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WHAT ARE THE DIFFERENCES BETWEEN HAPPINESS AND SELF-ESTEEM?

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ABSTRACT. The present study investigated theoretically and empirically derived similarities and differences between the constructs of enduring happiness and self-esteem. Participants ($N = 621$), retired employees ages 51–95, completed standardized measures of affect, personality, psychosocial characteristics, physical health, and demographics. The relations between each of the two target variables (happiness and self-esteem) and the full set of remaining variables were assessed through a series of successive statistical analyses: (1) simple Pearson's correlations, (2) partial correlations, and (3) hierarchical regression analyses. The results revealed that happiness and self-esteem, while highly correlated ($r = 0.58$), presented unique patterns of relations with the other measured variables. The best predictors of happiness were the following: mood and temperamental traits (i.e., extraversion and neuroticism), social relationships (lack of loneliness and satisfaction with friendships), purpose in life, and global life satisfaction. By contrast, self-esteem was best predicted by dispositions related to agency and motivation (i.e., optimism and lack of hopelessness). Implications for the understanding of happiness and self-esteem are discussed.

KEY WORDS: affect, agency, happiness, nomological net, personality, self-esteem, subjective well-being

INTRODUCTION

Happiness and self-esteem appear, on the surface, to be inextricably linked. In their everyday experience, happy individuals tend to feel good about themselves, and people who lack self-worth and self-respect are generally unhappy. Empirical evidence supports this intuition, revealing moderate to high correlations between measures of happiness and self-esteem (ranging from 0.36 to 0.58) (Andrews, 1991; A. Campbell et al., 1976; A. Campbell, 1981; Diener and Diener, 1995; Fordyce, 1988; Kozma and Stones, 1978; Lyubomirsky and Lepper, 1999; Schimmack et al., 2004). These associations are

neither perfect nor consistent, however, leaving much of the variance unexplained and prompting the need to further examine the similarities and differences between these two constructs.

Although few researchers would openly argue that happiness and self-esteem are synonymous, self-esteem is often used as an index of global happiness or psychological well-being (e.g., Baruch and Barnett, 1986; Ryff, 1989; Whitley, 1983). More common is the view that happiness and self-esteem are so intimately related that it is difficult, if not impossible, to separate them conceptually. Indeed, happiness may not be possible or realizable without a healthy dose of self-confidence and self-acceptance. William James (1910), for example, “spoke of well-being and self-esteem in the same breath” (Epstein, 1973, p. 405), positing that all three aspects of the self – the material, the social, and the spiritual – are capable of evoking feelings of happiness. Nearly a century later, in a review of the ensuing perspectives on happiness, Ryff (1989) concluded that the most recurrent criterion for positive well-being has been the individual’s sense of self-acceptance or self-esteem (see also Taylor and Brown, 1988; Myers, 1992; Diener, 1996). Many who are socialized in individualistic cultures may not even make a distinction between how happy they are with their lives and how satisfied they are with themselves (Lucas et al., 1996).

An alternate view holds that happiness and self-esteem are distinct and discriminable constructs. Although self-esteem may seem crucial and adaptive for happiness, it does not provide an adequate description of happiness and may be unrelated to many of our most happy or unhappy experiences (Parducci, 1995). Just as a good income, a good job, or a good marriage does not guarantee happiness (see Diener, 1984; Diener et al., 1999), high self-esteem is not a sufficient condition for happiness. This perspective may help explain why the relationship between self-esteem and life satisfaction (a key component of happiness) varies in individualist versus collectivist cultures (Diener and Diener, 1995). Where the group and the community are valued more highly than the self, self-esteem may simply not be as critical a source of happiness.

In the only study to date to analyze systematically the relationship between self-esteem and well-being, Lucas and his colleagues (1996) used multitrait-multimethod matrix analyses to show that life satisfaction is empirically distinguishable from self-esteem (see also

Diener and Diener, 1995). A number of important questions have yet to be explored, however: Are global happiness and self-esteem indeed unique constructs and, if so, what is the nature of the differences between them? Which characteristics discriminate between happy and unhappy individuals and which ones discriminate between high self-esteem (HSE) and low self-esteem (LSE) individuals? These questions are the focus of the current study.

