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Development and Psychometric Evaluation of the Personal Growth Initiative Scale–II

Christine Robitschek, Matthew W. Ashton, Cynthia C. Spering, Nathaniel Geiger, Danielle Byers, G. Christian Schotts, and Megan A. Thoen
Texas Tech University

The original Personal Growth Initiative Scale (PGIS; Robitschek, 1998) was unidimensional, despite theory identifying multiple components (e.g., cognition and behavior) of personal growth initiative (PGI). The present research developed a multidimensional measure of the complex process of PGI, while retaining the brief and psychometrically sound properties of the original scale. Study 1 focused on scale development, including theoretical derivation of items, assessing factor structure, reducing number of items, and refining the scale length using samples of college students. Study 2 consisted of confirmatory factor analysis with 3 independent samples of college students and community members. Lastly, Study 3 assessed test–retest reliability over 1-, 2-, 4-, and 6-week periods and tests of concurrent and discriminant validity using samples of college students. The final measure, the Personal Growth Initiative Scale–II (PGIS-II), includes 4 subscales: Readiness for Change, Planfulness, Using Resources, and Intentional Behavior. These studies provide exploratory and confirmatory evidence for the 4-factor structure, strong internal consistency for the subscales and overall score across samples, acceptable temporal stability at all assessed intervals, and concurrent and discriminant validity of the PGIS-II. Future directions for research and clinical practice are discussed.

Keywords: measurement, multidimensional, personal growth initiative, scale, eudaimonia

Counseling is essentially a process of personal growth. People come to counseling because either they identify something they want to change about themselves or someone else identifies this for them. Regardless of what brings someone to counseling, clients have an active, intentional role in the change process (Tallman & Bohart, 1999). Clients who enter therapy with experience intentionally growing and changing are at a distinct advantage over clients for whom the concept of intentional personal growth is new. Practicing psychologists usually can distinguish between the client entering counseling ready to "hit the ground running," that is, ready to make use of counseling versus the client who is naïve about the personal growth process. But the majority of clients are somewhere in between these two extremes, and these clients can have quite varied levels of experience with the process of intentional personal growth (see Robitschek & Hershberger, 2005). It can be more difficult for the practitioner to determine how ready these clients are to be active agents for personal growth. It would be beneficial to counselors and clients, alike, if this quality of intentional personal growth could be assessed easily at the start of a counseling relationship.

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Christine Robitschek, Matthew W. Ashton, Cynthia C. Spering, Nathaniel Geiger, Danielle Byers, G. Christian Schotts, and Megan A. Thoen, Department of Psychology, Texas Tech University.

Cynthia C. Spering is now at the Department of Psychology, Northeastern State University. G. Christian Schotts is now at the Department of Political Science, Texas Tech University.

Correspondence concerning this article should be addressed to Christine Robitschek, Department of Psychology, Texas Tech University, 18th and Boston, Lubbock, TX 79409-2051. E-mail: chris.robitschek@ttu.edu

Intentional personal growth, however, is relevant for everyone regardless of status as counseling clients. The ability to change and adapt is a hallmark of the healthy personality (Allport, 1955, 1961). This ability is also important in specific life domains such as career development, with constructs such as career adaptability (Savickas, 1997; Super & Knasel, 1981) gaining prominence. Personal growth is needed in healthy close relationships (Hendrick, 1995), to master new athletic skills, and to manage stressors and challenges encountered throughout life. Given the universal need for lifelong personal growth, this concept of intentional personal growth is relevant for all people.

Intentional personal growth is captured in the construct of personal growth initiative (PGI; Robitschek, 1998). PGI is a developed set of skills for self-improvement and includes cognition and behavior (Robitschek, 1998) that a person carries into life experiences. This skill set constitutes a global inclination to intentionally improve one's self across life domains (Robitschek, 2003). Like all developed skill sets, obtained levels of PGI exist on a continuum from little skill to highly skilled (Robitschek & Hershberger, 2005). The level of PGI that a person has will influence the overall extent to which that person seeks out opportunities to grow (Robitschek & Cook, 1999), and will be an important factor (among many factors) in determining the extent to which that person capitalizes on specific growth opportunities that present themselves (Robitschek & Kashubeck, 1999). This article describes the development of a second-generation measure of PGI, the Personal Growth Initiative Scale–II (PGIS-II), which retains the strengths of the original PGIS while addressing the limitations of the original measure.

The Original PGIS

The original measure of PGI, the PGIS (Robitschek 1998, 1999), was developed from an outcome evaluation protocol for a wilderness experience program for midlife adults who were seeking personal growth (Robitschek, 1997). The PGIS is a nine-item single-factor instrument, with item response options ranging from 0 (*definitely disagree*) to 5 (*definitely agree*). All items are worded in the positive direction. Strengths of the original PGIS include its brevity and strong psychometric properties. Internal consistency estimates ranged from .78 to .90, with the majority above .85, in college student, midlife, and elderly adult samples (see Spering & Robitschek, 2007, for a summary). Evidence for construct validity is supported by confirmatory factor analyses indicating a single factor for European American college students (Spering & Robitschek, 2007) and elderly adults (Spering, Robitschek, & Hardin, 2010), although there was some evidence for a two-factor model for Mexican American college students (Robitschek, 2003). College students with high PGI reported high levels of instrumentality, assertiveness, and internal locus of control, and low levels of chance locus of control, providing evidence of convergent validity (Robitschek, 1998). Relations with the convergent validity constructs support the instrumental nature of PGI (i.e., intentional behavior).

The original PGIS had two important limitations, which were addressed by the present research. First, items for the original PGIS were developed to address specific goals of the wilderness program, including seeking life balance, identifying life purpose, and goal setting (Robitschek, 1997), rather than intentional personal growth, per se. Thus, not all content for the *initial* item pool in the original PGIS was specific to intentional personal growth, neither were all *final* items specific to intentional personal growth. Although this may appear to be simply an issue of face validity, it also raises issues of content validity for the original measure. This limitation was addressed in the present research by development of a new measure with items derived directly from PGI theory. A second limitation is that the original PGIS contains both cognitive (e.g., knowledge) and behavioral (e.g., intentional action) items, but measures PGI as a unidimensional construct (Robitschek, 1998, 1999). Consequently, researchers are unable to use the original PGIS to assess whether cognitive and behavioral components of the intentional growth process are importantly different either conceptually or effectively in terms of their roles in the change process. Practitioners and clients also are unable to use the original PGIS to distinguish between strengths and weaknesses in a particular client's personal growth skills. Given these limitations, a new measure of PGI was needed. This new measure should have items derived directly from PGI theory, separate the cognitive and behavioral aspects of PGI, and yet retain the brevity and psychometric strength of the original measure. This research describes the development of this new measure.

PGI theory emphasizes two important overarching conceptual points that should be captured in measurement. First, *intentional* self-change is the heart of PGI (Robitschek, 1998, 1999). That is, personal growth occurs *on purpose* rather than incidentally. This is importantly distinct from other conceptualizations of personal growth. Ryff (1989) described a person with a high level of personal growth as follows:

> Has a feeling of continued development; sees self as growing and expanding; is open to new experiences; has sense of realizing his or her potential; sees improvement in self and behavior over time; is changing in ways that reflect more self-knowledge and effectiveness. (p. 1072)

This definition describes a person who is *aware* of personal growth, but it does not explicitly address *intentional engagement* in personal growth behaviors, which is critical to the PGI concept. Recognizing that we have changed over time is not the same as actively working at changing ourselves. For example, Kohlberg (1964) described a process of moral development that includes considerable change over time. Yet, he did not believe that this development was primarily an intentional process. Instead, moral processing changes as cognitive processes become more complex. Much of human development and change is simply a by-product of living one's life and, as Ryff (1989) points out, continuing to be open to experiences. Intentional self-change, which is inherent in PGI, is distinctly different. In support of this apparent difference, both PGI and personal growth that people describe as intentional are significantly and *positively* related to psychological well-being, whereas personal growth that people describe as in-awareness but unintentional (i.e., can identify *events* that changed them but did not intentionally grow), or completely out of awareness (i.e., they have no idea how they "ended up this way"), are significantly and *negatively* related to psychological well-being (e.g., Robitschek, 1999). This suggests that people who grow unintentionally likely will have lower levels of positive relations with others, autonomy, environmental mastery, self-acceptance, and purpose in life (dimensions of Ryff's, 1989, psychological well-being) than people who grow intentionally. It is plausible that when personal growth is not intentional, people do not know how to sustain changes they have made, particularly when encountering stressors. Items on the new scale, therefore, should capture *intentional* cognitive and behavioral processes directed at self-change.

