of personal growth as important, valuing personal growth for intrinsic reasons) and psychological functioning has yet to be explored. Both PGI and valuing personal growth could be important predictors of how one responds to psychotherapy. Further, PGI and valuing personal growth may be malleable, and as such, appropriate targets for (and perhaps even agents of change of) therapy. However, there is no research examining these hypotheses.

### **Overview of the Present Study**

The current study had several goals. First, this study aimed to examine PGI (as measured by the total PGIS-II score, which includes all four dimensions of the PGI theory) and the valuing of personal growth (i.e., endorsement of personal growth as being important, valuing personal growth for intrinsic reasons; VPG) both cross-sectionally and longitudinally in a clinical population, in order to determine their relationship with psychological distress and well-being.

The clinical sample used in this study consisted of patients enrolled in an acute psychiatric setting at McLean Hospital. It has previously been established (Björgvinsson

et al., 2014) that participation in this program is associated with a reduction in depression (as measured by the Center for Epidemiological Studies Depression Scale; CES-D-10; Andresen, Malmgren, Carter, & Patrick, 1994) and an increase in overall well-being (as measured by the Schwartz Outcome Scale; SOS-10; Blais et al., 1999). Thus, a second goal of the study was to examine whether treatment response in this program was predicted by the pre-existing patient characteristics of PGI and VPG. Finally, the study examined whether PGI and VPG changed as a function of treatment, and whether the cultivation of personal growth variables predicted response to treatment.

### **Hypotheses**

1. Personal growth initiative and valuing personal growth will be negatively associated with psychological distress among patients seeking treatment in an acute psychiatric setting.
2. Personal growth initiative and valuing personal growth will be positively associated with psychological well-being among patients seeking treatment in an acute psychiatric setting.
3. The pre-existing patient characteristics of personal growth initiative and valuing personal growth at baseline will predict response to treatment.
4. Personal growth initiative and valuing personal growth will increase from baseline to post-treatment in an acute psychiatric setting.
5. Change in personal growth variables from baseline to post-treatment will be associated with response to treatment.

## CHAPTER TWO

### METHOD

#### Participants

A statistical power analysis was performed for sample size estimation. The effect size (ES) was considered to be medium using Cohen's (1988) criteria. With an alpha = .05 and power = .95, the projected sample size needed with this effect size (G\*Power 3.1; Faul, Erdfelder, Buchner, & Lang, 2009) to test the hierarchical regression analysis (Hypothesis 3) was approximately  $n = 89$ . Thus, my sample size of 269 was more than adequate to test the stated hypotheses.

Participants were recruited from the Behavioral Health Partial Program (BHP) at McLean Hospital, which is a program for individuals with severe symptoms and functional impairment that warrant a partial hospital level of care and who meet criteria for a variety of psychological disorders (primarily mood, anxiety, personality, and psychotic disorders; Beard & Björgvinsson, 2014). Entry criteria for the BHP requires patients to maintain their safety and their sobriety from substances. Patients in this program are engaged in multidisciplinary treatment, which includes case management, psychopharmacology management, individual therapy, psycho-vocational counseling, and group therapy focused on acquiring skills from cognitive behavioral, dialectical behavioral, and acceptance-based behavioral approaches. Treatment length typically ranges from approximately 6-10 days, with the average length of stay being 8.2 days (Weiss, Aderka, Lee, Beard & Björgvinsson, 2014). Approximately 50% of patients in the program are stepping down from inpatient treatment, while the other 50% of patients

in the program are referred from the community (e.g., outpatient treatment) for a higher level of care.

The current sample of patients (ages 18-70,  $M = 33.56$ ,  $SD = 13.09$ ) was 52.4% female ( $n = 141$ ) and self-identified as 88.1% White ( $n = 237$ ), 4.5% Asian ( $n = 12$ ), and 4.1% Latino/a ( $n = 11$ ). The baseline mean CES-D-10 depression score for the sample was 16.65 ( $SD = 6.44$ ) which exceeds the suggested clinical cutoff score of 10 (Andresen et al., 1994), indicating that on average the sample was depressed. The baseline mean SOS-10 psychological well-being score for the sample was 22.46 ( $SD = 12.77$ ), which is slightly lower (i.e., indicating poorer psychological functioning) than the normative value established for inpatient samples (28.0,  $SD = 14.2$ ; Blais & Baity, 2009).

## **Measures (see Appendix A<sup>2</sup>)**

### ***Diagnostic Assessment***

*Miniature International Neuropsychiatric Interview* (MINI; Sheehan et al., 1997; 1998): The MINI is a structured interview assessing for Axis 1 symptoms (e.g., mood, anxiety, psychosis, substance abuse) according to the Diagnostic and Statistical Manual of Mental Disorders - Fourth Edition (DSM-IV-TR; American Psychiatric Association, 2000). In this study, the MINI was used to characterize the nature of the sample. The MINI was administered by interns and predoctoral practicum students of clinical psychology. MINI assessors received weekly supervision from a postdoctoral psychology fellow. The MINI has demonstrated strong validity and reliability with the Structured Clinical Interview for DSM-IV, with interrater reliabilities ranging from kappa's of .89 to 1.0 (Sheehan et al., 1998). Prior data using the same population

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<sup>2</sup> The Personal Growth Initiative Scale-II is not included in Appendix A because it is a copyrighted measure that I do not have permission to reproduce.

demonstrated that inter-rater reliability between the MINI and BHP psychiatrists was .69 for Major Depressive Disorder and .75 for Bipolar Disorder-Depressed (Kertz, Bigda-Peyton, Rosmarin, & Björgvinsson, 2012). The MINI was conducted on 87.4% ( $n = 235$ ) of the sample. Of these patients who had the MINI completed, 91.1% ( $n = 214$ ) met for lifetime Major Depressive Disorder (MDD), 57.4% ( $n = 135$ ) met for current MDD, and only 1 patient (0.4%) met for a current manic episode. Other disorders that patients met for at the time of the study included generalized anxiety disorder (31.5%,  $n = 74$ ), social anxiety disorder (31.1%,  $n = 73$ ), panic disorder (26.8%,  $n = 63$ ), post-traumatic stress disorder (14.0%,  $n = 33$ ), obsessive-compulsive disorder (10.2%,  $n = 24$ ), alcohol abuse (5.1%,  $n = 12$ ), and psychotic disorder (3.8%,  $n = 9$ ).

### ***Personal Growth***

*Personal Growth Initiative Scale-II* (PGIS-II; Robitschek et al., 2012): The PGIS-II is a 16-item measure of personal growth initiative (PGI), or a person's active and intentional involvement in changing and developing as a person. Items such as, "I am constantly trying to grow as a person" are rated on a six-point scale with 0 = "Disagree Strongly" and 5 = "Agree Strongly" and higher scores indicate greater levels of PGI. This multidimensional scale is comprised of four subscales: Readiness for Change, Planfulness, Intentional Behavior, and Using Resources, and the measure produces scores for the four subscales as well as a total mean score. This four-factor structure has been confirmed in samples including European American undergraduate students (Robitschek et al., 2012; Weigold et al., 2013), as well as international students (Yakunina, Weigold, & Weigold, 2013). Results have demonstrated adequate concurrent and discriminant validity, and test-retest reliability of up to 6 weeks (Robitschek et al., 2012; Yakunina,

Weigold, & Weigold, 2013). Cronbach's alpha for the total score and all subscales in the current sample was excellent (Total Score = .94 at baseline, .95 at post-treatment; Intentional Behavior = .89 at baseline, .89 at post-treatment; Planfulness = .90 at baseline, .90 at post-treatment; Readiness for Change = .84 at baseline, .85 at post-treatment; Using Resources = .86 at baseline, .87 at post-treatment).

