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ABSTRACT

The purpose of the present study was an attempt, by examining in more detail the use of the specific strategy of instrumental goal pursuit with the development of the Instrumental Goal Pursuit Scale (IGPS), to extend previous research on the self-selected strategies individuals employ in an attempt to seek happiness. The IGPS consists of five items characterized by happiness-enhancement strategies designed to meet personal goals (e.g., "Attempt to reach my full potential"). Although no gender difference was found, scores on the IGPS correlated significantly ($p < .001$) with measures of life satisfaction and positive affect. Compared to those with low scores, those in the High-IGPS group maintained personal beliefs reflective of being more satisfied with their current state of happiness, feeling more optimistic about the future, and expressing greater control over their happiness, as well as a greater ($p < .001$) frequency of use of the more constructive happiness-enhancement strategy categories of Purposeful Leisure, Social Affiliation, Mental Control, and Religious/Reflective. The overall pattern of results suggests initial support

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for the construct validity of the IGPS. Future research based on instrumental theories linking personality to subjective well-being should focus on individual differences in the underlying dynamics (e.g., goal construction/implementation) and practical implications (e.g., happiness interventions; goal-pursuit training) to examine more thoroughly the validity and utility of the IGPS.

KEY WORDS Happiness; Happiness-Enhancement Strategies; Instrumental Goal Pursuit; Instrumental Goal Pursuit Scale (IGPS); Subjective Well-Being

Reviews of sources that serve to contribute to happiness and life satisfaction have focused on three general categories: life circumstances and demographics (e.g., income, health, social relationships, and geographic location), inherited dispositions (e.g., underlying biological and/or genetic determinants) and personality traits (e.g., extraversion and neuroticism), and intentional behaviors (cf., Lucas and Diener 2008; Lyubomirisky, Sheldon, and Schkade 2005). Specific reviews within each of these categories suggest that their impact on happiness varies and is influenced by a variety of factors. Reviews of external life circumstances, such as income (cf., Lucas and Dyrenforth 2006), health (Okun and George 1984), and social relationships (cf., Lucas and Dyrenforth 2005, 2006) suggest that although such life circumstances and demographic characteristics are linked to happiness, their combined relative contribution is quite small (i.e., 10 percent of explained variance; Lyubomirisky et al. 2005).

In contrast to the limited contribution made to expressions of happiness by such life circumstances and demographic characteristics, biologically based personality traits have been reported to account for as much as 40–50 percent of the estimated variance in individual differences in the expressions of happiness (Diener et al. 1999). The basic pattern of the two personality traits most frequently identified is that of extraversion and neuroticism being positively and negatively associated with well-being, respectively (Costa and McCrae 1980; Emmons and Diener 1985; Lucas and Fujita 2000; McCrae and Costa 1991). Explanations to account for the relationship linking biologically based personality traits to subjective well-being have focused on the role of mediating process in the production and experience of affective responses that have taken one of two forms: temperamental theories and instrumental theories (cf., McCrae and Costa 1991). Temperament theories tend to link personality traits and affective states with individual differences in the mediating influence of fundamental neurological motivational systems that serve to account for approach and avoidance tendencies that result in positive and negative affective states, respectively (cf., Gomez and Cooper 2008). Instrumental theories tend to link positive and negative affective states with the mediating influence of personal choices and self-regulatory behavior characteristic of individuals with certain personality traits (cf., McCrae and Costa 1991). In support of the role of biological processes based on temperamental theories, investigations of incentive motivation have linked agentic extraversion and affiliative behavior with biological systems producing

positive emotional feelings, such as elation and euphoria, and motivational feelings of desire, wanting, craving, and self-efficacy (cf., Depue 2006), while behavioral genetics research has linked neuroticism as a genetic marker for negative emotional affect, such as anxiety and depression (cf., Gillespie and Martin 2006). In support of the role of linking personal choice and self-regulatory behavior and affective responses characteristic of instrumental theories, Emmons, Diener, and Larsen (1986) demonstrated the tendency of extraverts to choose to be in more social situations than introverts and, while in those chosen situations, to express more favorable affect than when in imposed nonsocial settings. In a similar manner, Moskowitz and and Coté (1995) reported that those individuals high on agreeableness experienced more pleasant affect when they were engaging in behaviors consistent with that trait.