Second, PGI is composed of skills that transfer across domains for personal growth rather than specifying the growth domains, per se (Robitschek, 2003). Preliminary research has supported the theoretical proposition that situational factors, such as developmental stage and cultural values (rather than level of PGI) are determinants of domains for personal growth (e.g., Robitschek, 2003; Robitschek & Cook, 1999). Instead of specifying content for personal growth, PGI is composed of transferable skills that are general skills for personal growth that can be used in a variety of growth opportunities (Robitschek, 1999; Robitschek & Kashubeck, 1999). These skills are transferable because the *process* of personal growth is similar across life domains. Items on the new scale, therefore, should address personal growth processes broadly, rather than specific to a single area for growth.

With these two theoretical points in mind, more specific cognitive and behavioral constructs can be found in the PGI literature. Cognitive components consist of efficacy expectations regarding the change process (Robitschek, 1998), metacognition about ongoing intentional personal growth (i.e., active thinking about engagement in activities targeting personal growth; Robitschek, 1998), having general knowledge of the personal change process (Robitschek, 1998; Whittaker & Robitschek, 2001), and valuing personal growth (Robitschek, 2003). Behavioral components consist of seeking out opportunities for personal growth (Robitschek

& Cook, 1999), capitalizing on opportunities for personal growth that present themselves (Robitschek & Kashubeck, 1999), and following through on plans for intentional personal growth (Whittaker & Robitschek, 2001). Items on the new scale, therefore, should cover these cognitive and behavioral components of PGI.

Enhancing Well-Being and Protecting Against Distress

Research with the original PGIS has yielded promising results regarding the utility of the PGI construct to aid in our understanding of well-being and distress. It is hoped that a new multidimensional scale that provides greater distinction between cognitive and behavioral components of PGI will prove even more useful.

People with high levels of PGI typically have high levels of well-being (Robitschek & Keyes, 2009), with PGI being identified as a *parsimonious predictor* of multidimensional well-being. That is, across samples and after controlling for covariance among the domains of well-being, PGI uniquely accounted for 18%–21% of the variance in emotional well-being, 25%–27% of the variance in social well-being, and 38%–55% of the variance in psychological well-being (effect sizes, $f^2 = .22–1.22$; Robitschek & Keyes, 2009). Compared with their low-PGI counterparts, people with high PGI also report more adaptive coping skills, for example, engaging in more reflective coping rather than reactive or suppressive coping (Robitschek & Cook, 1999). They also are better able to cope with life's developmental tasks, such as career development (e.g., Robitschek & Cook, 1999). One explanation for this pattern of relations is that PGI is a fundamental expression of *eudaimonia* (Robitschek & Keyes, 2009). This Greek term has been translated in various ways, including fulfilling our potential or living in sync with our own standards (Kashdan, Biswas-Diener, & King, 2008), actualizing our potentials (Deci & Ryan, 2008), and having "a responsibility to recognize and live in accordance with [the] daimon or 'true self'" (Waterman, 1990, p. 40). PGI, as broad-based intention and action targeting self-improvement, embodies these definitions in a parsimonious way. This has important implications for understanding how PGI might function to improve multidimensional well-being. Specifically, if counselors can increase the intentional efforts people put forth to grow and develop (i.e., *intentional behavior*), this may lead to improved mental health (Robitschek & Keyes, 2009).

In addition to enhancing positive aspects of functioning, high levels of PGI have been linked to low levels of depression, anxiety, and general emotional distress (Robitschek & Kashubeck, 1999). PGI can be viewed as a protective factor against psychological distress and negative or poor functioning. One hypothesized mechanism is particularly relevant. PGI is expected to have a direct effect in preventing psychological distress via a cognitive process, specifically, perceiving stressors as opportunities for personal growth. When people see stressors as opportunities for growth, they perceive themselves as capable of making self-improvements and are optimistic that positive change will occur. In contrast, the negative schemas that result from the cognitive triad for depression (Beck, 1976) tend to generate views of the self as worthless and inadequate and the environment as overwhelming. People with high PGI have high levels of self-acceptance, rather than worthlessness (Robitschek & Keyes, 2009), and high levels of hope, rather than hopelessness (Shorey, Little, Snyder, Kluck, & Robitschek, 2007). Viewing a stressor as an opportunity for growth is contradictory to the cognitive distortions of depression; thus, PGI is expected to inhibit the development of depression and other types of psychological distress via this cognitive mechanism.

The Present Research

In summary, this article presents the PGIS-II, which is multidimensional, including cognitive and behavioral factors. The new scale was developed to meet the following goals: (a) The new measure should be multidimensional to capture the complexity of PGI, as discussed above; (b) it should give roughly equal weight to the different dimensions of PGI (i.e., have similar numbers of items on each subscale); (c) it should have strong psychometric properties; and (d) it should be parsimonious, staying as brief as possible, without sacrificing psychometric quality.

Three studies are presented: Study 1, development of items and identification of the underlying factor structure using exploratory factor analyses; Study 2, confirmatory factor analyses on three independent samples; and Study 3, evidence for test–retest reliability and convergent validity. In all studies, procedures began with obtaining informed consent from participants and ended with providing debriefing information.

Study 1: Scale Development

We developed items and made systematic decisions about item and factor retention and deletion in line with recommendations for scale development best practices outlined by Worthington and Whittaker (2006). In Step 1, theoretically derived items were generated and pilot tested for clarity. In Step 2, items were administered to a large sample of undergraduates for item reduction and to assess factor structure. In Step 3, the obtained factor structure of the reduced item set was tested in a confirmatory sample. For Step 4, subscales were examined for internal consistency and the extent to which the subscales were meeting the goals for the new scale. Additional items were generated to increase stability of internal consistency on two of the subscales. In Step 5, the expanded number of items was administered to an additional sample of college students. On the basis of a series of additional exploratory factor analyses (as recommended by Worthington & Whittaker, 2006), the set of items for each subscale was adjusted to balance optimization of both internal consistency and parsimony.

Step 1: Item Generation and Pilot Study

Because items for the original PGIS were not developed from PGI theory (see Robitschek, 1997), all items for the PGIS-II were newly developed. The research team, which included the scholar primarily responsible for developing PGI theory, thoroughly examined the PGI literature to identify important aspects of PGI theory to measure. As presented previously, these include two underlying concepts and several specific constructs. The underlying concepts are (a) the *intentional* aspect of cognitive and behavioral processes directed at personal growth (Robitschek, 1998, 1999) and (b) the transferable (i.e., general) quality of these skills for personal growth (Robitschek, 1999; Robitschek & Kashubeck, 1999).

Specific constructs include the following cognitions and behaviors: (a) efficacy beliefs about the change process (Robitschek,

1998); (b) awareness of engagement in intentional personal growth (Robitschek, 1998); (c) knowledge of the personal growth process (Robitschek, 1998; Whittaker & Robitschek, 2001); (d) valuing intentional personal growth (Robitschek, 2003); (e) seeking out opportunities for personal growth (Robitschek & Cook, 1999); (f) capitalizing on opportunities for personal growth that present themselves (Robitschek & Kashubeck, 1999); and (g) following through on plans for intentional personal growth (Whittaker & Robitschek, 2001).

A large list of possible items was generated to assess these constructs (Worthington & Whittaker, 2006). Items were edited following standard practices for constructing quality scale items (see Kline, 2005), with a maximum reading level of eighth grade for each item and for the instructions. This process reduced item redundancy and yielded a list of 72 items, positively worded as present-tense statements that a person could say about him- or herself. Directions for participants read: "For each statement, please mark how much you agree or disagree with that statement." The 6-point response scale had endpoints ranging from 0 (*Disagree strongly*) to 5 (*Agree strongly*).

The 72 items were pilot tested with 10 introductory psychology students. Half were women, six were European American, with an average age of 20 years ($SD = 0.86$). Students completed a short demographic questionnaire and then were asked to read each of the 72 items aloud to the administrator and tell him whether the directions or any of the items were confusing or unclear. In response to participant feedback, three items were dropped due to confusion in their meaning or similarity with other items, and three items were reworded to improve clarity. This resulted in a final list of 69 items for further study.

Step 2: Assessing Factor Structure and Item Reduction

Method.

Participants. Participants in this study were 632 students in introductory and upper level psychology courses. Approximately two thirds were women ($n = 411$), with 19 students not responding. The mean age was 19.41 years ($SD = 2.53$). The majority of students were European American (68%), with African American (6%), Asian American (3.6%), Hispanic or Mexican American, (13.6%), multiracial (2.9%), and "other" ethnicities (5.9%) represented.

Measures. Measures were pencil-and-paper questionnaires, including the 69 items for construction of the PGIS-II and a short demographic survey. In addition, several measures were included to assess convergent and discriminant validity, replicating research on the original measure of PGI (Robitschek, 1998, 1999, 2003)—these included the original PGIS (Robitschek, 1998, 1999) and measures of internal and chance locus of control (Levenson, 1974) and gender roles (Spence & Helmreich, 1980).