*Valuing of Personal Growth:* For the purposes of the current study I have adapted a question from the Personal Values Questionnaire II (PVQ-II; Ciarrochi et al., 2006) to specifically measure the extent to which the respondent values the concept of personal growth. The PVQ-II consists of nine valued domains (only one domain, Personal Growth, was used for this study) with five questions probing each domain. These probing questions include items that measure the dimensions of importance, commitment, and goal-concordance. The dimension of importance was used to measure valuing personal growth in the current study. The adapted PVQ-II importance item used for this study states, "How important is personal growth to you?" and is rated on a five-point Likert scale with higher scores indicating higher levels of valuing personal growth.

*Valuing Personal Growth for Intrinsic Reasons:* The PVQ-II also includes items that assess respondents' motives for pursuing the value of personal growth and holding this value as important. Three items probe whether valuing personal growth is important for autonomous or intrinsic reasons (e.g., "acting in ways that are consistent with how important personal growth is to me make my life more meaningful,") and two items probe whether valuing personal growth is important for controlled or extrinsic reasons, (e.g., "other people would be upset with me if personal growth was not important to me"). Responses are rated on a 5-point Likert scale from "1- Strongly Disagree" to "5-

Strongly Agree.” A composite “intrinsic reasons” score was calculated for the study by taking the mean score of the three intrinsic items. Internal consistency of the intrinsic items in the current sample was good (Cronbach’s alpha = .73 at baseline, Cronbach’s alpha = .74 at post-treatment).

The PVQ-II was derived from the well-validated and widely used measure of personal strivings developed by Emmons (1986; 1991) and expanded by Sheldon and colleagues (2001). Although the domain that was assessed in the current study has not been previously used on its own in published research, other studies have successfully used just a subset of the domains (e.g., Ferssizidis et al., 2010; Levin, Hayes, Pistorello, & Seeley, 2016; Levin, Pistorello, Hayes, Seeley, & Levin, 2015). There is also some criterion-related validity for the five questions that probe into each domain (Ciarrochi et al., 2011).

### ***Psychological Functioning and Treatment Variables***

*Center for Epidemiological Studies Depression Scale* (CES-D-10; Andresen et al., 1994): This 10 item scale is a widely used, brief self-report instrument assessing for symptoms of depression. Items such as “I could not get going” are rated on a four-point Likert scale with 0 = “rarely or none of the time” and 3 = “all of the time,” with higher scores indicating greater severity of depressive symptoms. The CES-D-10 has demonstrated adequate reliability and validity, good internal consistency (e.g., Björngvinsson, Kertz, Bigda-Peyton, McCoy, & Aderka, 2013), and acceptable psychometric properties in studies within the same setting and population (Weiss et al., 2014). Internal consistency in the current sample was good (Cronbach’s alpha = .85 at baseline, .85 at post-treatment).

Two versions of the CES-D-10 exist that differ only in the time frame over which respondents rate their symptoms. In the current study, participants rated their depressive symptoms over the previous week at baseline and over the previous 24 hours at post-treatment since the average duration of treatment was 8.2 days.

*Schwartz Outcome Scale* (SOS-10; Blais et al., 1999). The SOS-10 is a 10-item scale designed to measure psychological health and well-being. Items such as “My life is progressing according to my expectations” are rated on a seven-point Likert scale with 0 = “Never” and 6 = “All or nearly all of the time” and higher total scores indicating better psychological well-being. This reliable and well-validated measure has been used in a range of settings (Young, Waehler, Laux, McDaniel, & Hilsenroth, 2003) and has demonstrated high internal consistency in studies using the same population (e.g., Beard & Björgvinsson, 2014). Internal consistency in the current sample was excellent (Cronbach’s alpha = .92 at baseline, Cronbach’s alpha = .92 at post-treatment).

*Clinical Global Impression Scale - Improvement* (CGIS; Guy, 1976). The CGIS is a 1-item 7-point scale assessing patient-rated clinical change at the time of treatment discharge in comparison to baseline. The statement, “compared with how I felt before beginning this latest treatment, I now am,” is rated from 1 (“very much improved”) to 7 (“very much worse”), with a score of 4 meaning, “unchanged.” The CGIS has also been recoded into a dichotomous variable (e.g., Beard, Hsu, Rifkin, Busch, & Björgvinsson, 2016) with scores of 1 (“very much improved”) and 2 (“much improved”) meaning the patient has improved, and scores of 3 (“improved”) through 7 (“very much worse”) meaning the patient has not improved. The CGIS has been shown to have moderate

correlations with ratings of providers ( $ICC=.65$ ) and has comparable validity (Forkmann et al., 2011).

*Credibility/Expectancy Questionnaire* (CEQ; Devilly & Borkovec, 2000). The CEQ is a 6-item scale that is divided into two subscales, with 3 items assessing treatment credibility (e.g., “at this point, how successful do you think this treatment will be in reducing your current symptoms?”) and 3 items assessing treatment expectancy (e.g., “by the end of the therapy period, how much improvement in your current symptoms do you really feel will occur?”). This scale has demonstrated good test-retest reliability and adequate validity in prior research (Devilly & Borkovec, 2000). Cronbach’s alpha for both subscales was good (.83 for credibility, .90 for expectancy).

### **Procedure**

All patients entering the BHP were offered the opportunity to provide informed consent (see Appendix B) and participate in research. On their first day of admission to the program, all patients completed a demographic questionnaire (see Appendix A), and a battery of self-report measures. The credibility/expectancy questionnaire was administered on the first or second day of the program, and the MINI was completed on the second day of the program. Self-report data was collected electronically in an office with the research coordinator of the BHP present, which took approximately a half an hour to complete. Electronic data was managed using REDCap (Research Electronic Data Capture), which is a secure web-based application used for research (Harris et al., 2009). On their day of discharge, patients completed the battery of self-report measures again, which included the addition of the Clinical Global Impression Scale. The average treatment length for the current sample was nearly 12 days ( $M = 11.7, SD = 4.7$ ). The

measures described in the current study were included in this battery for a period of 6.5 months (i.e., from 8/26/14 - 3/12/15).

## CHAPTER THREE

### RESULTS

Preliminary data analyses were conducted to test for normality and outliers. Tests for linearity and homoscedasticity were conducted separately with each statistical analysis in order to ensure that the data met assumptions for the statistical test. No violations of assumptions were found and no data transformations were necessary.

Demographic and diagnostic information on the participants is presented in Table 1. At baseline,  $n = 269$  participants completed measures, and at post-treatment  $n = 213$  participants completed measures. There was 20.8% missing data at post-treatment (i.e., at treatment discharge). Examination of reasons for attrition revealed that of this 20.8% ( $n = 56$ ) missing data at post-treatment, 50% ( $n = 28$ ) of participants did not complete measures because they discharged from home, 37.5% ( $n = 21$ ) went inpatient or were too acute to complete the treatment program, 10.7% ( $n = 6$ ) unexpectedly missed the post-treatment questionnaires, and 1.8% ( $n = 1$ ) was both admitted and discharged on the same day because the program was not perceived to be a good fit. There were no significant differences between completers and non-completers on any of the measured demographic variables, levels of depression (CES-D-10), psychological well-being (SOS-10), or personal growth measures (PGI total score and PGIS-II subscales, VPG-importance and VPG- Intrinsic). Means, standard deviations, and ranges for study variables at each time point are listed in Table 2. On average, the sample was depressed, with 81.8% ( $n = 220$ ) meeting or exceeding the clinical cutoff of 10 on the CES-D. Correlations among personal growth variables at baseline are listed in Table 3.