The third category to be considered influential in the expression of chronic happiness is that of intentional activity (Lyubomirsky et al. 2005). The category of intentional activity includes a broad range of actions individuals can elect to engage in with the express purpose of influencing their well-being and is estimated to account for approximately 40 percent of the variance of chronic happiness (Lyubomirsky et al. 2005). Such a broad range of actions can include an assortment of behavioral (e.g., exercising, talking with friends), cognitive (e.g., looking on the bright side, recalling positive events), and volitional (e.g., attempting to reach a personal goal, working for a meaningful cause) manifestations (Lyubomirsky et al. 2005). More recently, based on time-diary studies from more than 45,000 people collected by the General Social Survey (GSS) from 1972 to 2006 to examine the relationship between self-reported happiness and participation in an assortment of daily activities, Robinson and Martin (2008) reported that happy individuals tended to socialize more with relatives and friends, attend church more frequently, read the newspaper more often, watch less television, and go to bars slightly less than not happy people.

In addition to the variety of ways by which the behavioral, cognitive, and volitional manifestations of intentional activities are expressed, there is evidence to suggest considerable variation in the nature of the frequency by which individuals use these different activities to influence their well-being. In an investigation of the strategies college students used to pursue their happiness, Tkach and Lyubomirsky (2006) noted that one of the most frequently used and most effective strategies was that of instrumental goal pursuit. Instrumental goal pursuit as a happiness-enhancement strategy is characterized by an individual "acting as an agent" (Tkach and Lyubomirsky 2006:211) for the purpose of changing his or her situation (e.g., "reach my goal") or himself or herself (e.g., "become a better person"). Given instrumental goal pursuit's high frequency of use and high degree of effectiveness, additional insight regarding it as a happiness-enhancement strategy might be gained by examining further individual differences in the behavioral, cognitive, and volitional manifestations of its expression.

The purpose of the present study was, by examining in more detail the use of the specific strategy of instrumental goal pursuit, to extend previous research on the self-selected strategies individuals employ in an attempt to seek happiness. The focus of this investigation involved the identification of individual differences in the use of

instrumental goal pursuit as a self-selected strategy for seeking happiness. Such a focus necessitates the need for a measure designed to assess individual differences in instrumental goal pursuit. In this regard, one aim within the principal purpose of the present study is to design a measure of individual differences in the expression of instrumental goal pursuit in the seeking of happiness. A second aim is to provide initial validation of such a measure. The development and validation of this scale is based on the hypothesis that an increased expression of goal directedness will be associated with a pattern of thoughts, feelings, and behaviors characterized by positive mood and well-being.

METHODS

Participants

The initial participants were 337 students (overall, *M* = 25.40 years of age, *SD* = 8.82; 198 females, *M* = 25.7 years of age, SD = 9.49; 94 males, *M* = 25.0 years of age, *SD* = 7.48; 45 not indicating gender) attending a satellite campus of a major public Midwestern university. Of the 300 participants indicating an ethnic identification, 84 percent identified themselves as White/Caucasian, 6 percent as Black/African American, 2.3 percent as Asian, 2 percent as Hispanic, and 5 percent as other, Native American, or Multiracial.

Measures

The principal measures used in the present study included two objective self-report measures developed specifically for this study assessing personal beliefs associated with and behavioral strategies designed to enhance happiness, a measure assessing the dimensions of positive and negative affect, a measure of global life satisfaction that was contained in the online survey, and the development of the Instrumental Goal Pursuit Scale. A description of each of these measures follows.

Survey of belief statements related to one's happiness. As part of the online survey, the participants completed a 19-item fixed-format questionnaire assessing certain beliefs they had regarding their happiness (e.g., I am just as happy as my peers.: 1= Strongly Disagree to 4 = Strongly Agree; Today, I would describe my happiness level as: 1 = Very Low to 5 = Very High) with a fixed-format scoring that varied depending on the wording of the specific item. A more detailed description of the scoring for each of these items is provided in the results of their analysis.