Defining Happiness and Self-Esteem

Happiness

Howard Mumford Jones once said that “happiness...belongs to that category of words, the meaning of which everybody knows but the definition of which nobody can give” (cited in Freedman, 1978). Although happiness may have different meanings for different people, most agree that it is a “glow” word (Parducci, 1995) – that is, a pervasive and lasting sense that life is fulfilling, meaningful, and pleasant (Myers, 1992). To study this sometimes elusive construct, researchers have achieved a modest amount of agreement on how it should be measured and defined. The most widely accepted definition is that of Diener and his colleagues, who prefer to use the label subjective well-being, defining it as a combination of life satisfaction (a cognitive judgment) and the balance of the frequency of positive and negative affect (i.e., hedonic tone) (Larsen et al., 1985, Diener et al., 1991).

Making the assumption that most people know whether they are happy, a number of researchers have allowed the individuals being measured to define happiness for themselves (e.g., Gurin et al., 1960; Kozma and Stones, 1980; Lyubomirsky and Lepper, 1999). This assumption is also made here. Most people are capable of reporting on their own global happiness, and this judgment is not necessarily equivalent to a simple aggregate of their recent levels of affect and ratings of life satisfaction (or, reports of their resources). For example, one may conceivably consider oneself a very happy person, despite leading only a somewhat happy life or not typically experiencing more positive than negative emotions. Thus, for our measure of happiness in the present study, we use global, subjective assessments of whether one is a happy or unhappy individual (Lyubomirsky and Lepper, 1999; Lyubomirsky, 2001).

Self-Esteem

Greater consensus exists regarding the definition of self-esteem. Self-esteem has been defined as a global feeling of self-worth or adequacy as a person, or generalized feelings of self-acceptance, goodness, and self-respect (Coopersmith, 1967; Crocker and Major, 1989; Rosenberg, 1965; Wylie, 1979). This global, personal judgment of worthiness is characterized as the evaluative component of the self (e.g., J. D. Campbell, 1990), and as distinct from collective or racial self-esteem (Crocker and Major, 1989). According to Epstein (1973), people have a basic need for self-esteem, and, at least in Western cultures, they use numerous strategies to maintain it (Dunning et al., 1995; Taylor and Brown, 1988; cf. Markus and Kitayama, 1991; Diener and Diener, 1995). Self-esteem forms early in the course of development, remains fairly constant over time, and is relatively immune to change (J.D. Campbell, 1990).

Correlates and Potential Sources of Happiness and Self-Esteem

The more-or-less accepted definitions of happiness and self-esteem suggest important differences between these two constructs, not the least of which is that happiness is a broader and more overarching concept, whereas self-esteem appears to be more specific and more cognitive in nature. Thus, it is critical to delve deeper into the literature and explore the particular constructs that have been empirically related to the two constructs – namely, what attributes characterize people who are happy (vs. unhappy) and what attributes characterize people who are high (vs. low) in self-esteem. Whether these attributes happen to be quite comparable or quite distinct might offer clues into the differences and similarities between happiness and self-esteem.

Correlates of Happiness

Traits and dispositions. Typically, personality traits account for as much as 40% to 50% of the proportion of the variability in well-being (Diener et al., 1999); thus, traits and dispositions appear to be critical to happiness. According to Myers and Diener (1995), four traits consistently characterize happy people: self-esteem (e.g., Kozma and Stones, 1978; Fordyce, 1988; Diener and Diener, 1995), optimism (A. Campbell, 1981; Carver and Gaines, 1987), extraversion (Costa and McCrae, 1980; Costa et al., 1981; Emmons and Diener, 1985; Headey and

Wearing, 1989; Pavot et al., 1990; Brebner et al., 1995), and a sense of personal mastery or control (Ryff, 1989; Csikszentmihalyi and Wong, 1991; Grob et al., 1999). Thus, in general, happy individuals have social, outgoing personalities, as well as positive feelings about themselves, their sense of mastery, and the future. They are also more likely to be active and energetic and less likely to be neurotic (DeNeve and Cooper, 1998). These attitudes can be self-fulfilling, leading happy people to experience more positive events (e.g., Headey and Wearing, 1989; Magnus et al., 1993) and more fulfilling social relationships, which can further enhance well-being.