Table 1.

*Demographics and Diagnostic Information at Baseline*

	(n = 269)	
	<i>M (SD)</i>	Range
Sex (% Female)	52.4%	--
Age	33.56 (13.09)	18 -70
Race (%)		--
White	88.1%	
Asian	4.5%	
Latino/a	4.1%	
Diagnosis (%)		
MDD	57.4%	
GAD	31.5%	
SAD	31.1%	
Panic	26.8%	
PTSD	14.0%	
OCD	10.2%	
Alcohol	5.1%	
Psychotic	3.8%	
Manic episode	0.4%	

*Note.* Diagnosis = Current MINI diagnosis at baseline (which was only conducted on 87.4% of sample; percentages are out of the  $n = 235$  patients who had the MINI completed). MDD = Major depressive disorder. GAD = Generalized anxiety disorder. SAD = Social anxiety disorder. Panic = Panic disorder. PTSD = Post-traumatic stress disorder. OCD = Obsessive compulsive disorder. Alcohol = Alcohol abuse. Psychotic = psychotic disorder.

Table 2.

*Means, Standard Deviations, and Ranges of Study Variables at Baseline and Post-Treatment*

	Baseline	Post-Treatment	Range
	( <i>n</i> = 269)	( <i>n</i> = 213)	
	<i>M</i> ( <i>SD</i> )	<i>M</i> ( <i>SD</i> )	
PGI	2.79 (1.02)	3.54 (.90)	0-5
PGI Behavior	3.00 (1.22)	3.67 (1.01)	0-5
PGI Planfulness	2.49 (1.17)	3.44 (.96)	0-5
PGI Readiness	2.89 (1.10)	3.60 (.92)	0-5
PGI Resources	2.80 (1.32)	3.45 (1.16)	0-5
VPG Importance	4.30 (.84)	4.48 (.70)	1-5
VPG Intrinsic	4.07 (.71)	4.31 (.64)	1-5
Depression	16.65 (6.44)	9.55 (5.63)	0-30
Well-Being	22.46 (12.77)	32.89 (12.12)	0-60
Tx Credibility	19.52 (4.93)	---	3-27
Tx Expectancy	15.80 (5.49)	---	3-27
Improvement	---	2.01 (.70)	1-7

*Note.* *N*'s range from 208 to 265 due to occasional missing data. Range = range of possible scores on the measure. PGI = personal growth initiative total score. PGI\_behavior = intentional behavior subscale of personal growth initiative. PGI\_planfulness = planfulness subscale of personal growth initiative. PGI\_readiness = readiness for change subscale of personal growth initiative. PGI\_resources = using resources subscale of personal growth initiative. VPG\_importance = importance dimension of valuing personal growth. VPG\_intrinsic = valuing personal growth for intrinsic reasons. Depression = CES-D-10 total score. Well-Being = SOS-10 total score. Tx Credibility = Credibility subscale of the Credibility/Expectancy questionnaire. Tx Expectancy = Expectancy subscale of the Credibility/Expectancy questionnaire. Improvement = Clinical Global Improvement score.

### **Personal Growth and Psychological Functioning**

In order to test the first hypothesis<sup>3</sup> that at baseline, personal growth initiative (PGI) and valuing personal growth (VPG) would be negatively associated with psychological distress, bivariate Pearson correlations were conducted looking at the relationships between both PGI (as measured by the PGIS-II total score and subscales) and VPG (as measured by the importance and intrinsic dimensions of the PVQ-II) and depression (as measured by the CES-D-10) at baseline. As predicted, PGIS-II total score was correlated with depression in the expected direction at baseline ( $r = -.43, p < .01$ ) as were all of the PGIS-II subscales. Although VPG-Importance was not significantly correlated with depression ( $r = -.11, p = .08$ ), there was a significant association between VPG-Intrinsic and depression at baseline ( $r = -.20, p < .01$ ).

In order to test the second hypothesis that at baseline, PGI and VPG would be positively associated with psychological well-being, bivariate Pearson correlations were conducted looking at the relationship between both PGI and VPG and psychological well-being (as measured by the SOS-10) at baseline. As predicted, PGIS-II total score

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<sup>3</sup> Hypothesis 1 was also examined with only participants who were depressed at pre (i.e., only those who had a CES-D score of 10 or greater at baseline), and a similar pattern of results emerged.

was correlated with psychological well-being at baseline in the expected direction ( $r = .62, p < .01$ ), as were all of the PGIS-II subscales. Additionally, both VPG-Importance ( $r = .17, p < .01$ ) and VPG-Intrinsic ( $r = .24, p < .01$ ) were positively correlated with psychological well-being at baseline. Correlations between personal growth variables, depression, and psychological well-being at baseline are shown in Table 4.

Table 3

*Correlations Among Personal Growth Variables at Baseline*

Measure	2	3	4	5	6	7
1. PGI	.84*	.88*	.86*	.83*	.27*	.34*
2. Behavior	--	.64*	.64*	.62*	.37*	.34*
3. Planfulness	--	--	.79*	.61*	.15*	.25*
4. Readiness	--	--	--	.58*	.30*	.35*
5. Resources	--	--	--	--	.20*	.26*
6. Importance	--	--	--	--	--	.60*
7. Intrinsic	--	--	--	--	--	--

*Note.*  $N$ 's range from 254 to 265 due to occasional missing data. PGI = personal growth initiative total score. Behavior = intentional behavior subscale of personal growth initiative. Planfulness = planfulness subscale of personal growth initiative. Readiness = readiness for change subscale of personal growth initiative. Resources = using resources subscale of personal growth initiative. Importance = importance dimension of valuing personal growth. Intrinsic = valuing personal growth for intrinsic reasons.

\* $p < .01$

Table 4.

*Correlations Among Personal Growth and Psychological Functioning Variables at Baseline*

<b>Measure</b>	<b>Depression</b>	<b>Well-being</b>
PGI	-.43*	.62*
Behavior	-.39*	.54*
Planfulness	-.44*	.62*
Readiness	-.41*	.53*
Resources	-.31*	.49*
VPG		
Importance	-.11	.17*
Intrinsic	-.20*	.24*

*Note.* *N*'s range from 249 to 259 due to occasional missing data. PGI = personal growth initiative total score. PGI\_behavior = intentional behavior subscale of personal growth initiative. PGI\_planfulness = planfulness subscale of personal growth initiative. PGI\_readiness = readiness for change subscale of personal growth initiative. PGI\_resources = using resources subscale of personal growth initiative. VPG\_importance = importance dimension of valuing personal growth. VPG\_intrinsic = valuing personal growth for intrinsic reasons.