Survey of happiness-enhancement strategies. The online survey also included a 44-item checklist of self-selected happiness-enhancement strategies (e.g., hang out with friends, go shopping, read a book) designed to assess the extent to which the participants engaged in each of these strategies. The Survey of Happiness Strategies was based on a similar set of 66 items used by Tkach and Lyubomirsky (2006). The instructions for the

Survey of Happiness Strategies read, "A number of common happiness-enhancement strategies are listed below. Read each strategy and indicate how often you use the strategy to increase or maintain your happiness: 1= never, 2 = rarely, 3 = moderately, 4 = often, 5 = all the time."

Positive and Negative Affective Schedule. Affect was assessed using the Positive and Negative Affect Schedule (PANAS; Watson, Clark, and Tellegen 1988), which assesses positive affect and negative affect as two independent dimensions of mood. The positive-affect dimension of the PANAS includes the following 10 items: interested, excited, strong, enthusiastic, proud, alert, inspired, determined, attentive, and active. The negative-affective dimension of the PANAS includes the following 10 items: distressed, upset, guilty, scared, hostile, irritable, ashamed, nervous, jittery, and afraid. The instructions for completing the PANAS read, "This scale consists of a number of words that describe different feelings and emotions. Read each item and select the appropriate answer next to that word. Indicate to what extent you have felt this way during the past week. Use the following scale to record your answer: 1= Very slightly or not at all, 2 = A little, 3 = Moderately, 4 = Quite a bit, and 5 = Extremely."

Test-retest correlations for an eight-week period ranged from .47 to .68 for the Positive Affect scale and from .39 to .71 for the Negative Affect scale; coefficient alphas for various time periods ranged from .86 to .90 for the Positive Affect scale and from .84 to .87 for the Negative Affect scale. In support of the construct validity of the PANAS, it was reported that measures of general distress, depression, and state anxiety were more positively correlated with the Negative Affect scale and more negatively correlated with the Positive Affect Scale (Watson et el. 1988). Such a pattern of results provides consistent evidence to support the psychometric properties of the PANAS.

Satisfaction with Life Scale. The Satisfaction with Life Scale (SWLS; Diener, et al.1985) is a five-item self-report measure assessing global life satisfaction. The five items in the SWLS include (1) In most ways my life is close to my ideal; (2) The conditions of my life are excellent; (3) I am satisfied with my life; (4) So far I have gotten the important things I want in life; and (5) If I could live my life over, I would change almost nothing. The instructions for completing the SWLS read, "Below are five statements that you may agree or disagree with. Using the scale below indicate your agreement with each item. Please be open and honest in your responding: 1 = Strongly disagree, 2 = Disagree, 3 = Slightly disagree, 4 = Neither agree nor disagree, 5 = Slightly agree, 6 = Agree, 7 = Strongly agree." Previous research has documented that the SWLS has a two-month test-retest reliability coefficient of .82 and a coefficient alpha of .87. Item total correlations for each of the five items in the SWLS ranged from .57 to .75 for a sample of college students and from .61 to .81 for a sample of elderly individual. The SWLS has also been found to correlate (.68) with the Life Satisfaction Index (Adams 1969) and other associated measure of personality indicating "that individuals satisfied with their lives are in general well adjusted and free of psychopathology" (Diener et al. 1985:73). Such a pattern of results provides consistent evidence to support the psychometric properties of the SWLS.

Instrumental Goal Pursuit Scale. The Instrumental Goal Pursuit Scale (IGPS) used in the present study was created based on a factor analysis of the response of the participants to the 44 items included in the Survey of Happiness Strategies. The factor analysis was based on the online version of the *PASW Statistics18* program (SPSS 2010) and used a principal component analysis and Equaimax with Kaiser normalization method of rotation to identify eight factors similar to those generated by Tkach and Lyubomirsky (2006) in a factor analysis of their 66 happiness-increasing strategies. Similar to that of Tkach and Lyubmirsky (2006), one of the eight factors identified in the present factor analysis was labeled "Instrumental Goal Pursuit" (IGP). A list of the five items, along with their factor loadings, composing the IGP factor is presented in the left panel of Table 1. With factor loadings ranging from .829 to .703, the five highest items contained in the IGP factor were all characterized by actions designed to meet a future goal. The five items in the IGP factor accounted for 18.93 percent of the total variance, whereas each of the remaining seven factors, which are presented in Table 3, accounted for between 3.8 percent and 10 percent of the variance. Given the similarity of their factor loadings, the five highest items contained in the IGP factor were combined to create the Instrumental Goal Pursuit Scale (IGPS) used in the present study. The IGPS had an overall mean score of 19.32 and a range of scores from 6 to 25. IGPS mean scores for males (19.20) and females (19.51) did not differ significantly ($t[290] = -.32$, ns).