Procedure. Introductory psychology participants completed the measures in groups. In upper level psychology courses, the questionnaire was given either in or out of class. All students received course credit for their participation.

Statistical analysis. The sample was randomly divided into two equal samples of 316 participants to create separate samples for exploratory and confirmatory factor analyses (Worthington & Whittaker, 2006). Data were examined for missing data. Only participants with responses to all newly constructed items were included in Study 1 because of the nature of the data. Given that this was a scale development study, we were not able to use any type of scale scores to impute data prior to development of the final measure.

The primary data analytic method was exploratory factor analysis (EFA) with oblique rotation (direct OBLIMIN) because we anticipated the factors would be intercorrelated. As recommended by Worthington and Whittaker (2006), identification of factors and items for retention was an iterative process using multiple, primarily empirical, criteria including (a) eigenvalues ≥ 1.0; (b) breaks in the scree plot; (c) approximating simple structure (i.e., avoiding item cross-loadings); and (d) each factor's "conceptual interpretability" (p. 822). Criteria used to determine item retention were used sequentially, as recommended by Worthington and Whittaker (2006), and consisted of (a) dropping items that do not contribute to a useful factor structure (operationalized as dropping items that do not contribute to "conceptual interpretability" [p. 822] of a factor); (b) identifying a minimum item-factor loading and maximum cross-loading and drop items that do not meet these criteria (in this study, criteria were loadings $\geq |.32|$ [i.e., at least 10% shared variance] on only one factor,with the next highest loading $< |.32|$ and the difference between the highest loading and any other loading $> .15$; Worthington & Whittaker, 2006); and (c) optimizing scale length to maximize psychometric properties (i.e., scale reliability) and maintain a practical length. Because removal of items can change the factor structure for remaining items, EFA was repeated with the remaining set of items each time items were deleted (Worthington & Whittaker, 2006). Because Worthington and Whittaker (2006) recommend focusing on refining factor structure before refining number of items, we minimized the number of items we dropped early in this iterative FA process. We did so by addressing only one of the two cross-loading criteria when there were still many factors with eigenvalues greater than 1.0. It was not until there were only five factors remaining that the second criterion (i.e., the next highest loading $< |.32|$ and the difference between the highest loading and any other loading $> .15$) was used in conjunction with the first criterion (Worthington & Whittaker, 2006). Bivariate correlation was used to assess construct validity.

Results and discussion. In the first EFA (with maximum likelihood estimation), 13 factors emerged with eigenvalues over 1.0, which explained 65.3% of the total variance. Additionally, the scree plot indicated a slight break in the slope around Factor 6. We examined items that loaded on the first 13 factors at $\geq |.32|$ to determine cohesiveness of content. Items that significantly loaded on Factors 1 through 6 showed general themes of Intentional Behaviors, Planfulness, Using Resources, Readiness for Change, Knowledge about the Growth Process, and Valuing the Process of Change, respectively. These themes map onto the broad PGI domains of intentional cognitions and behaviors (Robitschek, 1998, 1999), knowledge of the personal growth process (Robitschek, 1998; Whittaker & Robitschek, 2001), valuing intentional personal growth (Robitschek, 2003), and following through on plans for intentional personal growth (Whittaker & Robitschek, 2001). Individual items in the first six factors captured two additional PGI constructs, specifically, seeking out and capitalizing on opportunities for personal growth (Robitschek & Cook, 1999; Robitschek & Kashubeck, 1999). Awareness of engagement in

intentional personal growth (Robitschek, 1998) was inherent in almost all items. The only PGI construct not explicitly captured within the first six factors was efficacy beliefs about the change process (Robitschek, 1998). A reexamination of PGI theory (e.g., Robitschek, 1998) clarified that although people have efficacy expectations about their intentional personal growth, these expectations are not an inherent part of the PGI process. Therefore, capturing efficacy beliefs was not critical in a new measure of PGI.

Five of the next seven factors showed mixed content with no apparent themes. Factor 13 showed the theme of Knowing What to Change, which was already measured with items loading on the first six factors. Factor 8 showed a theme of Valuing the Outcomes of Change. Valuing the *outcomes* of change was deemed to be not theoretically relevant to PGI, which focuses on the *process* of change (Robitschek, 2003). Alternatively, items that measured valuing the process of change (Factor 6) were considered more relevant to PGI.

Given these theoretical and empirical findings, only the first six factors (and items loading only on these factors) were deemed to meet all criteria and retained for future analysis. This process yielded 25 items for further examination. The next EFA yielded five factors with eigenvalues greater than 1.0. We examined Factor 5 first because it contributed least to explanation of scale variance. This factor had three items that loaded greater than |.32|, one of which cross-loaded on Factor 3. The content of one of the other two items was redundant with content of items loading on other factors and the third item measured valuing the outcomes of growth (which had already been deemed irrelevant to the overall scale). We deleted these two items loading on Factor 5 along with two other items not meeting criteria for inclusion. We retained the final item loading on Factor 5 because it loaded significantly on another factor. We did not examine other factors at this time for factor interpretability because the factor structure might change after deletion of the two Factor 5 items and subsequent EFA (see Worthington & Whittaker, 2006).

A third EFA on the remaining 21 items yielded four factors having eigenvalues greater than 1.0, accounting for 59.9% of the total variance. Twenty of the 21 items met criteria for approximating simple structure, with seven, four, seven, and three items loading on Factors 1–4, respectively. We examined the content of Factor 1 items, which yielded mixed content, with four items addressing intentional behaviors, two addressing valuing personal growth, and one addressing readiness for personal growth. Loadings ranged from .39 to .77. To unify factor content, that is, increase "conceptual interpretability" (Worthington & Whittaker, 2006, p. 822), we retained only the four items with the highest factor loadings (all $>$ .69); these were the items measuring *Intentional Behavior*, which became the name of the factor (e.g., "When I get a chance to improve myself I take it"). This process resulted in dropping items measuring the valuing of growth processes. In hindsight, we realized this construct is an attitude rather than an active process. As such, although the construct may have an important role in the success of the personal growth process, it is importantly different from intentional personal growth behavior, itself. Importantly, therefore, the construct does not belong within a measure of PGI.

The four items on the second factor assessed obtaining assistance with the personal growth process from resources outside one's self. We retained all items and named the factor *Using Resources* (e.g., "I ask for help when I try to change myself").

The seven items loading on the third factor addressed planning the process of personal growth. We dropped one item to reduce redundancy in item content, leaving six items. We named the factor *Planfulness* (e.g., "I set realistic goals for what I want to change about myself").

The fourth factor was composed of three items measuring aspects of preparedness for making specific changes in one's self. We named this factor *Readiness for Change* (e.g., "I can tell when I am ready to make specific changes in myself").

We ran a fourth EFA with maximum likelihood estimation on the 17 remaining items. As expected, four factors had eigenvalues greater than 1.0, accounting for 54.26% of the total variance. The scree plot indicated a noticeable change in slope after Factor 4. All items met criteria for approximate simple structure. The factors intercorrelated, with r = .31–.59. We calculated scale scores by averaging the item scores for each subscale and for the total scale score. Internal consistency estimates for this sample were .76 (Readiness for Change), .85 (Planfulness), .79 (Using Resources), and .78 (Intentional Behavior). Evidence for construct validity was provided by the following data: (a) moderate significant and positive correlations of original PGIS scores with all subscale and mean overall score (rs = .38–.59; ps $<$ .001); (b) significant and positive correlations of internal locus of control with Planfulness (.12; p = .04), Intentional Behavior (.19; p = .001), and mean overall PGI (.21; p $<$ .001); (c) small significant and negative correlations of chance locus of control with Readiness for Change ($-$.15; p = .006) and mean overall PGI ($-$.12; p = .04); and small to moderate significant and positive correlations of instrumentality and expressiveness with all subscales and mean overall PGI (rs = .14–.35; ps $<$ .02).

These four factors map well onto PGI theory. They retain the broad PGI domains of intentional cognitions and behaviors and transferable skills (see Readiness for Change, Planfulness, Using Resources, and Intentional Behavior). Some more specific constructs, such as awareness of engagement in intentional personal growth processes (Robitschek, 1998), are inherent in items across factors. Knowledge of the personal growth process (Robitschek, 1998; Whittaker & Robitschek, 2001) is assessed by Planfulness. Seeking out opportunities for growth (Robitschek & Cook, 1999) is captured in Readiness for Change and Intentional Behavior. Capitalizing on opportunities for growth that cross one's path (Robitschek & Kashubeck, 1999) and following through on plans for intentional personal growth (Whittaker & Robitschek, 2001) are present in Intentional Behavior. The only factor that was somewhat of a surprise was Using Resources. Although items were written about using resources for intentional personal growth within the context of other specific PGI theory constructs, such as planning and following through on plans for intentional personal growth, the data suggested that the extent to which people use external resources in their intentional personal growth processes might be importantly different from other aspects of PGI. The findings were so pronounced in the EFAs that it was important to retain this factor to determine whether it would hold up in confirmatory tests of the factor structure. Also, we hypothesized that culture might have an important influence on the extent to which people used external resources, such as family, clergy, or mental

health professionals, in their intentional personal growth efforts. Thus, we retained the Using Resources factor for further analyses.