\* $p < .01$

### **Personal Growth as a Predictor of Response to Treatment**

In order to test the third hypothesis<sup>4</sup> that the pre-existing patient characteristics of PGI and VPG would predict response to treatment, a multiple linear regression was conducted. The impact of baseline PGI and VPG-Importance on change in depression (measured by residualized gain in CES-D) was examined. The overall model only accounted for 0.7% of the variance in change in depression and was not significant,  $F(2, 196) = .65, p = .53$ . The same regression was also run with the addition of baseline VPG-Intrinsic, however, the model remained non-significant.

<sup>4</sup> Hypothesis 3 was also examined with only participants who were depressed at pre (i.e., only those who had a CES-D score of 10 or greater at baseline) and similar findings emerged.

Exploratory analyses were also conducted in order to examine the impact of baseline personal growth variables on additional outcomes of interest: psychological well-being and clinical global improvement. A multiple linear regression with baseline PGI and VPG-Importance predicting change in well-being (as measured by residualized gain in SOS-10) was conducted, but this model only accounted for 0.8% of the variance in change in well-being and was not significant (note: this multiple regression was rerun with the additional predictor of baseline VPG-Intrinsic and it remained non-significant). A logistic regression was also conducted with baseline PGI and VPG predicting clinical global improvement (CGI; as measured by recoding the Clinical Global Impression Scale [CGIS] into a dichotomous variable). The overall model was not significant and only accounted for 2.1-3.2% of the variance in improvement status (note: this logistic regression was rerun with the additional predictor of baseline VPG-Intrinsic and it remained non-significant).

### **Change in Personal Growth Over Treatment**

Next, the fourth hypothesis, that personal growth variables would increase from baseline to post-treatment, was tested using paired t-tests. As predicted, all three measures of personal growth variables significantly increased from baseline to post-treatment (see Table 5).

Table 5.

*Paired t-tests of Personal Growth Variables from Baseline to Post-Treatment*

	<b>Pre</b>	<b>Post</b>	<b>Lower</b>	<b>Upper</b>	<b><i>t</i></b>	<b><i>d</i></b>
PGI	2.80 (1.03)	3.55 (.87)	.63	.88	11.90**	.84
VPG						
Importance	4.33 (.85)	4.49 (.69)	.06	.27	3.09*	.21

Intrinsic	4.11 (.71)	4.33 (.60)	.13	.31	4.84**	.34
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*Note.* *N*'s range from 200 to 210 due to occasional missing data. PGI = personal growth initiative total score. VPG\_importance = importance dimension of valuing personal growth. VPG\_intrinsic = valuing personal growth for intrinsic reasons. Lower Upper = the 95% confidence interval of the difference.

\**p*<.05; \*\**p*<.001

### **Change in Personal Growth as a Predictor of Response to Treatment**

In order to test the fifth hypothesis, that change in personal growth variables from baseline

to post-treatment would be associated with response to treatment, correlations among change in PGI and change in VPG were examined in relation to change in depression, change in psychological well-being, and CGI. As predicted, change in all three personal growth variables were correlated with changes in depression and well-being, as well as CGI (see Table 6).

Table 6.

#### *Correlations Among Change in Personal Growth Variables and Treatment Outcome*

<b>Measure</b>	<b>Change in Depression</b>	<b>Change in Well-being</b>	<b>Clinical Global Improvement</b>
Change in PGI	-.35*	.54*	-.39*
Change in VPG			
Importance	-.26*	.29*	-.25*
Intrinsic	-.25*	.45*	-.29*

*Note.* *N*'s range from 194 to 207 due to occasional missing data. PGI = personal growth initiative total score. VPG\_importance = importance dimension of valuing personal growth. VPG\_intrinsic = valuing personal growth for intrinsic reasons. Clinical Global Improvement = the CGIS total score (on a scale from 1-7).

\**p*<.001

In order to examine the relative contribution of change in each of the personal growth variables to treatment outcomes, a series of regression analyses were conducted. First, a multiple linear regression was calculated to predict the impact of change in PGI and VPG-Importance on change in depression (measured by residualized gain in CES-D). The overall model was significant  $F(2, 191) = 14.23, p < .001$  and accounted for 13% of the variance in change in depression. Only PGI made a statistically significant unique contribution to the prediction of change in depression ( $\beta = -.306, p < .001$ ). A similar pattern of findings emerged when VPG-Intrinsic was included in the equation. Although change in all three personal growth variables accounted for a significant 13.7% of the variance in change in depression, only change in PGI was a unique predictor.

A second regression was conducted to examine the impact of change in PGI and VPG on change in psychological well-being (measured by residualized gain in SOS-10). The overall model was significant  $F(3, 191) = 29.83, p < .001$  and accounted for 31.9% of the variance in change in well-being. Both change in PGI ( $\beta = .416, p < .001$ ) and change in VPG-Intrinsic ( $\beta = .210, p = .008$ ) were unique predictors of change in well-being.

Finally, a logistic regression was calculated to predict the impact of change in PGI and VPG on CGI (as a dichotomous variable). The overall model was significant  $\chi^2 (3, N = 197) = 18.01, p < .001$  and accounted for between 8.7% and 13.5% of the variance in improvement. Only PGI ( $\text{Exp}(B) = 2.66, p = .003$ ) was a unique predictor.

Given that treatment credibility and expectancy have been shown to predict change in depression within the same context of the current psychiatric setting (Webb, Kertz, Bigda-Peyton, & Björgvinsson, 2013), I was interested in exploring whether

personal growth variables would add to the predictive power of these variables.

Hierarchical multiple regression was used to assess the ability of change in PGI, VPG-Importance, and VPG-Intrinsic to predict change in depression after controlling for the influence of treatment credibility and expectancy. Treatment credibility (as measured by the credibility subscale of the Credibility/Expectancy Questionnaire [CEQ]) and expectancy (as measured by the expectancy subscale of the CEQ) were entered at Step 1, explaining 2.9% of the variance in change in depression (non-significant,  $p = .067$ ).

Adding in change in the personal growth variables at Step 2 explained an additional 11.7% of the variance  $F\Delta (2, 184) = 12.63, p < .001$ . However, the only unique predictor when all variables were in the equation was change in PGI ( $\beta = -.31, p < .001$ ). The overall model accounted for 14.6% of the variance in change in depression ( $F(4, 184) = 7.85, p < .001$ ; see Table 7).

Table 7.

*Regression Predicting Change in Depression, Controlling for Treatment Credibility and Expectancy*

	$R^2$	$\Delta R^2$	$\beta$
Step 1	.029	.029	
Credibility			.010
Expectancy			-.175
Step 2	.146	.117**	
Credibility			.049
Expectancy			-.158
$\Delta$ PGI			-.310**

$\Delta$ VPG			-.069
$\Delta$ Intrinsic			-.068

*Note.* Credibility = Treatment credibility subscale. Expectancy = Treatment expectancy subscale.  $\Delta$ PGI = PGI residualized gain score.  $\Delta$ VPG = Valuing personal growth importance residualized gain score.  $\Delta$  Intrinsic = Valuing personal growth for intrinsic reasons residualized gain score.

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

A similar regression was conducted using change in psychological well-being as the outcome. Treatment credibility and expectancy were entered at Step 1, explaining a significant 7.6% of the variance in change in well-being. Adding in change in personal growth variables at Step 2 explained an additional 29.4% of the variance.  $F\Delta(3, 184) = 28.54, p < .001$ . Both change in PGI ( $\beta = .367, p < .001$ ) and in VPG-Intrinsic ( $\beta = .263, p = .001$ ), as well as treatment expectancy ( $\beta = .244, p = .002$ ) were unique predictors. The overall model accounted for 36.9% of the variance in change in well-being ( $F(5, 184) = 21.55, p < .001$ ; see Table 8).