Procedures

As described in more detail above, the participants completed an online survey investigating various aspects of happiness. The participants were recruited based on in-class announcements by instructors in various courses (e.g., business, psychology, sociology, nursing, criminal justice) requesting volunteers to complete an online survey as part of a university-sponsored "Happiness Project." As part of the announcement, the instructors provided an Internet link to the online survey, which the students were allowed to complete outside of class. Once the link was opened, the participants were required to read and accept the conditions of an informed consent statement before beginning the online survey. The survey contained both a series of fixed-format questions and open-ended questions assessing various affective (e.g., feelings associated with being happy), cognitive (e.g., thoughts that contribute to happiness), and behavioral (e.g., activities to enhance happiness) components of happiness and two additional objective self-report instruments frequently used to assess components of happiness. After completing their responses, the participants submitted their surveys electronically to a secure university data-storage facility. Depending on their instructors, some participants were offered extra credit for participation.

Table 1. Factor Matrix of the Factors Loadings on the Items of the IGP Dimension

Strategy Items	Factor Loading
Highest Loading Items:	
Attempt to reach my full potential	.829
Pursue my career goals	.815
Strive to accomplish things	.807
Study to raise my grades	.725
Organize my life and set goals	.703

RESULTS

Overview of Statistical Procedures

Consistent with the basic objective of the present study, the analyses of the results began with the classification of the participants into subgroups based on their scores on the IGPS. The remaining analyses of the results included comparisons of these subgroups of participants on the measures of subjective well-being and the dimensions of positive and negative affect, the individual personal belief statements related to one's happiness, and the self-selected happiness-enhancement strategies.

IGPS with Other Measures of Subjective Well-Being

The results of the present study indicated that scores on the IGPS were significantly correlated (r = .27, p < .001) with the scores on the SWLS (Diener et al. 1985) and scores on the positive (r = 42, p < .001) and negative (r = –.12, p < .05) dimensions of the PANAS (Watson et al. 1988).

IGP Subgroups

For the purposes of analysis, individual scores on the IGPS were used to classify participants in two groups. Based on their scores on the IGPS, participants in the bottom one-third were assigned to the Low (L) IGP Group (n = 92; IGPS score =/< 17) while those in the top one-third were assigned to the High (H) IGP Group (n = 108; IGPS score =/> 21).

IGPS and personal beliefs. A series of t-tests was used to compare the mean ratings of the LIGP and HIGP groups for the 17 fixed-format items in the online survey assessing belief statements related to one's happiness. Table 2 presents a summary of the

responses for those participants in the HIGP vs. LIGP group to the first 11 of these 17 items. For these 11 items, the fixed-format scoring was 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree. An inspection of the pattern of the results in Table 2 indicates that in comparison to the participants in the LIGP group, those in the HIGP group to tended to view themselves as being significantly ($p < .005$) more happy, satisfied with their lives, and optimistic about the future; see their lives as more meaningful; see themselves as more likely to look for ways to make a difference in the world; and to be more likely to believe they are just as happy as their peers. In contrast, the mean ratings for the participants in both the LIGP and HIGP groups did not differ significantly with respect to their beliefs that they become so absorbed in a task that they lose track of time, that they could be happier, that it is more important to be happier than they are now, and that they are willing to work seriously at being happier.