Step 3: Confirmatory Factor Analysis: New Sample

To confirm the four-factor structure identified through exploratory analyses, the data set containing the remaining 316 cases was analyzed with a confirmatory factor analysis (CFA) using the same 17 items retained from exploratory analyses. Each item was loaded on only one factor, and the four factors were allowed to covary. Hu and Bentler's (1999) joint criteria suggested good model fit, with standardized root-mean-square residual (SRMR) = .06 and robust root-mean-square error of approximation (RMSEA) = .06, 90% CI [.05, .07]. All estimated factor loadings and covariances were significant, with correlations among the factors ranging from .58 to .81. The magnitude of some of the interfactor correlations was a potential cause for concern, raising the possibility that at least some of the factors might not differ in substantial ways.

Estimates of internal consistency (alpha) for this sample were .80 (Readiness for Change), .88 (Planfulness), .79 (Using Resources), and .86 (Intentional Behavior). Data for the confirmatory sample yielded stronger evidence for construct validity than did the sample used for exploratory analyses. Scores on the original PGIS were correlated with all subscales and mean overall score ranging from .44 to .59 ($ps < .001$). All subscales and mean overall score were significantly and positively correlated with internal locus of control ($rs = .24–.37$; $ps < .001$), instrumentality ($rs = .25–.35$; $ps < .001$), and expressiveness ($rs = .15–.21$; $ps < .02$). None of the new subscales of mean overall score were significantly correlated with chance locus of control. Although all subscales evidenced acceptable levels of internal consistency, three of the subscales had fewer than five items, suggesting that stability of internal consistency estimates might be improved by increasing scale length with additional items (see Murphy & Davidshofer, 2005). The remaining subscale, Planfulness, had six items and yielded a strong estimate of internal consistency, suggesting that improving parsimony by reducing the number of items might be warranted.

Step 4: Refining Scales

Following procedures identical to those used to construct the first set of items, the research team developed additional items that were consistent with each of the Readiness for Change, Using Resources, and Intentional Behavior subscales. A final list of 17 new items was generated, with five, four, and eight new items for the Intentional Behavior, Using Resources, and Readiness for Change subscales, respectively. One of these new items was judged to have better wording for the same content as an existing item on the Using Resources subscale, so the existing item was dropped. Step 4 yielded a total of 33 items for further analysis.

Step 5: Assessing New Items and Factor Structure

Method.

Participants. Participants were 164 undergraduate students enrolled in introductory psychology courses, with a mean age of 19.34 ($SD = 1.46$). Female participants numbered 100 (61.0%). Regarding ethnicity, 72.6% were European American, 4.9% were African American, and 11.6% were Hispanic or Mexican American, and 10.9% reported other ethnicities.

Measures. The survey included a short demographic questionnaire and the 33 items of this version of the PGIS-II, and 10.9% reported other ethnicities.

Procedure. Procedures replicated those in Step 2.

Results and discussion. The sample size was determined to be adequate for EFA based on guidelines recommended by Worthington and Whittaker (2006). Specifically, sample size was between 150 and 200, all but one of the communalities were $> .50$, and the Kaiser-Meyer-Olkin measure of sampling adequacy was .90. Worthington and Whittaker's (2006) procedures for using EFA in scale construction, described above, were used to determine whether the four-factor model would be replicated and to improve parsimony by reducing the number of items. The first EFA (principle-axis estimation and oblimin rotation) was constrained to four factors. Each of the four extracted factors had eigenvalues over 1.0, which explained 51.8% of the shared variance. Interfactor correlations ranged from |.32| to |.55|. The iterative process of EFAs used to improve parsimony resulted in a final EFA yielding four factors accounting for 62.10% of the total variance. Sixteen items had loadings that approximated simple structure. Factor loadings, descriptive statistics, and estimates of internal consistency for the subscales are shown in Table 1. Factor intercorrelations ranged from |.19| to |.59|, with three to five items per subscale. The magnitude of factor intercorrelations decreased markedly with this refinement of the items, without changing or compromising other psychometric properties.

Study 2: CFAs With Independent Samples

The aim of this study was to further establish the four-factor structure of the PGIS-II (see the Appendix for complete measure) with three independent samples, two of which were similar to samples in Study 1 and one sample drawn from a distinctly different population—thereby testing the construct validity in a new population. For two of these samples, the PGIS-II was included in a research screening survey administered to introductory psychology students for course credit. Students participated via online survey software. The third sample was nationwide (i.e., United States), community-based, and collected via convenience methods (primarily snowball sampling) directing participants to an online survey. A variety of methods were used in snowball sampling, including e-mail invitations from friends or family (54.9%), Facebook invitations (32.0%), and e-mail invitations from student organizations. Remaining participants were recruited in a variety of ways, specifically, via Craigslist invitations (4.0%), finding the PGI website on their own (2.9%), receiving contact cards for the project (0.7%), and "other" (4.5%). Community participants were not compensated in any way.

Method

Participants. Samples 1 and 2 had similar demographics with 563/551 students, 71.8%/64.4% female, with an average age of 18.70/19.55 ($SD = 1.60/2.93$) years. Participants identified as 73.5%/77.1% European American, 3.2%/4.5% African American, 3.3%/4.2% Asian American, 17.8%/11.3% Hispanic/Latino/Mexican American, and 2.2%/2.9% other ethnicities. Sample 3

Table 1
Factor Loadings; Factor Intercorrelations; and Subscale Means, Standard Deviations, and Estimates of Internal Consistency for Final Exploratory Factor Analysis

Item	F1: Planfulness	F2: Using Resources	F3: Readiness for Change	F4: Intentional Behavior
11	**.87**	−.01	−.05	.05
12	**.82**	−.05	−.01	−.02
18	**.66**	.10	.06	.00
24	**.74**	−.03	.05	−.02
27	**.63**	.02	.07	−.10
5	−.10	**.79**	−.01	−.04
8	.01	**.92**	.06	.06
9	.24	**.50**	−.05	−.13
1	.09	−.10	**.68**	−.01
6	−.05	.06	**.74**	−.03
7	−.02	−.03	**.82**	.03
10	.03	.07	**.68**	.02
28	−.05	−.02	.02	**−.94**
29	−.05	−.05	−.03	**−.93**
30	.14	.12	.01	**−.65**
32	.19	.10	.14	**−.51**
Subscale				
M	3.48	2.76	3.50	3.67
SD	0.82	1.00	0.81	0.96
Cronbach's α	.84	.80	.83	.89
Interfactor correlations				
F1	—			
F2	.29	—		
F3	.52	.19	—	
F4	−.58	−.47	−.39	—

Note. Results from Study 1. $n = 164$ (100 women, 64 men). Bold loadings indicate the factor on which the item was retained. F1–F4 = Factor 1–Factor 4.

had 682 participants (69.7% female). Similar to Samples 1 and 2, this sample identified primarily as European American (81.6%). Other participants in Sample 3 identified as 2.2% African American, 2.7% Asian American, 8.3% Hispanic/Latino/Mexican American, and 5.2% other ethnicities. Also similar to Samples 1 and 2, the community sample was highly educated, with 39.7% having a 4-year college degree and 38.2% having postbaccalaureate education. In contrast to Samples 1 and 2, the community sample was older ($M = 33.44$, $SD = 13.34$), more likely to be partnered or married (46.9%), and have children (39.1%). Although 24.9% of participants in Sample 3 stated they were students, the majority identified as employed (57.2%), full-time homemakers (4.5%), or neither working nor in school (6.6%). Participants in Sample 3 reported living in 41 of the United States and the District of Columbia, although a large portion (40.6%) lived in the state where data were collected from Samples 1 and 2.

Results and discussion. We examined data in Study 2 (and Study 3) for missing data at the item level. If a participant was missing data for less than 10% of items on any relevant scale, data were imputed using the following procedures: We calculated a mean item score for that participant for that subscale using items with data present. We substituted that mean item score for the missing item scores for that participant only. Few participants had any missing data for either Study 2 or 3, and there was no discernable pattern to items that were missing, although there was no statistical assessment to determine whether data truly were missing at random.