Table 8.

*Regression Predicting Change in Well-Being, Controlling for Treatment Credibility and Expectancy*

	$R^2$	$\Delta R^2$	$\beta$
Step 1	.076	.076*	
Credibility			.016
Expectancy			.265*
Step 2	.369	.294**	
Credibility			-.046
Expectancy			.244*
$\Delta$ PGI			.367**
$\Delta$ VPG			-.038

$\Delta$ Intrinsic			.263*
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*Note.* Credibility = Treatment credibility subscale. Expectancy = Treatment expectancy subscale.  $\Delta$ PGI = PGI residualized gain score.  $\Delta$ VPG = Valuing personal growth residualized gain score.  $\Delta$  Intrinsic = Valuing personal growth for intrinsic reasons residualized gain score

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

## CHAPTER FOUR

### DISCUSSION

Personal growth has been presumed to be a key aspect of psychological functioning throughout the history of psychology (e.g., Erikson, 1950; Maslow, 1968; Ryff, 1989a; 1989b). Although there is evidence for its association with psychological functioning in non-clinical samples (e.g., Luyckx & Robitschek, 2014; Yakunina, Weigold, Weigold, et al., 2013) our understanding of this construct is incomplete. The current study advances the literature by assessing the relevance of personal growth to psychological distress in a clinical population, examining the relationship between valuing personal growth (VPG) and psychological functioning, exploring personal growth as a potential predictor of response to treatment, and investigating how changes in personal growth over the course of treatment relate to treatment outcome.

Results from the current study support the hypothesis that personal growth initiative (PGI) is negatively associated with psychological distress. This findings is consistent with those of previous studies that documented a relationship between PGI and depression in non-clinical samples (e.g., Luyckx & Robitschek, 2014; Weigold et al., 2013). Similarly, I also found support for my second hypothesis, that PGI is positively associated with psychological well-being. Although this findings is consistent with that reported by Yakunina, Weigold, and Weigold (2013), in the current study the magnitude of the relationship between PGI and well-being was nearly double that found in the Yakunina and colleagues study. If this finding is replicated and there is compelling evidence that the relationship between PGI and well-being is even more robust in clinical

compared to student populations, that would indicate that personal growth may be especially pertinent to examine and enhance in samples of individuals with mental health problems.

As predicted, I also found a relationship between the extent to which one values personal growth and current psychological functioning. Although valuing was originally theorized to be important to PGI, items tapping into this component of the construct were dropped in the development of the PGIS-II. However, this study suggests that valuing personal growth is an important domain to examine. This study finding is consistent with the psychological flexibility model of mental health proposed by Steven Hayes (1999; 2004) which suggests that being able to clearly articulate the importance of one's personal values is a key component of psychological health and well-being. However, it is important to note that people articulate values for a variety of reasons. Someone may hold a value because it is personally meaningful (e.g., for intrinsic reasons) or for more extrinsic reasons. For examples, people may articulate a specific value (like valuing personal growth) in order to gain approval from others or because they would feel guilty or ashamed if they did not (Ciarrochi et al., 2011). The relationship between valuing personal growth for intrinsic reasons and psychological health and well-being found in the current study is consistent with a larger literature that suggests that prioritizing intrinsic values is associated with higher personal well-being (e.g., Dittmar et al., 2014, Emmons, 2003a).

My hypothesis that personal growth is a predictor of response to treatment was not supported. Baseline personal growth did not predict change in depression, well-being, or clinical global improvement (CGI) over the course of treatment. This finding

suggests that patients do not need to value, or be inclined to intentionally seek out, opportunities to personally change or grow in order to benefit from psychotherapy.

As predicted, I found that both PGI and VPG can be cultivated as a function of treatment. These findings bolster Robitschek and colleague's (2012) conceptualization and definition of PGI as a developed skill-set and they support the notion that these constructs are malleable. Moreover, these findings align with recent studies that found increases in PGI following a strengths-focused intervention (Meyers et al., 2015) and a program aimed at enhancing PGI through psychoeducation about the change process and engagement in growth activities (Thoen & Robitschek, 2013). Of note, in the current study both PGI and VPG increased over the course of treatment even though these constructs were not directly targeted. More research is needed to identify the specific clinical strategies that enhance personal growth. One possibility is that change in symptoms as a function of therapy actually leads to increased PGI and a valuing of personal growth. Longitudinal assessment of these variables is needed to better understand the trajectory of change.

Although baseline personal growth variables did not predict changes in depression or well-being, *change* in personal growth variables over the course of treatment was related to both change in symptoms and clinical global improvement ratings at post-treatment. It is interesting to note that the *importance* dimension of VPG was not a unique predictor (while PGI and the *intrinsic* dimension of VPG were). In terms of predicting response to treatment, it is not necessarily enough for personal growth to be important to a patient, it seems that it must also be important for intrinsic reasons, such as that living consistently with the value provides fun and enjoyment or makes life more

meaningful. As noted above, this finding is consistent with prior research showing that engaging in values that are motivated by autonomous, self-concordant, and ultimately intrinsic reasons predicts greater well-being and more positive outcomes than values that are motivated by controlled or extrinsic factors (Ciarrochi et al., 2011; Emmons, 2003a; Sheldon & Elliot, 1999).

The significance of the finding that change in personal growth variables predicted treatment outcome is bolstered by the finding that they predict treatment outcome over and above the previously established predictors of treatment credibility and expectancy (Webb et al., 2013). Research conducted in the same treatment setting (i.e., at the BHP in McLean Hospital) found that therapeutic alliance, a variable associated with reduction in depression, no longer predicted treatment response when controlling for treatment credibility and expectancy variables (Webb, Beard, Auerbach, Menninger, & Björgvinsson, 2014). However, it is important to note that in the current study credibility and expectancy did not predict change in depression, although there was a trend in the expected direction.

### **Implications**

The current study has implications for our understanding of the personal growth construct and its measurement. To date, research on personal growth has primarily been measured using the PGI. Although PGI taps into several important factors related to personal growth (namely: engaging in intentional behavior to facilitate growth, using resources to grow, readiness for changing in a certain way, and planning for the process of change), it fails to address that some people may feel coerced or externally pressured to engage in the personal growth process. Findings from the current study suggest that

Robitschek's decision to drop the 'valuing of personal growth' factor when developing her recent measure (PGIS-II; 2012) results in an incomplete assessment tool for the construct of personal growth. Despite the fact that intentional and active engagement in the growth process in order to develop as a better person (i.e., PGI) is an important part of the personal growth process, valuing personal growth and more specifically doing so for intrinsic or authentic reasons are also a crucial part of the personal growth construct. The importance of personal growth as a value/striving to work towards, and holding this value for autonomous and intrinsic reasons, are central components of understanding personal growth, as they are related to and enhance psychological functioning over the course of treatment.