McCrae and Costa (1991) proposed two ways that traits might influence well-being – temperamental and instrumental. The temperamental sequence is illustrated by a trait leading to a mood, and then, in turn, both trait and mood bearing on happiness (Costa and McCrae, 1980; McCrae and Costa, 1991). Similarly, Rusting (1998) posited that traits predispose people to interpret events in a dispositionally congruent manner. Thus, happy people's positive attitudes and judgments may lead them to perceive life experiences in a way that sustains their positive moods (e.g., Lyubomirsky and Tucker, 1998; cf. Lyubomirsky, 2001) – for example, by perceiving control in their actions or by construing value in daily life events. Notably, experimental evidence supports the temperamental sequence for both extraversion and neuroticism. Specifically, results show that extraverted individuals seem to experience positive events as more intensely positive than do introverts, whereas individuals high in neuroticism seem to experience negative events more negatively than do their more emotionally stable peers (Larsen and Ketelaar, 1989).

In contrast, the instrumental causal sequence is illustrated by the notion that particular traits compel people towards certain situations, which lead to later happiness or unhappiness. The empirical evidence supports this sequence as well. For example, in a recent study, the relation between extraversion and happiness was partially mediated by social affiliation and active leisure activities (Tkach and Lyubomirsky, 2005). Even more convincing is a study of personality and daily activities that found that extraverts chose to spend more time in social situations than did introverts, and that extraverts experienced greater positive affect during chosen social situations than during imposed solitary ones (Emmons et al., 1986).

Social affiliation. One of the most important sources of happiness is personal relationships (Argyle, 1987; Diener, 1984; Ryff, 1989; Myers, 1992; Kahana et al., 1995; Myers and Diener, 1995). Numerous studies support a link between happiness and friendship, marriage, intimacy, and social support (e.g., see Lyubomirsky et al., in press, for a review). For example, one study showed that those who named five or more friends with whom they discussed important matters in the last 6 months were 60% more likely to report being “very happy” (cited in Myers, 1992; see also Henderson et al., 1981). Indeed, people are happiest when with friends (Csikszentmihalyi and Hunter, 2003). Also, happy people are more likely to have friends who encourage and support them (Myers, 1992). A number of studies suggest that close friendships can help buffer stress (Reis, 1984) and avert distress due to loneliness, anxiety, boredom, and loss of self-esteem (Peplau and Perlman, 1982; see Argyle, 1987). Not surprisingly, loneliness is inversely correlated with happiness, especially in older adults (Lee and Ishii-Kuntz, 1987), and positively correlated with depression (Weeks et al., 1980; Peplau and Perlman, 1982; Seligman, 1991).

Positive moods. The experience of happiness is marked by more frequent positive affective states than negative ones (Bradburn, 1969; Diener et al., 1985b; Diener et al., 1991). Indeed, the possibility exists that because people may rely on their moods at the time of judgment to simplify the complex task of appraising their happiness (Schwarz and Clore, 1983; Schwarz and Bohner, 1996), such appraisals may be affected by transient moods. However, although happiness reports are somewhat dependent on mood, they are in fact relatively stable, with good long-term reliability (see Diener, 1994, for a review). Furthermore, daily mood is not consistently correlated with happiness (Lucas et al., 1996; Lyubomirsky and Tucker, 1998; Diener et al., 1999), does not predict outcomes over and above levels of happiness (e.g., Seidlitz and Diener, 1993; Lyubomirsky and Ross, 1997; Lyubomirsky and Tucker, 1998), and peer reports of well-being predict current well-being better than does transient mood (Pavot and Diener, 1993). Thus, the evidence suggests that both current mood and long-term affect are reflected in measures of happiness (Diener, 1984). In addition, when people are asked to describe how they decide whether they are happy, the decisions are predominantly based on affect (Ross et al., 1986).