We used CFA testing for multigroup invariance to test the four-factor structure in the three new samples. We conducted CFAs of three nested models to determine whether the four-factor model was the best fitting model. Specifically, Model 1 was the four-factor model, with factors allowed to covary; Model 2 included the same four factors as Model 1, but instead of allowing the factors to covary, we added a second-order factor, hypothesized to load on each of the other four factors, to the model; Model 3 had all scale items loading onto a single factor. Constraints were placed on both factor loadings and covariance paths between factors to be invariant in all three models. Multivariate statistics indicated the possibility of multivariate kurtosis as well as positively skewed residuals in all samples. Therefore, we used robust statistics when assessing goodness of fit. For Model 1, the Satorra-Bentler (S-B) chi-square test produced a significant result, $\chi^2(330, N = 1{,}796) = 1356.70$, $p < .001$. Other fit indices suggested acceptable (but not good) model fit, with SRMR = .09 and robust RMSEA = .07 (90% CI [.07, .08]), using Hu and Bentler's (1999) joint criteria.

The analysis of Model 2 produced similar fit indices as Model 1, S-B $\chi^2(324, N = 1{,}796) = 1360.89$, $p < .001$; SRMR = .09; robust RMSEA = .07, (90% CI [.07, .08]). Model 3 produced fit indices indicating a single factor was a poor fit for the data, S-B $\chi^2(342, N = 1{,}796) = 3827.32$, $p < .001$ .000; SRMR = .10; RMSEA = .13 (90% CI [.127, .134]). Therefore, we excluded Model 3 from further consideration.

To determine which model is a better fit for the data, it is typical to use a scaled chi-square difference test comparing the S-B chi-square values of Models 1 and 2. If this test was used with these models, then it would result in a negative value for chi square; therefore, the more constrained model, Model 1, which is

the four-factor model with covarying factors, is a better fit for the data. The LaGrange Multiplier test suggested that six paths (two factor covariances and four factor loadings) were variant among the groups, indicating that releasing any or all of these constraints of equal loadings and correlations across groups would significantly improve model fit. The only discernable pattern appeared to be that compared with the college student samples; for the community sample, Planfulness was slightly less strongly correlated with Readiness for Change and Intentional Behavior, although all correlations remained strong. Given the modest differences among strong factor correlations and item loadings and the potential for spurious findings, we did not release any of the equality constraints or make other adjustments to the model. The potential for between-group differences on interfactor correlations should be examined in future research, however. Standardized solutions of item loadings for Model 1 are presented in Table 2. Intercorrelations among subscales are shown in Figure 1.

Although the primary purpose of Study 2 was the assessment of factor structure, we also examined existing data for evidence of convergent and discriminant validity for Sample 3, the community-based sample. Correlations of PGIS-II subscales and total scores with scores on the Marlowe-Crowne Social Desirability Scale–Short Form (Ballard, 1992; Reynolds, 1982) ranged from −.07 to .08, providing evidence for discriminant validity. Correlations with the original PGIS provided evidence for convergent validity. The total PGIS-II score and all subscale scores were significantly ($p < .001$) and meaningfully correlated with scores on the original PGIS: total PGIS-II (.70), Readiness for Change (.62), Planfulness (.71), Using Resources (.38), and Intentional Behavior (.62).

Table 2
Standardized Item Loadings From Confirmatory Factor Analyses in Three Samples

Scale and item	Sample 1[a] item loading	Sample 2[b] item loading	Sample 3[c] item loading
Readiness for Change			
Item 2	.72	.68	.70
Item 8	.71	.68	.73
Item 11	.84	.83	.83
Item 16	.87	.83	.86
Planfulness			
Item 1	.65	.71	.70
Item 3	.82	.84	.82
Item 5	.82	.82	.81
Item 10	.86	.87	.88
Item 13	.70	.70	.71
Using Resources			
Item 6	.83	.84	.88
Item 12	.52	.53	.57
Item 14	.90	.91	.94
Intentional Behavior			
Item 4	.72	.71	.68
Item 7	.70	.73	.74
Item 9	.79	.82	.80
Item 15	.82	.83	.87

Note. Results from Study 2. All item loadings and error terms significant at $\alpha = .05$ level.
[a] $n = 406$ women, 157 men. [b] $n = 353$ women, 198 men. [c] $n = 473$ women, 208 men;, no gender information given for one participant.

Study 3: Test–Retest Reliability and Concurrent and Discriminant Validity

The purpose of Study 3 was to explore the temporal stability and concurrent and discriminant validity of scores on the PGIS-II. It was hypothesized that scores on the PGIS-II would be reasonably stable over the tested time periods of 1, 2, 4, and 6 weeks.

Regarding tests of validity, although research with the original PGIS consistently found no gender differences on descriptive statistics, there have been frequent gender differences in the relations of PGI with measures of other constructs (e.g., Robitschek, 1998, 2003; Spering et al., 2010). The concept of intentional personal growth is relevant across cultures, but culture determines the ways in which a person will want to grow (Robitschek, 2003). Differing social norms experienced by women and men are conceptualized as having cultural influences on manifestations of PGI in a person's life (Spering et al., 2010). Thus, it is not surprising that, on average, men and women might want to grow in different ways. For example, men more than women might be taught to value independence; conversely, women more than men might be taught to value interdependence. If this is the case, then we would expect PGI to be more strongly related to independence for men and related to interdependence for women. On the basis of this rationale, we hypothesized that for both men and women, the PGIS-II would be significantly correlated with constructs that have been shown to be associated with intentional personal growth in previous research, but we did not assume that the magnitude of correlations for women and men would be the same. Thus, we tested for evidence of validity for men and women, separately. On the basis of previous PGI research (Robitschek, 1998, 1999), we hypothesized significant positive relations of PGIS-II subscale and total scores with the original PGIS, assertiveness, instrumentality, and internal locus of control. We hypothesized a significant negative relation of PGIS-II subscale and total scores with chance locus of control. We expected that PGIS-II subscale and total scores would not be significantly related to social desirability. And we expected that PGIS-II subscale and total scores would be significantly positively related to expressiveness for men, but not for women.

Method

Participants and procedure. Participants were 166 female, 77 male, and two male-to-female students, 73.5% of whom identified as European American, enrolled in introductory and upper level psychology courses at a large southwestern university. Mean age was 20.13 years ($SD = 4.46$). Gender was distributed fairly evenly across groups. Students in the upper level courses (i.e., the 6-week interval group) were somewhat older than students in the other three groups (i.e., in introductory psychology courses). In the first session, introductory psychology participants were given a demographics survey, the PGIS-II, and the measures of concurrent validity, specifically, the original PGIS, Rathus Assertiveness Schedule (Rathus, 1973), Personal Attributes Questionnaire (Spence & Helmreich, 1980), Locus of Control (Levenson, 1974), and Social Desirability Scale (Crowne & Marlowe, 1964). Upon completion of the questionnaires, these participants were randomly assigned to the 1-, 2-, or 4-week conditions and provided with a date to return for their second session. During the second session,

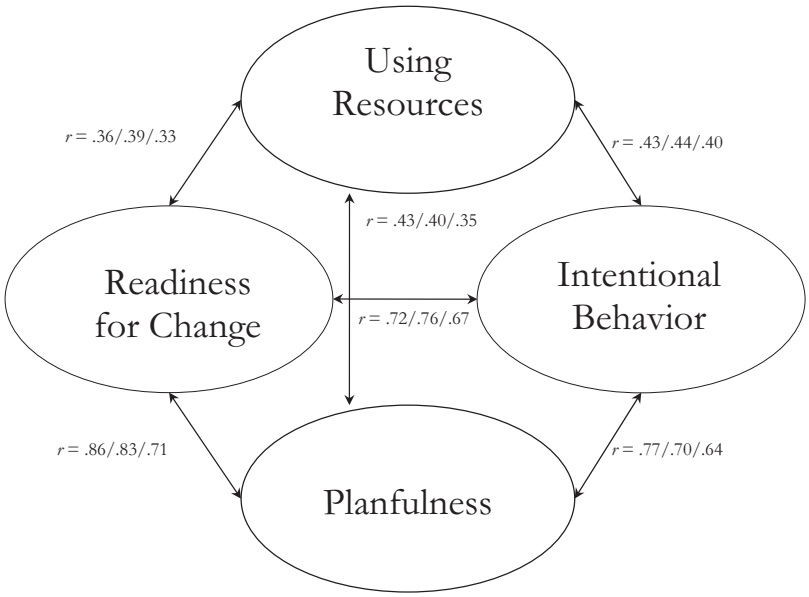

Figure 1. Factor structure and subscale intercorrelations of the Personal Growth Initiative Scale–II as measured in three independent samples. Results from Study 2. All correlations significant at the $\alpha = .05$ level. Correlations shown first generated from Sample 1 ($n = 563$), those shown second are generated from Sample 2 ($n = 551$), and those shown third are generated from Sample 3 ($n = 682$).

all participants completed the PGIS-II again. Participants in the 6-week interval data collection completed only the demographic and PGIS-II questionnaires at Time 1 and only the PGIS-II at Time 2. All participation in the research was voluntary. Participants in the 1-, 2-, and 4-week conditions received course credit. Some participants in the 6-week condition also received course credit. Others did not, depending on their course requirements. Participants in the 6-week condition were aware if credit would be awarded before they decided whether or not to participate.