Study findings also provide implications for personal growth as a potential mechanism to enhance psychological functioning. Interestingly, personal growth does not appear to be an individual difference patient variable that predicts response to treatment. Instead, it seems that personal growth is malleable and potentially may be an appropriate target for psychotherapy. Identifying mechanisms of action in psychotherapy is important in enhancing the efficacy of existing treatments, and current study findings suggest that personal growth may potentially be one of the agents of change that operate during the therapy process. There is a need within the field for additional empirical evidence to identify key ingredients of effective treatment. More specifically, Lambert and Ogles (2004) wrote in a review on the efficacy and effectiveness of psychotherapy, "It is clear that much of what makes one treatment effective is common to other forms of treatment. Further specification of these common factors may facilitate strengthening the core, central features of all effective treatments," (p.179). Although the current study

findings lay an important framework for the role of personal growth variables in association with enhancing treatment outcome, future research is clearly needed in order to determine whether personal growth variables may be process variables that are common factors across treatments.

Not only are changes in personal growth variables beneficial at post-treatment, but they may also serve as a protective factor against subsequent poor outcomes that patients confront following treatment discharge (e.g., reoccurrence of symptoms, relapse). Further, enhancing VPG, and having patients draw from internal, autonomous, and inherently reinforcing (rather than controlled or extrinsic) reasons for valuing this process, may lead to more robust outcomes. Research in non-clinical samples have shown that the experience of initial striving success can lead to an ‘upward spiral’ of subsequent striving attainment, having a cumulatively positive impact on level of adjustment (Ciarrochi et al., 2011; Sheldon & Houser-Marko, 2001). Assessing personal growth variables in the weeks or months following treatment would be helpful in determining this.

### **Limitations**

This study contains several limitations that should be taken into account when interpreting the results. First there are a number of potential limitations with the measures used. This study relied solely on self-report, in part due to the limited options currently available to assess personal growth. As such, individual differences in patient response styles (e.g., tendencies to over- or underreport) and common method variance may have impacted findings. Moreover, the valuing personal growth measure used in the current study has not been used before as a stand-alone measure and therefore its

psychometric properties have not previously been established. Although the larger measure from which this item was drawn has demonstrated construct and criterion-related validity (Ciarrochi et al., 2006; Ciarrochi et al., 2011) and other studies have looked at a subset of the domains (e.g., Ferssizidis et al., 2010) as well as the questions that probe each domain (i.e., intrinsic versus extrinsic reasons for holding the value; Ciarrochi et al., 2011), no study has examined the personal growth item as a stand-alone measure.

Although the PGIS-II scale was selected to assess the construct of personal growth for the current study, there is debate within the field about the best way to measure this construct. As such, it is unclear whether these study findings would be replicated if an alternate definition and measure of personal growth (e.g., that of Ryff [1989a; 1989b]) was examined. Another limitation is that a factor analysis was not conducted in the current study, and since this was the first study to examine the PGIS-II in a clinical sample, it is not clear how the four subscales of this measure hang together in this type of population.

The number and timing of the assessment points in the design of the study also limit the implications of the findings. For example, although change in PGI and VPG predicted CGI at post-treatment, it is not clear as to whether this relationship would persist following discharge. Moreover, although the relationship between change in personal growth variables and change in symptoms across treatment is promising, the timing of assessment points makes it impossible to determine temporal precedence, thus this study does not provide any evidence of a directional or causal link between change in personal growth and treatment outcome.

Although conducting this study in a naturalistic treatment environment potentially enhances the generalizability of the findings, it also introduces a number of potential limitations to internal validity. For example, use of a diagnostically heterogeneous sample (i.e., patients with a wide range of pathology, including mood, anxiety, and thought disorders) may have impacted the findings if the importance of personal growth differs as a function of diagnostic status. For example, patients with thought disorders may have compromised lucidity that impacts their ability to understand, appreciate and/or value personal growth. Because change in personal growth and associated psychological functioning was assessed in the context of a clinical treatment setting, no control group was employed. Thus, the possibility that personal growth changed as a function of time, and not treatment, cannot be ruled out. Finally, “treatment” in the current study consisted of a fairly heterogeneous mix of providers and clinical strategies (e.g., individual therapy, a variety of groups, and many forms of psychopharmacology). Thus, it is not clear which treatment components may have contributed to changes in personal growth variables.

The sample used in the current study had limited diversity (88.1% White). Thus, findings may not be generalizable to more diverse populations. Also, the limited diversity precluded an examination of whether personal growth may be a culturally specific value as others values are suggested to be (e.g., Smith & Schwartz, 1997) or whether this value fits into a broader framework that cuts across cultures (e.g., Schwartz, 1994; 2006).

Similarly, because this study was conducted in the context of a partial hospitalization program it is unclear whether findings would be replicated in longer-term outpatient settings or other treatment settings. However, given the limited exclusion

criteria and the range of psychopathology represented in the current sample, results are likely generalizable to other psychiatric settings.

Finally, although treatment credibility and expectancy were controlled for in predicting treatment outcome, there may also be unstudied variables that account for change in depression and well-being that were not examined or controlled for in the current study, such as the role of CBT skill use (Webb, Beard, Kertz, Hsu & Björgvinsson, 2016), and the therapeutic alliance (Horvath, Del Re, Flückiger, & Symonds, 2011). Future research is clearly needed to address these limitations.

### **Future Directions**

Despite the fact that personal growth variables have been almost exclusively examined in non-clinical populations, it is clear that personal growth is a relevant construct to explore within clinical samples and in the context of psychotherapy. Future directions should include replicating and examining personal growth in clinical samples longitudinally, as well as conducting a factor analysis in clinical samples in order to determine whether the four subscales of the PGIS-II proposed by Robitschek and colleagues (2012) still hang together in populations with psychopathology.

Additional research is needed to assess personal growth variables at multiple time points throughout therapy in order to examine mediation. The current study findings that change in personal growth variables predict changes in symptomology over and above treatment credibility and expectancy (which are variables that have been demonstrated to account for the therapeutic alliance in prior research in a similar sample; Webb et al., 2014) highlight that targeting personal growth variables may be especially powerful and important in relation to enhancing treatment outcome. Targeting personal growth

variables over the course of treatment may also help patients to view the therapy process as more than just a reduction of symptoms, but also as way to work towards their values and enhance their quality of life. Prior studies aimed at enhancing outcomes other than solely reducing symptomology (e.g., increasing quality of life, engagement in valued action; Michelson, Lee, Orsillo, & Roemer, 2011; Roemer, Orsillo, & Salters-Pedneault, 2008) have been shown to be effective at addressing pathology such as anxiety, depression, substance use, among other disorders (e.g., Morgan, Danitz, Roemer, & Orsillo, 2015). Future studies are crucial in order to examine personal growth variables over the course of treatment and to determine whether they are mechanisms of action, so that they can potentially be implemented into current evidence-based practices and enhance the treatment of a broad range of psychopathology.

Future research should also include conducting follow-up measures after treatment discharge. This would allow for testing whether changes in personal growth variables are sustained over time, whether these changes predict psychological functioning beyond discharge from treatment, and whether personal growth variables serve as protective factors against subsequent difficulties.

Next steps for research also include examining strategies for targeting and enhancing personal growth variables in treatment settings. Although there is support for teaching the use of many skills (e.g., CBT skills, DBT skills; Webb et al., 2016) in treatment settings, it would be interesting to examine whether personal growth can be taught in a similar fashion across individual and group treatment modalities. While there are two studies to date aimed at intentionally targeting personal growth (Meyers et al., 2015; Thoen & Robitschek, 2013), more research is clearly needed in order to examine

what incorporating this type of personal growth enhancement intervention into a treatment setting would look like, and how effective it would be.