Table 2. Mean Ratings of Belief Statements Related to One's Happiness for LIGP vs. HIGH Groups

	Instrumental Goal Pursuit Group		
Belief Statements Related to One's Happiness	**Low**	**High**	***t***
Overall, I consider myself to be a happy person.	2.85	3.13	–2.88**
Even though I have made a few mistakes along the way, there are very few things that I would change if I could live my life over.	2.60	3.03	–3.94***
Agree that my future looks bright for me.	2.99	3.44	–4.76***
Believe that my life is meaningful.	3.03	3.39	–3.49***
Looking for ways to make a difference in the world around me.	2.72	3.25	–5.73***
So absorbed in what I'm doing that I lose track of time. (R)	2.78	2.58	1.78
Rarely preoccupied with the past or the future.	2.09	2.36	–2.64**
Just as happy as my peers (of similar age, sex, and background)	2.59	2.90	–3.29***
Believe I can become happier.	3.23	3.20	.28
Believe that is very important for me to be happier than I am now.	2.96	2.73	1.96
Willing to work seriously at being happier.	3.01	3.08	–.80

Scoring: 1= Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree
(R) = Reversed Scoring
*$p < 05$; **$p < .01$; ***$p < .005$

Because the remaining six fixed-format items on the online survey assessing belief statements related to one's happiness, each had different scoring options, and the

wording of each item and the fixed-format scoring options are presented separately. For the survey item "Today, I would consider my happiness level as," 1 = Very low, 2 = Below average, 3 = Typical, 4 = Above average, and 5 = Very high; the mean rating for the HIGP group (3.39) was significantly greater ($p < .001$) than the mean rating of the LIGP group (2.79). For the item "How often are you happy?" 1 = Rarely, once a month or less, 2 = Occasionally, less than once a week, 3 = Once or twice a week, 4 = Often, nearly every other day, 5 = Almost every day, and 6 = Every day; the mean rating for the HIGP group (4.98) was significantly greater ($p < .001$) than the mean rating of the LIGP group (4.39). For the survey item "When I consider the future, I consider myself to be," 1 = Pessimistic, 2 = Somewhere in the middle—neither an optimist nor a pessimist, and 3 = Optimistic; the mean rating for the HIGP group (2.74) was significantly greater ($p < .001$) than the mean rating of the LIGP group (2.34). For the survey item "When I consider my past experiences, I would say that they were," 1 = Terrible, 2 = Generally bad, 3 = Neutral, 4 = Generally good, and 5 = Extremely good; the mean rating for the HIGP group (3.38) was marginally significantly greater ($p < .08$) than the mean rating of the LIGP group (3.13). For the survey item "With regard to my happiness, I feel that," 1 = It's all luck, 2 = Other people/things are in control, 3 = I'm only partly in control, and 4 = I'm in complete control; the mean rating for the HIGP group (3.41) was significantly greater ($p < .008$) than the mean rating of the LIGP group (3.13). For the survey item "Overall, I would say that," 1 = I am extremely unsatisfied with life, 2 = I am unsatisfied with life, 3 = I am satisfied with life, and 4 = I am extremely satisfied with life; the mean rating for the HIGP group (3.21) was significantly greater ($p < .001$) than the mean rating of the LIGP group (2.77).

IGPS and self-selected happiness-enhancement strategies. The analysis of the self-selected happiness-enhancement strategies for seeking happiness used by participants in the LIGP and HIGP groups involved examining a set of composite scores based on the remaining seven factors derived from the factor analysis. A listing of the seven factors, the original survey items contained within each factor, and their factor loadings are presented in Table 3. The remaining seven factors, along with the percentage of variance accounted for by each factor included within parentheses, were labeled as Purposeful Leisure (10.24 percent), Social Affiliation (6.09 percent), Mental Control (5.40 percent), Partying/Clubbing (4.36 percent), Religious/Reflective (3.76 percent), Direct Attempts (3.61 percent), and Passive Leisure (3.08 percent). Those items with a factor loading of greater than .40 within each factor were combined to create a composite factor score, while those items having a factor loading of .40 on two or more factors (i.e., "Hang out with friends": .412 vs. .557 on the Purposeful Leisure and Social Affiliation factors, respectively, and "Think about how bright the future will be": .413 vs. .534 on the Instrumental Goal Pursuit and Mental Control factors, respectively) were not included in creation of any of the factor scores because of their redundancy. Those items failing to achieve a factor loading of greater than .40 (i.e., "Help other people" and "Receive help from others") on any of the factors were not included in the creation of any of the composite factor scores. A summary of the descriptive statistics of the composite scores of the seven happiness-enhancement strategies is presented in the left panel of Table 4.