Results

Reliability. Descriptive statistics and internal consistency estimates for PGIS-II subscale and overall scores at Time 1 and Time 2 for each test–retest interval are shown in Table 3. Paired samples *t* tests indicated there were no significant ($p > .05$) differences from Time 1 to Time 2 for any subscale or total score for any test–retest time interval. Test–retest reliability estimates for total PGIS-II scores were as follows: 1 week, $r = .82$; 2 week, $r = .67$; 4 week, $r = .70$; and 6 week, $r = .62$, providing evidence for the temporal stability of the PGIS-II. We used a 4 (subscales) × 4 (groups) repeated measures analysis of variance (ANOVA) to compare Time 1 scores on the subscales within each sample to determine whether there was a consistent pattern of subscale scores across samples. Results indicated a significant within-subjects main effect for subscale, $F^1(3, 810) = 96.213$, $p < .001$, partial $\eta^2 = .26$, and a significant Subscale × Group interaction, $F(9, 810) = 2.082$, $p = .048$, partial $\eta^2 = .02$ (see Figure 2). The between-subjects main effect for group was not significant. Pairwise comparisons of subscale scores indicated that Using Resources had a significantly lower score than all other subscales (mean differences = .76–.86; all *p*s < .001); this appears to be consistent across groups. Also, Readiness for Change had a significantly lower score than Planfulness (mean difference = .10; $p = .02$), although this appears to be largely due to the Readiness for Change score only in the 2-week sample.

Validity. Correlations of PGIS-II subscale and total scores measured at Time 1 with validity variables are shown in Table 4, separated for men and women. It is noteworthy that there was considerably more power for the correlations for women, due to almost twice as many women as men in the sample. None of the correlations yielded significant differences by gender using *z*-tests. However, 13 of the 35 correlations (37%) yielded differences that can be categorized within Cohen's (1992) definition of a small effect (i.e., $q = .10–.23$). See Table 4 for specification of these correlations. A discernable pattern was that for 12 of the 13 differences, the relation was stronger for men than women.

As shown in Table 4, there was considerable support for the validity hypotheses, with a preponderance of correlations in the hypothesized directions for PGIS-II subscale and total scores with scores for the original PGIS, assertiveness, instrumentality, internal locus of control, and social desirability. In contrast with hypotheses, chance locus of control was not significantly related to PGIS-II scores, except for Using Resources for women. Also contrary to hypotheses, Using Resources and total PGIS-II scores were significantly related to expressiveness for both men and women.

[1] All *F* statistics are corrected with Greenhouse–Geisser.

Table 3
Descriptive Statistics and Estimates of Internal Consistency for PGIS-II Scores by Test–Retest Interval (Study 3)

	1-week[a]		2-week[b]		4-week[c]		6-week[d]	
Scale	Time 1	Time 2	Time 1	Time 2	Time 1	Time 2	Time 1	Time 2
Readiness for Change	3.80 (0.78)	3.79 (0.75)	3.88 (0.72)	3.86 (0.75)	3.61 (0.94)	3.66 (0.69)	3.85 (0.78)	3.95 (0.60)
Planfulness	3.85 (0.86)	3.86 (0.76)	3.93 (0.68)	3.88 (0.67)	3.92 (0.81)	3.80 (0.70)	3.91 (0.73)	4.02 (0.68)
Using Resources	3.21 (1.12)	3.20 (1.09)	3.38 (1.01)	3.33 (0.84)	2.79 (1.38)	2.90 (0.99)	2.91 (1.32)	3.10 (0.97)
Intentional Behavior	3.89 (0.83)	3.92 (0.80)	3.94 (0.82)	3.85 (0.87)	3.85 (0.99)	3.83 (0.83)	3.86 (0.91)	3.94 (0.82)
Total scale	3.69 (0.72)	3.69 (0.69)	3.78 (0.62)	3.73 (0.63)	3.54 (0.86)	3.55 (0.66)	3.70 (0.72)	3.81 (0.58)
				Estimates of Internal Consistency				
Readiness for Change	.81	.88	.76	.86	.87	.82	.83	.80
Planfulness	.89	.91	.85	.85	.84	.82	.83	.87
Using Resources	.82	.84	.73	.73	.88	.76	.88	.83
Intentional Behavior	.83	.89	.86	.91	.89	.84	.85	.87
Total scale	.92	.94	.90	.92	.94	.92	.92	.91

Note. Subscale scores calculated as average item scores. Total scale score calculated as average of subscale scores. PGIS-II = Personal Growth Initiative Scale–II.
[a] $n = 103$ (62 women, 41 men). [b] $n = 62$ (39 women, 23 men). [c] $n = 43$ (35 women, 8 men). [d] $n = 66$ (49 women, 15 men, two transgendered).

General Discussion

The purpose of these studies was to describe the development, factor structure, internal consistency estimates, temporal stability, and validity of the PGIS-II. Studies 1 and 2 provided evidence of an internally stable four-factor structure, with correlated factors identified as Readiness for Change, Planfulness, Using Resources, and Intentional Behavior. Study 3 provided evidence for the temporal stability and a relatively consistent pattern of relations among the subscales of the PGIS-II. Also, Study 3 provided substantial evidence for concurrent and discriminant validity of PGIS-II subscale and total scores. Taken together, the results of these three studies indicate that we have achieved our goal of developing a parsimonious multidimensional measure of PGI that has evidence of good initial psychometric properties.

The multidimensional nature of the PGIS-II is a critical contribution to the personal growth literature. The content of the factors closely matches PGI theory. Readiness for Change and Planfulness comprise the intentional cognitive skill set derived from PGI theory. Using Resources and Intentional Behavior comprise the overt behavioral skill set similarly derived. Although we included items assessing valuing intentional personal growth in the initial item pool, none of these items was retained in the final measure. Our research suggested that items measuring *active* components of

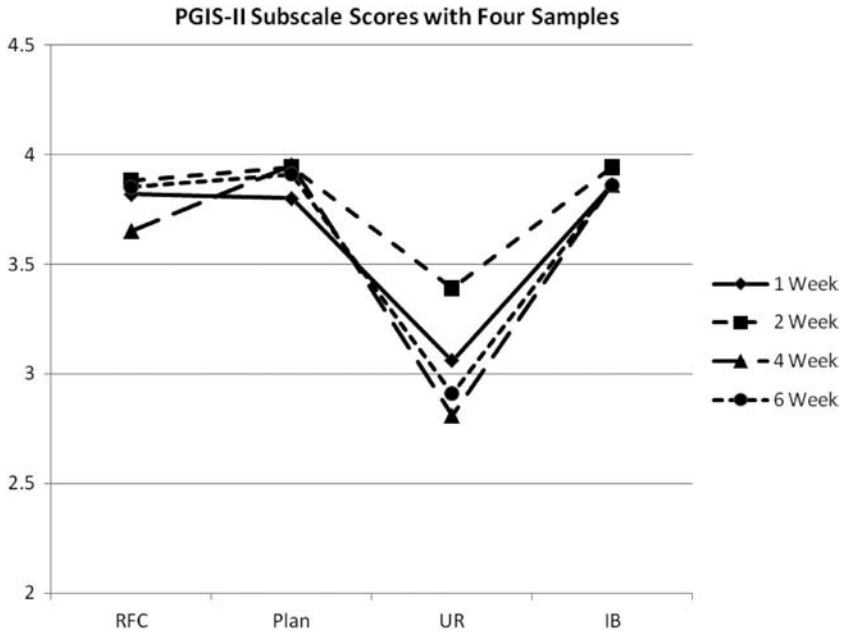

Figure 2. PGIS-II = Personal Growth Initiative Scale–II; RFC = Readiness for Change; Plan = Planfulness; UR = Using Resources; IB = Intentional Behavior.

Table 4
*Time 1 PGIS-II Scores Correlated With Measures of Concurrent Validity for Women and Men (*Ns *= 117 and 62, Respectively)*

Time 1 measures	Readiness for Change	Planfulness	Using Resources	Intentional Behavior	Total score
Original PGIS					
Women	.51***	.60**	.31**	.59***	.59***
Men	.46***	.61***	.30*	.43**	.57***
Assertiveness					
Women	**.20***	.23*	**.20***	**.24***	**.26****
Men	**.30***	.30*	**.37****	**.36****	**.44*****
Instrumentality					
Women	.25*	**.28****	**.07**	.29**	**.25****
Men	.24	**.42****	**.36****	.28*	**.43*****
Expressiveness					
Women	.10	.16	.32***	.15	.24*
Men	.07	.14	.38**	.24	.29*
LOC-Chance					
Women	−.05	−.14	**−.22***	−.10	−.16
Men	−.09	−.13	**−.04**	−.10	−.11
LOC-Internal					
Women	**.10**	**.25****	.10	**.23***	**.20***
Men	**.23**	**.44*****	.23	**.36****	**.41****
Social desirability					
Women	−.07	.01	**−.05**	−.12	−.08
Men	−.06	.07	**−.23**	−.13	−.13

Note. Paired correlations in bold text have different values within the pair meeting criteria for a small effect (i.e., $q \geq .10$). PGIS = Personal Growth Initiative Scale; LOC = locus of control.
* $p < .05$. ** $p < .01$. *** $p < .001$.