Satisfaction with life. Since subjective well-being is commonly defined as an aggregate of life satisfaction and the balance of affect, it is not surprising that happy individuals demonstrate both global satisfaction with their lives (see Diener, 1984; Argyle, 1987; Myers and Diener, 1995, for reviews) and satisfaction within specific life domains, such as work, recreation, friendship, marriage, health, and the self (A. Campbell, 1981; Argyle, 1987; Eysenck, 1990; Lepper, 1996; Diener et al., 1999). An influential “top-down” view is that happiness influences one’s outlook, which “colors” one’s perceptions of specific domains (Stones and Kozma, 1986; Feist et al., 1995; Veenhoven, 1997). However, evidence also suggests that happiness results in part from a summation of various domains of satisfaction (Feist et al., 1995).

Satisfaction of psychological needs. Although a large number of psychological needs have been proposed, recently researchers have begun to focus on three universal needs – competence, autonomy, and relatedness (Deci and Ryan, 1985). Regardless of the number of needs put forward, however, theorists agree that the satisfaction of needs is related to well-being (e.g., Rogers, 1961; Maslow, 1970; Omodei and Wearing, 1990), and research supports this relationship. For example, a diary study demonstrated that people’s self-reported “good days” were days in which they were feeling above their baseline in competency and autonomy – that is, they felt capable and self-motivated (Sheldon et al., 1996). Research provides additional support for this linkage at the daily level (Reis et al., 2000), as well as for longer-term periods (e.g., Omodei and Wearing, 1990; Sheldon and Elliot, 1999).

Demographics and life events. Finally, the literature on happiness is marked by the robust finding that “external blessings” – namely, demographic variables and life circumstances – are less important than a happy disposition. For example, smaller-than-expected correlations have been found between well-being and objective variables such as income, age, gender, race, occupation, education, religion, children, and life events in both younger and older adults (see Diener et al., 1999; Lyubomirsky, 2005, for reviews; see also George, 1978).

Correlates of Self-Esteem

Most investigations of self-esteem have been concerned with the thoughts, moods, and actions – often observed in college students in the laboratory – that are associated with high versus low levels of the construct (e.g., Crocker and Major, 1989). For example, relative to

people with low self-esteem, those with high self-esteem have been found to possess clearer self-concepts (J.D. Campbell and Lavalley, 1993); to be less vulnerable to depression (e.g., Harter, 1993; Tennen and Affleck, 1993; see also Kernis et al., 1993) and anxiety (Fleming and Courtney, 1984); to be more resilient to self-image threats (Spencer et al., 1993); and to be more likely to savor positive affect (Wood et al., 2003), to persist in the face of failure (DiPaula and J. D. Campbell, 2002), and to perceive negative feedback as a challenge rather than a threat (Seery et al., 2004). It should be noted, however, that little empirical research on self-esteem has been conducted with the elderly, who were the subject of our study.

Agency and competence. Although less research has addressed the relationship between self-esteem and stable, dispositional constructs, some clues regarding the source of feelings of self-worth are provided in theoretical accounts of self-esteem. For example, according to one theoretical perspective, self-esteem is gained through efficacious and successful navigation of one's environment, whereby one acquires a sense of control, competence, and ability (Bandura, 1977; Crocker and Major, 1989; cf. Van Tuinen and Ramanaiah, 1979). Furthermore, according to a developmental perspective, self-worth is derived from having a sense of competence in domains that are valued by the individual and important significant others (Harter, 1993).

Thus, self-esteem would be expected to be closely linked with a sense of agency or mastery and control of one's environment. Indeed, the notion that a sense of personal control is critical to self-concept and self-esteem has been endorsed by a number of theorists (e.g., Fenichel, 1945; Heider, 1958; White, 1959; see Taylor and Brown, 1988, for a review).

Positive expectations. Self-esteem is also highly correlated with optimism and lack of hopelessness in college students (Scheier et al., 1994; Lucas et al., 1996; see also Tennen and Affleck, 1993). Optimists anticipate bright futures and expect favorable outcomes for their actions. Thus, one might expect optimists to persist longer and harder through life's tasks and challenges, creating self-fulfilling prophecies, and, consequently, bolstering their self-regard.