Additionally, future research should examine how different types of therapy have differential impacts on personal growth. For example, acceptance-based behavioral therapies, which frequently include a focus on identifying and living consistently with one's values, may be more effective at targeting VPG than a more traditional cognitive-behavioral therapy approach.

Finally, future research should also examine personal growth variables across different diagnoses in order to determine whether there are differences across diagnostic categories. It is also important to examine personal growth variables in other treatment settings, such as longer term outpatient and residential environments. Although it is promising that personal growth variables are important in the current acute psychiatric sample, it would be interesting to explore these variables in both higher functioning samples (such as individuals receiving outpatient treatment) as well as more chronic samples (such as patients in residential settings) and even more acute (e.g., inpatient) environments.

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**APPENDIX A**

**Measures**

Demographic Survey

<p>What is your age? _____</p>	<p>I Live:</p> <p><input type="checkbox"/> Alone</p> <p><input type="checkbox"/> With Friend(s)/roommate(s)</p> <p><input type="checkbox"/> Family</p> <p><input type="checkbox"/> Other (Specify)_____</p>
<p>What is your gender?</p> <p><input type="checkbox"/> Male</p> <p><input type="checkbox"/> Female</p>	
<p>What is your Race/Ethnicity?</p> <p><input type="checkbox"/> American Indian or Alaskan Native</p> <p><input type="checkbox"/> Asian</p> <p><input type="checkbox"/> Black or African-American</p> <p><input type="checkbox"/> White</p> <p><input type="checkbox"/> Native Hawaiian or Pacific Islander</p> <p><input type="checkbox"/> Caribbean Islander</p> <p><input type="checkbox"/> Latino/a</p> <p><input type="checkbox"/> Multiracial (Specify) _____</p> <p><input type="checkbox"/> Choose not to answer</p> <p><input type="checkbox"/> Do Not Know</p>	<p>Have you ever been homeless?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>
<p>If you are a Latino/a, where is your place of ancestry?</p> <p><input type="checkbox"/> Dominican Republic</p> <p><input type="checkbox"/> Puerto Rico</p> <p><input type="checkbox"/> Cuba</p> <p><input type="checkbox"/> Central America</p> <p><input type="checkbox"/> South America</p> <p><input type="checkbox"/> Mexico</p> <p><input type="checkbox"/> Other (Specify)_____</p>	<p>Marital status:</p> <p><input type="checkbox"/> Never married</p> <p><input type="checkbox"/> Separated/divorced</p> <p><input type="checkbox"/> Widowed</p> <p><input type="checkbox"/> Married</p> <p><input type="checkbox"/> Living with partner</p>
<p>Education:</p> <p><input type="checkbox"/> Eighth Grade or less</p> <p><input type="checkbox"/> Some high school</p> <p><input type="checkbox"/> High School graduate/GED</p> <p><input type="checkbox"/> Some college</p>	<p>Have you ever received treatment at the Behavioral Health Partial Program (MAP/GAP) before?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>

<input type="checkbox"/> 4-year college graduate <input type="checkbox"/> Post-college education <input type="checkbox"/> Other (Specify)_____	If so, when was the last time? _____
Employment in the past 30 days: <input type="checkbox"/> Employed <input type="checkbox"/> Not employed	Rating of physical health: <input type="checkbox"/> Very poor <input type="checkbox"/> Poor <input type="checkbox"/> Good <input type="checkbox"/> Very good <input type="checkbox"/> Excellent
Are you a student? <input type="checkbox"/> Yes <input type="checkbox"/> No	Living situation in the past 30 days: <input type="checkbox"/> Apartment or house <input type="checkbox"/> Homeless or shelter <input type="checkbox"/> Group home or halfway house <input type="checkbox"/> Hospital/detox <input type="checkbox"/> Jail/prison <input type="checkbox"/> Temporary housing
Do you have a primary care physician (PCP)? <input type="checkbox"/> Yes <input type="checkbox"/> No	

Personal Values Questionnaire II Adapted:

In this questionnaire, please reflect on the extent to which *you value* the idea of *Personal Growth*. *Personal Growth* is defined as improvements that we make in different areas of our life that have to do with working on ourselves and growing as a person, which may have the potential to make us more effective and enhance our sense of fulfillment, life satisfaction and purpose.

Please keep in mind that there are no right or wrong answers when it comes to the things we *value*. Everyone has his or her own personal sense of what is important.

**Please answer the following questions by circling the number (on the right) that is true for you:**

1. How important is personal growth to you?	1 Not at all important	2 A little bit important	3 Moderately important	4 Quite important	5 Extremely important
2. How committed are you to engaging in activities in the service of personal growth?	1 Not at all committed	2 Slightly committed	3 Moderately committed	4 Quite committed	5 Extremely committed
3. There are often obstacles that prevent us from acting in ways that are consistent with what we value. Right now, how close is the match	1 Not close	2 A little close	3 Moderately close	4 Quite a bit close	5 Extremely close

between how important personal growth is to you and how open you are to engaging in personal growth activities?					
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4. If you answered question # 1 as “Not at all important” please skip to question 5. Otherwise, please answer the following questions by circling the number (on the right) that is true for you:

a. Other people would be upset with me if personal growth was not important to me.	1 Strongly Disagree	2 Moderately Disagree	3 Neither Disagree nor Agree	4 Moderately Agree	5 Strongly Agree
b. I would feel guilty or ashamed if personal growth was not important to me.	1 Strongly Disagree	2 Moderately Disagree	3 Neither Disagree nor Agree	4 Moderately Agree	5 Strongly Agree
c. Personal growth is important to me, whether or not others agree	1 Strongly Disagree	2 Moderately Disagree	3 Neither Disagree nor Agree	4 Moderately Agree	5 Strongly Agree
d. Acting in ways that are consistent with how important personal growth is to	1 Strongly Disagree	2 Moderately Disagree	3 Neither Disagree nor Agree	4 Moderately Agree	5 Strongly Agree

me makes my life more meaningful					
e. I experience fun and enjoyment when I act in ways that are consistent with how important personal growth is to me.	1 Strongly Disagree	2 Moderately Disagree	3 Neither Disagree nor Agree	4 Moderately Agree	5 Strongly Agree

**5. If you value personal growth, in 4 lines or less, please describe what that means to you.**

(Examples include, “I value learning about myself and becoming aware of my behavior” or “I value receiving feedback from others” or “I value being open and receptive to new ideas and perspectives”)

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**If you do not value personal growth, in 4 lines or less, please describe why personal growth is not important to you.**

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Center for Epidemiological Studies Depression Scale (CES-D-10):

Baseline Version:

CES-D-10					
<p>Below is a list of some of the ways you may have felt or behaved. Please indicate how often you have felt this way during the PAST WEEK: (circle one answer per question)</p> <p><i>The rating scale is as follows:</i></p> <p>0 Rarely or none of the time (less than 1 day)</p> <p>1 Some or a little of the time (1-2 days)</p> <p>2 Occasionally or a moderate amount of time (3-4 days)</p> <p>3 All of the time (5-7 days)</p>					
<p>During the PAST WEEK...</p>					
1	I was bothered by things that usually don't bother me...	0	1	2	3
2	I had trouble keeping my mind on what I was doing...	0	1	2	3
3	I felt depressed...	0	1	2	3
4	I felt that everything I did was an effort...	0	1	2	3
5	I felt hopeful about the future...	0	1	2	3
6	I felt fearful...	0	1	2	3
7	My sleep was restless...	0	1	2	3
8	I was happy...	0	1	2	3
9	I felt lonely...	0	1	2	3
10	I could not "get going"...	0	1	2	3

Post-Treatment Version:

CES-D-10				

Below is a list of some of the ways you may have felt or behaved. Please indicate how often you have felt this way during the PAST 24 HOURS: (circle one answer per question)

During the PAST 24 HOURS...