PGI, such as planning personal growth and enacting those plans, were cohesive and did not include valuing this process. Retrospectively, this is not surprising. Historically, PGI has been defined as "active, intentional engagement in the process of personal growth" (Robitschek, 1998, p. 184). This definition is clearly behavioral, not attitudinal. In contrast, valuing personal growth processes or outcomes is attitudinal. Future research can study the potential role this attitude might play in the personal growth process. But valuing personal growth and its process does not appear to be part of PGI.

The multifactor structure of the PGIS-II yields an important advantage over the original PGIS of assessing PGI more complexly. It is possible that these four factors differentially influence the success of personal growth efforts or are differentially predictive of well-being or distress. These differences could exist on a population level or an individual level. For example, research may find that Using Resources, which includes asking for help from other people, might be more relevant to populations in which *interdependence* is highly valued than to populations that more highly value *independence*. In contrast, increasing Planfulness might be particularly important for Client A, but working on Intentional Behavior is an area of greater need for Client B. If such differences are found, then the multiple constructs captured in the PGIS-II could offer a variety of paths to interventions in clinical settings for people with low levels of intentional personal growth. Examples include an individualized counseling intervention that targets specific PGI needs for a single client and workshops for specific populations that tailor content to the unique needs of those populations (e.g., teaching the process of Using Resources to first-year college students by focusing on resources present on the college campus). These possibilities will need to be addressed in future research.

We note that all mean subscale scores are above the midpoint of the possible range across samples. This is expected given that the samples were from the broad populations of generally well-functioning college students and community members. This replicates results for the original PGIS with similar samples (Robitschek, 1998, 1999). Research with an outpatient clinical sample using the original PGIS reported mean scores near the midpoint of the possible range (Robitschek & Hershberger, 2005). It is expected that the PGIS-II will have similarly lower mean scores in clinical samples. The midpoint of the possible range for the PGIS-II indicates a transition from agree to disagree that PGI cognitions and behaviors are part of one's life. This might represent an important clinical threshold in PGI levels. Additional research with clinical samples is needed to determine whether these expected lower scores will be found and whether the lower scores have the hypothesized clinically significant threshold.

The most notable variability among subscales involves the Using Resources subscale. Using Resources yielded consistently lower mean scores and consistently greater variance than the other subscales. In addition, Using Resources had markedly smaller correlations with all other subscales compared with intercorrelations among the other subscales. Using Resources involves processes occurring outside the self, in contrast to the other subscales that measure primarily internal processes. One possible explanation is that Using Resources might not be as essential to the *process* of intentional personal growth as the processes operationalized in the other three subscales. A contrasting explanation is that Using Resources might moderate the *outcomes* of the three other components of the process. For example, research has shown that using social support resources increases the effectiveness of smoking cessation efforts (U.S. Department of Health and Human Services, 2000). Another possibility is that cultural values have influenced these relations among components (Robitschek, 2003). The majority of participants in all samples self-identified as European American. With European American cultures, valuing in-

dependence and self-reliance (Markus & Kitayama, 1991; Triandis, Bontempo, Villareal, Asai, & Lucca, 1988), perhaps it is not surprising that these participants would endorse Using Resources at lower levels than other more independent aspects of PGI and that this pattern of correlations would exist. If this explanation is correct, then we would expect to find notably higher mean levels of Using Resources and notably stronger intersubscale correlations involving Using Resources in samples drawn from populations oriented to greater interdependence, such as Mexican Americans and Asians. Yet another possibility is that there could be considerable variability in the quality of support provided by external resources, with some people perceiving much utility in using resources, in general, other people perceiving little utility in using resources, in general, and a third group perceiving various amounts of utility depending on the specific resource or the growth domain (Davis, Brickman, & Baker, 1991; Finch, Okun, Pool, & Ruehlman, 1999; Smith & Ingram, 2004).

An important direction for future research is to explore the possibility of gender differences in relation to the scale, as a whole, and the component subscales. For example, if men score significantly lower on the Using Resources subscale than do women, then it would support previous gender research on help-seeking (Addis & Mahalik, 2003), and potentially be a manifestation of the masculine stereotype that men do not/should not ask for help (e.g., do not ask for directions when unsure of where they are). It also is possible that men will have higher scores than women have on the Using Resources item that asks specifically about "resources" rather than "help" perhaps due to reduced activation of self-stigma or fears of dependence when reading or hearing the word *help* (e.g., Addis & Mahalik, 2003; Hammer & Vogel, 2010). The pattern of gender differences in correlations of PGIS-II subscales with measures of validity suggests that continued examination of possible gender differences in the manifestations of PGI is warranted.

An additional question for future research is the extent to which Readiness for Change and Planfulness really differ, given their strong correlation across samples in the present research. In question is the extent to which we can do one of these without the other. It seems reasonable to believe that a person can be ready for personal growth without being planful about it, but it seems less likely that someone would be planful about personal growth without simultaneously being at least somewhat ready for some type of personal growth. A readily accessible counterexample, however, is the classic New Year's resolution in which some level of planning takes place without more than a *wish* (as opposed to *readiness*) to change. Research will need to determine the extent to which Readiness for Change and Planfulness might be merged in the future or remain importantly distinct. In particular, as the PGIS-II is studied across populations, relations between these two subscales should be closely monitored. The acceptable (but not good) fit indices found for the final model tested in Study 2 further suggest the importance of assessing factor structure in future studies.

An important limitation of the present research is that the samples were relatively homogeneous, including predominantly college student, European American, and nonclinical samples. Future research is needed to assess the psychometric properties of the PGIS-II across a wide range of diverse groups to determine its multicultural validity and utility in clinical settings. The original PGIS yielded mean scale scores that were similar across multiple age and ethnic groups (e.g., Robitschek, 1998, 1999; Spering & Robitschek, 2007; Spering et al., 2010) with evidence for relevance across age groups (e.g., Spering et al., 2010) and cultures (e.g., Robitschek, 1998, 2003). But there also was evidence that PGI manifested differently across cultures. For example, Mexican Americans with high PGI had high levels of social desirability (Robitschek, 2003), whereas these constructs were not related for European Americans (Robitschek, 1998). This difference is reasonable given the traditional Mexican value of *simpatía* (Triandis, Marín, Lisansky, & Betancourt, cited in Marín & Marín, 1991), which emphasizes minimizing conflict in positive social relationships. Similar studies will need to be conducted with the PGIS-II. In addition, evidence regarding convergent and discriminant validity will need to be examined across cultures.

Research using the original PGIS demonstrated that people with high levels of PGI also had high levels of psychological, emotional, and social well-being (Hardin, Weigold, Robitschek, & Nixon, 2007; Robitschek & Keyes, 2009) and low levels of psychological and emotional distress (Robitschek & Kashubeck, 1999). Using the multidimensional PGIS-II, which distinguishes between the cognitive and behavioral components of PGI, in research on depression, anxiety, and other types of psychological distress may yield valuable information about the ways PGI actually works, and in turn may provide a means of preventing or lowering levels of such psychological distress. The PGIS-II may prove to be a valuable instrument for both researchers and counselors hoping to understand and possibly improve aspects of personal growth within and outside of the therapeutic relationship.

References

Addis, M. E., & Mahalik, J. R. (2003). Men, masculinity, and the contexts of help seeking. *American Psychologist, 58,* 5–14. doi:10.1037/0003-066X.58.1.5

Allport, G. (1955). *Becoming: Basic considerations for a psychology of personality.* New Haven, CT: Yale University Press.

Allport, G. (1961). *Pattern and growth in personality.* New York, NY: Holt, Rinehart, & Winston.

Ballard, R. (1992). Short forms of the Marlowe-Crowne Social Desirability Scale. *Psychological Reports, 71,* 1155–1160.

Beck, A. T. (1976). *Cognitive therapy and the emotional disorders.* New York, NY: International Universities Press.

Cohen, J. (1992). Quantitative methods in psychology. *Psychological Bulletin, 112,* 155–159. doi:10.1037/0033-2909.112.1.155

Crowne, D. P., & Marlowe, D. (1964). *The approval motive: Studies in evaluative dependence.* New York, NY: Wiley.