In sum, it would appear that self-esteem is strongly related to motivational constructs such as optimism, mastery, and competence – that is, feelings that one is a competent agent, capable of success.

The Present Study

Our examination of the relevant literatures points to marked differences between the constructs that are empirically and theoretically linked to happiness, compared with those linked to self-esteem. Indeed, happiness and self-esteem seem to share high correlations only with a sense of mastery, optimism, and hopefulness. In the present study, we examine a comprehensive set of variables to assess previously unexplored relationships involving happiness and self-esteem.

The primary approach undertaken in the current study was to examine the “nomological networks” of both happiness and self-esteem – that is, to determine those factors that are most strongly associated with each construct (Lucas et al., 1996). Establishing that happiness and self-esteem each have a unique nomological net of relationships supports their discriminant validity and provides clues to the differences and similarities between them.

Unlike much of the literature reviewed here, the present study used a sample of retired adults, ages 51–95. This sample offers several advantages, including the opportunity to bolster the generalizability of previous findings. In contrast to a college sample, an older sample may more accurately reflect the thoughts, feelings, and behaviors of the general population in everyday life (Sears, 1986). In addition, unlike undergraduates, older people arguably have relatively stronger self-definitions and more certain and solidified attitudes. They have conceivably enjoyed a long life to reflect on and judge their personality, feelings, and beliefs – e.g., whether they have achieved their cherished goals, how happy or optimistic or neurotic they truly are, or how much they genuinely accept and like themselves, their friends, or their activities.

Much more empirical research using elderly samples has focused on well-being than on self-esteem. Self-esteem tends to be viewed as important during the formative years and not the retirement years, and researchers' interest in it appears to wane with the age of participants (e.g., Dietz, 1996). By contrast, the experience of happiness has been an enduring concern of gerontologists, in part because some of the predictors of happiness are correlated with age and because happiness is frequently taken to indicate successful adaptation to aging (Schulz, 1985; Whitbourne, 1985; Baker et al., 1992). According to Freedman (1978), older people who are happy are more likely to feel acceptance

and satisfaction with their lives than younger folks, are more certain that their lives have meaning and direction, and are more confident in their guiding values. Paradoxically, they may also be more optimistic than younger people because most of their important decisions – i.e., regarding their accomplishments, relationships, and loves – have already been made. Indeed, older individuals have been found to report higher levels of happiness than younger ones (Roberts and Chapman, 2000; Sheldon and Kasser, 2001).

In contrast, inconsistent results have been found regarding age differences in sources of self-esteem (e.g., Wylie, 1979; Gove et al., 1989; Ryff, 1989; Coleman et al., 1993; Atchley, 1994; Brandtstadter and Greve, 1994; Dietz, 1996). This pattern may be a consequence of two opposing processes (Tennen and Affleck, 1993), which could lead to declines in the stability of self-esteem during middle and old age (Trzesniewski et al., 2003). The usual suspects of self-esteem enhancement (e.g., in Western culture – power and status, career success, beauty, athletic ability, etc.) are less available in old age. Furthermore, one's peers and mentors, who probably have played an important role in boosting one's self-esteem, may have passed away, and one's health has begun to decline. On the other hand, with maturity, people are able to gain confidence in their abilities and alter their goals adaptively and appropriately – for example, by relinquishing some of their unattainable dreams and accepting their failings as well as their gifts.

Following our earlier discussion of previous work, we hypothesized that self-reported happiness, assessed with the Subjective Happiness Scale (Lyubomirsky and Lepper, 1999), would be related to self-reported positive affect, need satisfaction, satisfaction with one's life as a whole as well as with a variety of life domains, temperamental traits (an extraverted demeanor and a lack of neuroticism), an optimistic outlook, a sense of mastery, fulfilling social relationships (e.g., satisfaction with one's family and friends, social support, lack of loneliness), and a sense of purpose in life. Objective characteristics and circumstances – such as sex, age, and life events – were not expected to correlate strongly with happiness.