Table 3. Factors and Loadings of Happiness-Increasing Strategies

Factor	Loading	Factor	Loading
Strategy I: Purposeful Leisure		*Strategy IV: Party/Clubbing*	
Find ways to use my talents	.744	Drink alcohol	.738
Work on my hobbies	.681	Go to parties	.708
Learn something new	.601	Go dancing	.669
Exercise/work to maintain my health	.599	Take illegal drugs	.634
Play sports	.579		
Strategy V: Religious/Reflective		*Strategy II: Social Affiliation*	
Read religious texts	.814	Spend time with family or relatives	.682
Perform religious activities (pray, go to church)	.722	Talk on the telephone with friends	.589
Practice meditation/mindfulness	.700	Go shopping	.487
Write in a journal	.565	Laugh/tell jokes	.484
Read a book	.445	Play with my pets (dog, cat, etc.)	.458
		Date	.426
Strategy VI: Direct Attempts		*Strategy III: Mental Control*	
Eat/snack	.658	Decide to be happy	.725
Sleep	.654	Try to look on the positive side of things	.660
Daydream	.582	Think about my problems and look for solutions	.571
Listen to music	.555	Remember happy events in my past	.456
Spend quality time alone	.404		
Strategy VII: Passive Leisure			
Watch television	.739		
Surf the net	.709		
Play computer games	.671		
Go to movies	.488		

The right panel of Table 4 includes a comparison of the composite scores of the frequency of use of the seven happiness strategies by participants in the LIGP and HIGP

groups. The pattern of results indicates that the mean frequency of use by the participants in the HIGP was significantly greater than in the LIGP for the Purposeful Leisure, Social Affiliation, Mental Control, and Religious/Reflective happiness-enhancement strategies.

Table 4. Frequency of Use for Happiness-Enhancement Strategies: Mean Values for the Overall and the LIGP vs. HIGP Groups

	Overall			Instrumental Goal Pursuit Group		
Happiness-Enhancement Strategy	M	SD	Range	Low	High	*t*
Purposeful Leisure	14.57	4.10	5 to 25	12.60	16.12	–5.91*
Social Affiliation	19.23	4.32	9 to 30	18.06	20.15	–3.39*
Mental Control	17.80	3.47	6 to 25	15.71	19.53	–7.98*
Party/Clubbing	8.23	3.41	4 to 20	8.33	7.66	1.40
Religious/Reflection	10.94	3.96	5 to 25	9.64	11.91	–-4.05*
Direct Attempts	16.86	3.06	8 to 25	17.12	16.74	.83
Passive Leisure	11.52	3.03	5 to 20	11.53	11.41	.27

*$p < .001$

DISCUSSION

The present study attempted to investigate individual differences in the use of IGP as a self-selected strategy for seeking happiness. The investigation of individual differences in IGP was supported by the creation of the IGPS, which consists of five items characterized by actions designed to meet a future goal. The use of scores on the IGPS to classify individuals into LIGP and HIGP groups for the purpose of examining the hypothesis that increased expressions of goal directedness would be associated with a pattern of feelings, thoughts, and behaviors characterized by positive mood and well-being was confirmed. Such a pattern of results suggests initial support of the construct validation of the IGPS.

Affect, Beliefs, and Behaviors Associated with IGP

In support of the construct validity of the IGPS and of the hypothesis that goal-directed behavior would be associated with subjective well-being, scores on the IGP scale were correlated positively with the SWLS and the positive-affective dimensions of the PANAS and negatively with the negative-affect dimensions of the PANAS. Such a pattern of results is consistent with previous research linking goal-directed behavior with positive mood (cf., Carver 2004) and well-being (cf., King 2008). As a possible reflection