Davis, R. C., Brickman, E., & Baker, T. (1991). Supportive and unsupportive responses of others to rape victims: Effects on concurrent victim adjustment. *American Journal of Community Psychology, 19,* 443–451.

Deci, E. L., & Ryan, R. M. (2008). Hedonia, eudaimonia, and well-being: An introduction. *Journal of Happiness Studies, 9,* 1–11. doi:10.1007/s10902-006-9018-1

Finch, J. F., Okun, M. A., Pool, G. S., & Ruehlman, L. S. (1999). A comparison of the influence of conflictual and supportive social interactions on psychological distress. *Journal of Personality, 67,* 581–621. doi:10.1111/1467-6494.00066

Hammer, J. H., & Vogel, D. L. (2010). Men's help seeking for depression: The efficacy of a male-sensitive brochure about counseling. *The Counseling Psychologist, 38,* 296–313. doi:10.1177/0011000009351937

Hardin, E. E., Weigold, I. K., Robitschek, C., & Nixon, A. E. (2007). Self-discrepancy and distress: The role of personal growth initiative.

Journal of Counseling Psychology, 54, 86–92. doi:10.1037/0022-0167.54.1.86

Hendrick, S. S. (1995). *Close relationships: What couple therapists can learn.* Pacific Grove, CA: Brooks/Cole.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6,* 1–55. doi:10.1080/10705519909540118

Kashdan, T. B., Biswas-Diener, R., & King, L. A. (2008). Reconsidering happiness: The costs of distinguishing between hedonics and eudaimonia. *Journal of Positive Psychology, 3,* 219–233. doi:10.1080/17439760802303044

Kline, T. J. B. (2005). *Psychological testing: A practical guide to design and evaluation.* Thousand Oaks, CA: Sage.

Kohlberg, L. (1964). Development of moral character and moral ideology. In M. Hoffman & L. W. Hoffman (Eds.), *Review of child development research* (pp. 383–432). New York, NY: Russell Sage Foundation.

Levenson, H. (1974). Activism and powerful others: Distinctions within the concept of internal-external control. *Journal of Personality Assessment, 38,* 377–383. doi:10.1080/00223891.1974.10119988

Marín, G., & Marín, B. V. (1991). *Research with Hispanic populations.* Thousand Oaks, CA: Sage.

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98,* 224–253. doi:10.1037/0033-295X.98.2.224

Murphy, K. R., & Davidshofer, C. O. (2005). *Psychological testing: Principles and applications* (6th ed.). Upper Saddle River, NJ: Pearson.

Rathus, S. A. (1973). A 30-item schedule for assessing assertive behavior. *Behavior Therapy, 4,* 398–406. doi:10.1016/S0005-7894(73)80120-0

Reynolds, W. M. (1982). Development of reliable and valid short forms of the Marlowe-Crowne Social Desirability Scale. *Journal of Clinical Psychology, 38,* 119–125. doi:10.1002/1097-4679(198201)38:1<119::AID-JCLP2270380118>3.0.CO;2-I

Robitschek, C. (1997). Life/career renewal: An intervention for vocational and other life transitions. *Journal of Career Development, 24,* 133–146. doi:10.1023/A:1025053330494

Robitschek, C. (1998). Personal growth initiative: The construct and its measure. *Measurement and Evaluation in Counseling and Development, 30,* 183–198.

Robitschek, C. (1999). Further validation of the Personal Growth Initiative Scale. *Measurement and Evaluation in Counseling and Development, 31,* 197–210.

Robitschek, C. (2003). Validity of Personal Growth Initiative Scale scores with a Mexican American college student population. *Journal of Counseling Psychology, 50,* 496–502. doi:10.1037/0022-0167.50.4.496

Robitschek, C., & Cook, S. W. (1999). The influence of personal growth initiative and coping styles on career exploration and vocational identity. *Journal of Vocational Behavior, 54,* 127–141. doi:10.1006/jvbe.1998.1650

Robitschek, C., & Hershberger, A. R. (2005). Predicting expectations about counseling: Psychological factors and gender implications. *Journal of Counseling and Development, 83,* 457–469. doi:10.1002/j.1556-6678.2005.tb00367.x

Robitschek, C., & Kashubeck, S. (1999). A structural model of parental alcoholism, family functioning, and psychological health: The mediating effects of hardiness and personal growth orientation. *Journal of Counseling Psychology, 46,* 159–172. doi:10.1037/0022-0167.46.2.159

Robitschek, C., & Keyes, C. L. M. (2009). Keyes' model of mental health with personal growth initiative as a parsimonious predictor. *Journal of Counseling Psychology, 56,* 321–329. doi:10.1037/a0013954

Ryff, C. D. (1989). Happiness is everything or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology, 57,* 1069–1081. doi:10.1037/0022-3514.57.6.1069

Savickas, M. L. (1997). Career adaptability: An integrative construct for life-span, life-space theory. *The Career Development Quarterly, 45,* 247–259. doi:10.1002/j.2161-0045.1997.tb00469.x

Shorey, H. S., Little, T. D., Snyder, C. R., Kluck, B., & Robitschek, C. (2007). Hope and personal growth initiative: A comparison of positive, future-oriented constructs. *Personality and Individual Differences, 43,* 1917–1926. doi:10.1016/j.paid.2007.06.011

Smith, N. G., & Ingram, K. M. (2004). Workplace heterosexism and adjustment among lesbian, gay, and bisexual individuals: The role of unsupportive social interactions. *Journal of Counseling Psychology, 51,* 57–67. doi:10.1037/0022-0167.51.1.57

Spence, J. T., & Helmreich, R. L. (1980). Masculine instrumentality and feminine expressiveness: Their relationships with sex role attitudes and behaviors. *Psychology of Women Quarterly, 5,* 147–163. doi:10.1111/j.1471-6402.1980.tb00951.x

Spering, C. C., & Robitschek, C. (2007). *Personal Growth Initiative Scale manual.* Lubbock, TX: Author.

Spering, C., Robitschek, C., & Hardin, E. (2010). *Validity of the Personal Growth Initiative Scale in older adults.* Manuscript in preparation.

Super, D. E., & Knasel, E. G. (1981). Career development in adulthood: Some theoretical problems and a possible solution. *British Journal of Guidance and Counselling, 9,* 194–201. doi:10.1080/03069888100760211

Tallman, K., & Bohart, A. C. (1999). The client as a common factor: Clients as self-healers. In M. A. Hubble, B. L. Duncan, & S. D. Miller (Eds.), *The heart and soul of change: What works in therapy* (pp. 91–131). Washington, DC: American Psychological Association. doi:10.1037/11132-003

Triandis, H. C., Bontempo, R., Villareal, M. J., Asai, M., & Lucca, N. (1988). Individualism and collectivism: Cross-cultural perspectives on self–ingroup relationships. *Journal of Personality and Social Psychology, 54,* 323–338. doi:10.1037/0022-3514.54.2.323

U.S. Department of Health and Human Services, Public Health Services. (October, 2000). *Treating tobacco use and dependence. Quick reference guide for clinicians.* Rockville, MD: Author.

Waterman, A. S. (1990). The relevance of Aristotle's conception of eudaimonia for the psychological study of happiness. *Theoretical and Philosophical Psychology, 10,* 39–44. doi:10.1037/h0091489

Whittaker, A. E., & Robitschek, C. (2001). Multidimensional family functioning: Predicting personal growth initiative. *Journal of Counseling Psychology, 48,* 420–427. doi:10.1037/0022-0167.48.4.420

Worthington, R. L., & Whittaker, T. A. (2006). Scale development research: A content analysis and recommendations for best practices. *The Counseling Psychologist, 34,* 806–838. doi:10.1177/0011000006288127

Appendix

Personal Growth Initiative Scale–II ©

(author)

Please mark how much you agree or disagree with that statement. Use the following scale:

0 = Disagree Strongly
1 = Disagree Somewhat
2 = Disagree A Little
3 = Agree A Little
4 = Agree Somewhat
5 = Agree Strongly

1. I set realistic goals for what I want to change about myself.
2. I can tell when I am ready to make specific changes in myself.
3. I know how to make a realistic plan in order to change myself.
4. I take every opportunity to grow as it comes up.
5. When I try to change myself, I make a realistic plan for my personal growth.
6. I ask for help when I try to change myself.
7. I actively work to improve myself.
8. I figure out what I need to change about myself.
9. I am constantly trying to grow as a person.
10. I know how to set realistic goals to make changes in myself.
11. I know when I need to make a specific change in myself.
12. I use resources when I try to grow.
13. I know steps I can take to make intentional changes in myself.
14. I actively seek out help when I try to change myself.
15. I look for opportunities to grow as a person.
16. I know when it's time to change specific things about myself.

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