With respect to self-esteem (assessed with Rosenberg's (1965) widely used scale), previous theoretical and empirical work led us to expect a significant association with agentic dispositions such as optimism, a sense of mastery or control, and an inverse association

with hopelessness. However, due to a paucity of research, no specific predictions were made about the relationship between self-esteem and other factors. Finally, we examined links between happiness and self-esteem, respectively, and a set of additional potentially important constructs. For example, given our older sample, several variables tapping health were included – namely, perceptions of one's health, physical symptoms, physical functioning, severity of pain, and energy level. Research has demonstrated a consistent relationship between poor health status and unhappiness and distress, especially in older people (Okun et al., 1984; Lubin et al., 1988; for reviews, see Pressman and Cohen, in press). However, other studies have found that when other factors are taken into account, subjective health status has little effect on happiness levels (see Diener, 1994). Presumably, however, the happiness of older folks may be more strongly related to their health than that of younger ones.

METHOD

Sample

Participants were retired employees of a large utility company serving much of Southern California. A systematic, computer-driven procedure was used by the company to select a random subsample of the names and addresses of individuals from the company's population of retirees. The sample was comprised of 621 individuals, ages ranging from 51 to 95 ($M = 70$), who were 80% male, 80% married, and 96% Caucasian. They were typically well-educated (56% with at least some college education) and had been retired for an average of 10 years. Only 10% of the participants were widowed ($n = 65$), with the average time since widowhood equaling 7.5 years. In addition, fully 85% of this sample reported sharing a residence with at least one other.

Procedures and Measures

Self-report questionnaires were mailed to the home addresses of the participants, who were asked to complete them at their leisure and while alone. Respondents returned the completed questionnaires in a

postage-paid envelope and were not compensated for their time. With the exception of demographics, all measures used in this study are described in Table I. Henceforth, the variables happiness¹ and self-esteem will be referred to as the “target” variables, whereas all other variables of interest will be referred to as the “measured” variables.

RESULTS

Overview of Statistical Analyses

Our primary aim was to explore the similarities and differences between the two target variables, happiness and self-esteem. To this end, we performed a confirmatory factor analysis on our two target variables; computed simple zero-order and partial correlations between the target variables and the measured variables; and, finally, performed hierarchical regression analyses on a subset of the variables.

First, a confirmatory factor analysis (CFA) was conducted to test whether a one-factor or a two-factor solution fit the data best. That is, we set out to test whether happiness and self-esteem share so much construct overlap that they are indistinguishable in the population, or whether they are related but distinguishable constructs.

Second, zero-order Pearson's correlations were computed separately for happiness and self-esteem with each measured variable. The aim of these analyses was to examine the similarity and uniqueness of associations among the two target variables with the measured variables. Furthermore, we computed dependent sample *Z*-scores to test the magnitude of the differences between the correlations for happiness and those for self-esteem across each measured variable. The effect size index described by Cohen (1977) was used to determine the relative size of the zero-order correlations. We focused primarily on those measured variables that demonstrated a “large” relation to the target variables (i.e., $r \geq 0.50$) and had significant *Z*-scores.

Third, partial correlations were computed to test the independent relationships between each of the target variables and the measured variables (cf. Block and Kremen, 1996). These partial correlations provided information about the strength of the association between one target variable with each measured variable, while controlling for the influence of the *other* target variable. Here, our focus was on

TABLE I
Descriptive statistics of the measured variables

Measure	Items	Description	M	SD	α
Happiness	4	Lyubomirsky and Lepper (1999): Levels of global and comparative subjective happiness (7-point).	5.67	0.93	0.86
Self-esteem	10	Rosenberg (1965): Global feelings of self-worth (4-point).	2.36	0.42	0.87
Domain satisfactions ^a	10	Michalos (1985): Includes satisfaction with health, family relations, friendships, housing, residential area, recreation, self-esteem, transportation, education, and marital relationship (7-point).	5.48	0.78	–
Energy Level	4	Stewart et al. (1992): Fatigue and energy in the last four weeks (6-category).	3.18	0.96	0.91
Extraversion	10	Eysenck and Eysenck's (1985) short form: Dispositional extraversion (Yes/No).	0.65	0.24	0.71
Health perceptions	4	Stewart et al. (1992): Ratings of current state of health (5-category).	2.79	0.72	0.75
Hopelessness	11	Beck et al. (1974): Hopeful feelings about life and expectations for the future (4-point).	0.70	0.48	0.93
Life satisfaction	5	Diener et al. (1985): Ratings of general life satisfaction (7-point).	4.15	5.36	0.89
Loneliness	7	Hays and DiMatteo (1987): Feelings of loneliness and isolation in the last 4 weeks (4-point)	0.72	0.67	0.89
Mood state	1	Rating of present mood (7-point).	5.86	1.05	–