of this increase in subjective well-being and positive affect, in contrast to those individuals in the LIGP group, individuals in the HIGP group expressed personal beliefs related to their happiness that were generally less regretful of past experiences, more accepting of their present level of happiness, more optimistic about the future, and more satisfied with life. Those individuals in the HIGP groups also expressed personal beliefs that included experiencing a greater frequency of happiness, being happier in comparison to others, and having more personal control over their happiness than those participants in the LIGP group. The pattern of cognitive responses exhibited by the more favorable set of personal beliefs expressed by those in the HIGP group is consistent with previous research noting that happier people tend to be more satisfied with and optimistic about life, feel a sense of control over their outcomes, and view life's circumstances in positive ways (cf., Lyubomirsky 2004). An exception to this pattern of results was a lower mean score for the HIGP on the item in Table 2 that was reverse-scored. More specifically, based on the concept of flow (cf., Csikszentmihalyi 1990), when individuals become overly involved in a task, they tend to lose track of time. The reverse scoring of this single item was designed to assess the extent to which individuals in the HIGP would be more involved in the pursuit of their goals and thus more likely to agree (reverse scoring: 1 = strongly agree and 2 = agree vs. 3 = disagree and 4 = strongly disagree) with the statement "I often become so absorbed with what I am doing that I lose track of time." Although the lower group mean for the HIGP in comparison to the LIGP group was in the expected direction, it failed to meet a conventional level of significance. Finally, the results indicated that the HIGP group tended to report employing more frequently a behavioral pattern characterized by a wider range of happiness-increasing strategies that could be considered more constructive in nature and linked to more happiness than did the LIGP group (cf., Lyubomirsky, 2004; Tkach and Lyubomirsky 2006). Such a pattern of results is consistent with previous research linking positive affect with flexibility in thinking and improved coping (cf., Isen 2002) and the value of flexibility in goal pursuit (cf., Gollwitzer, et al. 2008).

Happiness-Enhancement Strategies and IGP

Although no definitive conclusion can be made based on the present results, a greater understanding of how goal-directed behavior might be associated with subjective well-being through the use of specific happiness-enhancement strategies is warranted. In this regard, a more detailed discussion of the characteristic features of the individual categories of happiness-enhancement strategies employed more frequently by those in the HIGP groups compared to those in the LIGP group is presented.

Purposeful leisure. The HIGP group had a higher mean frequency of use for the Purposeful Leisure strategy than did the LIGP group. The specific items within the Purposeful Leisure factor tend to reflect two groups of intrinsically motivated goal-directed behavior for the purpose of self-improvement: personal growth and physical exercise. The items linking self-improvement through personal growth were characterized by intrinsically motivated activities reflecting personal strengths (e.g., find

ways to use my talents), interests (e.g., work on my hobbies), and development (e.g., learn something new). In support of the use of such purposeful leisure activities, goal-directed behaviors that are freely selected by, have personal meaning to, and allow for the possibility of personal growth for individuals have been associated with increases in happiness and satisfaction (Kasser and Ryan 1993, 1996). Regarding the items linking self-improvement through physical activity (e.g., exercise/work to maintain my heath; play sports), there is considerable evidence linking exercise and well-being (cf., Dubbert 2002), as exercise tends to increase positive affect through mood improvement by increasing feelings of positive emotions and vitality (Rejeski et al. 1995; Thayer 1989) and the likelihood of experiencing flow (Csikszentmihalyi 1990) and decrease negative affect by reducing levels of stress, anxiety, and depression (Salmon 2000).

Social affiliation. The HIGP group had a higher mean frequency of the use of the Social Affiliation strategy than did the LIGP group. The specific items within the Social Affiliation factor tend to focus on taking action that involves spending time with significant others (e.g., spending time with family and relatives, talking on the phone with friends, playing with pets). Such a pattern of results is consist with the finding of Robinson and Martin (2008) that happy people spend more time socializing with relatives and friends, which is based on a national sample over a 34-year time span. The importance of quality relationships with significant others has been positively associated with both biological and psychological well-being (cf., Ryff and Singer 2002).

Mental control. The HIGP group had a higher mean frequency of use of the Mental Control strategy than did the LIGP group. The specific items within the Mental Control factor tend to focus on actively thinking about what to do to be happy (e.g., decide to be happy; try to look on the positive side of things; think about my problems and look for solutions). Such an approach is in sharp contrast to other forms of mental-control happiness-enhancement strategies that focus on attempts to "try not to think about unhappy thoughts" that were *negatively* associated with happiness (Tkach and Lyubomirsky 2006) or on attempts to suppress unpleasant emotional expression that are negatively related to subjective well-being (Gross and John 2003) that are not accompanied by thoughts associated with solutions to deal with the unhappiness.