1	I was bothered by things that usually don't bother me...	0	1	2	3
2	I had trouble keeping my mind on what I was doing...	0	1	2	3
3	I felt depressed...	0	1	2	3
4	I felt that everything I did was an effort...	0	1	2	3
5	I felt hopeful about the future...	0	1	2	3
6	I felt fearful...	0	1	2	3
7	My sleep was restless...	0	1	2	3
8	I was happy...	0	1	2	3
9	I felt lonely...	0	1	2	3
10	I could not "get going"...	0	1	2	3

### Schwartz Outcome Scale (SOS-10)

#### SOS10

Below are 10 statements about you and your life that help us understand how you feel you are doing. Please respond to each statement by filling in the response number that best fits how you have generally been over the last seven days (1 week). There are no right or wrong responses, but it is important that your response reflect how you feel you are doing. Often the first answer that comes to mind is the best. Please be sure to respond to each statement.

The rating scale is as follows:

-----  
 0 1 2 3 4 5 6  
 Never All or nearly all of the  
 time

1	Given my current physical condition, I am satisfied with what I can do.	0	1	2	3	4	5	6
2	I have confidence in my ability to sustain important relationships.	0	1	2	3	4	5	6
3	I feel hopeful about my future.	0	1	2	3	4	5	6
4	I am often interested and excited about things in my life.	0	1	2	3	4	5	6
5	I am able to have fun.	0	1	2	3	4	5	6
6	I am generally satisfied with my psychological health.	0	1	2	3	4	5	6
7	I am able to forgive myself for my failures.	0	1	2	3	4	5	6
8	My life is progressing according to my expectations	0	1	2	3	4	5	6
9	I am able to handle conflicts with others.	0	1	2	3	4	5	6
10	I have peace of mind.	0	1	2	3	4	5	6

### Clinical Global Improvement Scale (CGIS)

Compared With How I Felt Before Beginning This Latest Treatment, I Now Am:

1. Very Much Improved
2. Much Improved
3. Minimally Improved
4. Unchanged
5. Minimally Worse
6. Much Worse
7. Very Much Worse



## **APPENDIX B Informed Consent**

### **McLean Hospital – Behavioral Health Partial Program Consent to Participate in Research**

**Title of Study**

Establishing the Effectiveness of Cognitive-Behavioral Partial Hospitalization for Anxiety, Depression, and Overall Functioning

**Version Date: July 2014****Principal Investigator**

Thröstur Björgvinsson, PhD, ABPP  
Director, BHPP  
617-855-4180 (business hours)  
617-855-2000 (page any time for emergencies)

**Study Contact**

Lara Rifkin, BA  
Research Coordinator, BHPP  
617-855-2282  
[lsrifkin@partners.org](mailto:lsrifkin@partners.org)

**Description of Research Study**

As a patient in the Behavioral Health Partial Program (BHPP) we request that you consider participating in a research study. The goal of the study is to assess how the BHPP impacts patients' symptoms, knowledge of coping skills and overall functioning, so we can better serve our patients in the future. We hope to enroll 900 patients in this study each year. As a BHPP patient, part of your treatment involves the completion of a packet of questionnaires about these areas, and a structured, diagnostic assessment. Your participation in this research study will entail consenting for the information you have provided to be used for research purposes. Furthermore, for the purposes of the research study we request to include health information. This will include information collected only in the duration of the current study such as hospital admissions or visits, types of treatments received (such as medications, groups attended, and therapy sessions), diagnoses and your insurance provider. If you consent, we will de-identify (remove your personal information from) the data prior to its use for research.

**Risks and Benefits**

We believe that the risks of this study are minimal as the assessments used in this study are part and parcel of clinical care and are therefore no more invasive than treatment as usual in our program. The proposed research expects to provide benefits for the individual participant as well as generate novel findings. As stated above, research will be incorporated into clinical care at the BHPP. Because of this, questionnaire and diagnostic data will influence clinical care. This will allow the clinical team to make use of the information generated by the proposed research, as well as their clinical training, to make the most informed, evidence-based, decisions possible about clinical care.

**What happens if I am injured as a result of participating in this study?**

We will offer you the care needed to treat any injury that directly results from taking part in this research study. We reserve the right bill your insurance company or other third parties, if appropriate, for the care you get for the injury. We will try to have these costs paid for, but you may be responsible for some of them. For example, if the care is billed to your insurer, you will be responsible for payment of any deductibles and co-payments required by your insurer. Injuries sometimes happen in research even when no one is at fault. There are no plans to pay you or give you other compensation for any injury, should one occur. However, you are not giving up any of your legal rights by signing this form. If you think you have been injured or have experienced a medical problem as a result of taking part of this research study, tell the person in charge of this study as soon as possible. The researcher's name and phone number are listed at the top of this consent form.

**Confidentiality and Privacy**

Federal laws requires that Partners HealthCare System, Inc., its affiliated institutions including McLean Hospital, as well as all researchers, health care providers, and physician network protect the privacy of information that identifies you and relates to your past, present, and future physical and mental health ("protected health information"). If you agree to participate in this study, information you provide (which will be de-identified) will be shared with designated individuals involved in this research. We may publish the results of our findings however your identity and "protected health information" will be treated as confidential information and therefore you will not be identifiable in any publication which may arise from this research. Paper records will be stored in locked filing cabinets. Your records or any part thereof can only be legally obtained with your written permission specifying what exact information is to be released or if court ordered by law. Even after all precautions, there is a possibility that confidentiality could be breached (e.g. stolen records, internet piracy). This risk should be considered before consenting to participate in this project.

**Voluntary Participation**

Participation in this study is completely voluntary. You may refuse to allow your questionnaires and clinical assessment to be used for research if you like without any penalty or loss of benefits. Refusing to sign this consent form will not affect your treatment in anyway.

**Statement of privacy rights**

You have the right to withdraw your consent to participate in this study without any penalty or loss of benefits. While we will not be able to withdraw information that already has been used or shared with others or that which is needed to ensure the quality of the study, you may withdraw your permission for the researchers and participating McLean entities to use or share your protected health information for future use. If you wish to withdraw your consent, you must do so in writing by contacting the researcher listed as the Study Contact on this informed consent (see above). You also have the right to request access to your protected health information that is used during this research and relates to your treatment or payment for your treatment, but you may access this information only

after the study is completed. To request this information, please contact the researcher listed under Study Contact on this consent form in writing. If you want to speak with someone not directly involved in this research study, please contact the Partners Human Research Committee office at (617)-424-4100.

**By signing below, you acknowledge that**

You have received a copy of this consent document to keep.

You have read this consent form and have and the opportunity to ask any questions. The study staff has answered all your questions to your satisfaction.

You voluntarily agree to sign this form and participate in this research study.

\_\_\_\_\_

Subject Signature

Printed Name

Date

If you are interested in future research findings, please leave your preferred contact information: \_\_\_\_\_

\_\_\_\_\_

Witness Signature

Printed Name

Date