Religious/Reflective. The HIGP group had a higher mean frequency of the use of the Religious/Reflective strategy than did the LIGP group. Again, this finding is similar to that of Robinson and Martin (2008), who report that happy people tend to attend church more frequently than less happy people. The specific items within the Religious/Reflective factor tend to focus on intentional activities that have been associated with providing individuals with a sense of meaning and purpose in life (cf., Frazier, Mintz, and Mobley 2005; Levin, Chatters, and Taylor 2005). In addition to the engagement of such faith-based activities being associated with the goal-directed intention of providing a sense of purpose in life, however, they have also been linked with an increased sense of social connectedness, and it is this mediating influence of

social connectedness that has been used to account for the positive association between faith-based beliefs and activities and well-being (cf., Myers 2000).

Limitations and Suggestions for Future Research

Although the overall pattern of results represents an initial attempt to demonstrate the construct validity of the IGP Scale as an individual difference measure used to examine the self-selected use of happiness-enhancement strategies, there are a few methodological limitations associated with the present study that should be noted. One methodological limitation of the present study is the exclusive use of self-report measures to document differences in subjective well-being between those in the HIGP and LIGP groups to support the construct validity of the IGPS. Although the SWLS (Diener et al. 1985) and PANAS (Watson et al. 1988) have been shown to be reliable and valid self-report measures associated with subjective well-being, future research attempting to document the construct validity of the IGPS should attempt to examine direct behavioral expressions of goal attainment to understand more clearly other critical differences in the underlying dynamics between those individuals in the HIGP and LIGP groups. Two such direct behavioral processes might include frustration tolerance and delay of gratification, as the ability to regulate goal-directed behavior is a critical factor in goal attainment (cf,. Fitzsimons and Bargh 2004). Going beyond the use of objective self-report methods, future research should also employ qualitative methodologies to investigate in more detail how the nature of the descriptive narratives of individuals in the HIGP vs. LIGP groups differ in the manner by which they negotiate the fundamental processes of goal attainment (cf., Gollwitzer, Fujita, and Oettingen 2004; Oettingen and Gollwitzer 2004), including defining a goal, preparing to pursue a goal, initiating goal-directed behavior, assessing progress toward the goal, and modifying thoughts, feelings, and behavior in response to the nature of the progress toward the goal.

Finally, another methodological limitation of the present study was the development and validation of the IGPS based on a restricted sample of college students from a single university; however, it should be noted that the pattern of results indicating that individuals in the HIGP group reported not only more happiness but also more time socializing with relatives and friends and engaging in religious activities (e.g., going to church) and less time watching television and drinking alcohol/partying than those individuals in the LIGP group is consistent with the findings of Robinson and Martin (2008) based on a national sample characterized by a wider range of participant characteristics (e.g., age, occupation, marital status, ethnicity, and geographic location) than those of the present study. Future research should attempt to replicate the present findings with students from other universities, as well as with populations other than college students and the modification of certain items in the IGPS (e.g., Pursue my career goals; Study to raise my grades) to reflect goal-directed behavior aimed at a wider range of individuals (e.g., older individuals) and goal pursuits (e.g., financial, romantic, and lifestyle changes).

Another possibility for future research is in the area of prescriptive interventions based on happiness research designed to enhance the cognitive and motivational processes associated with subjective well-being through educational and training programs (cf., Lyubomirsky 2004, 2008). With respect to the specific population employed in the present study, one possibility for future research might involve using the IGPS as a means of identifying earlier in their academic careers those potential students who might benefit from training designed to help them with the process of identifying, formulating, and implementing plans for personal and educational goals, as well as developing techniques for assessing progress toward and dealing with setbacks associated with their personal and education goals, as a means of improving academic performance and persistence and general well-being. Additional institutional-based programs might also include workshops designed to help students develop personalized plans for implementing in their daily lives those self-selected strategies that have been associated with increased happiness and subjective-well being. Although such suggestions are highly speculative in nature, some possible evidence of their support can be found in a semester-long instructional program with undergraduates that involves showing them how to conceptualize their goals and providing them with strategies designed to maximize the attainment of their goals and that succeeds in helping some of the students attain their goals and increase their psychological well-being (Sheldon et al. 2002). Again, although speculative in nature, perhaps more of the students could be helped in the future with similar instructional programs if closer attention is paid to individual differences in their level of IGP.

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