TABLE I
Continued

Measure	Items	Description	M	SD	α
Need satisfaction	15	Omodei and Wearing (1990): Based on Murray's needs; measures levels of need fulfillment across 15 separate needs (7-point).	5.29	0.84	0.93
Negative affect	5	Bradburn (1969): Levels of negative affect during the past few weeks (Yes/No).	0.15	0.23	0.65
Neuroticism	10	Eysenck and Eysenck's (1985) short form: Dispositional neuroticism (Yes/No).	0.14	0.19	0.68
Optimism	8	Scheier and Carver's (1985) Life Orientation Test: Dispositional optimism (4-point).	2.14	0.41	0.85
Pain severity	2	Sherbourne (1992): Interference in daily life caused by pain (5-category) and overall level of pain severity (6-category).	1.30	1.04	0.82
Physical symptoms	12	Sherbourne et al. (1992): Physical symptoms experienced in the last 4 weeks (6-category).	0.74	0.54	–
Positive affect	5	Bradburn (1969): Levels of positive affect during the past few weeks (Yes/No).	0.78	0.26	0.69
Purpose in life	7	Crumbaugh's (1968) short form: Sense of purpose and meaning in life (4-point).	5.41	0.71	0.83
Recent experiences	41	Henderson et al. (1981): List of life events during the previous year. Divided into negative and positive events via three expert raters (intrater reliability = 0.91).			
		Negative Events (31 items)	2.68	2.16	–
		Positive Events (10 items)	0.08	0.08	–

TABLE I
Continued

Sense of mastery	7	Pearlin et al. (1981): Perception that life changes are under one's control (4-category).	2.02	0.35	0.73
Social support	12	Sherbourne and Stewart (1991): Levels of perceived social supports available during the previous month (4-category).	3.14	0.96	0.95

Note: Mean value (*M*) represents the mean scale score. Higher values represent greater levels of the variable. *SD*, standard deviation; α , Cronbach's alpha. "-" denotes that computation of alpha reliability was not appropriate.^a Descriptive statistics are provided for the composite of domain satisfactions and not separately across the individual domains.

those variables that demonstrated a “medium” partial relation to the target variables (i.e., $r_p \geq 0.30$).

Finally, we focused on those variables that appeared to be dominant predictors of the target variables – that is, those variables that emerged as significant predictors even after controlling for the effects of other measured variables. To that end, a series of hierarchical regression analyses were performed, such that happiness and self-esteem were regressed on the measured variables. The advantage of this study, with its large set of measured variables, is that it provided the opportunity to determine the relative strength of the association between each target variable and the measured variables, while taking into account other measured variables. Concerns regarding the inter-relatedness of the numerous predictor variables (i.e., multicollinearity) were addressed by reducing the total number of measured variables into smaller, theoretically important subsets.

In sum, the successive steps of our analytic strategy allowed us to narrow down the full set of measured variables to a more parsimonious set of constructs that were both strongly and differentially related to happiness and self-esteem. These final variables would have jumped all the hurdles we had placed in their paths. In the final hour, these variables would have met the following four criteria: First, the measured variable’s zero-order correlation with the target variable was “large.” Second, the measured variable’s zero-order correlation with the target variable was significantly larger than that with the comparison target variable. Third, the measured variable’s partial correlation with the target variable, controlling for the comparison target variable, remained “high”. Finally, the measured variable was a significant predictor of the target variable in a hierarchical multiple regression.

Relations Between the Target Variables and Demographics Characteristics

Happiness

Although education level has been consistently, albeit slightly, related to happiness in national probability samples (cf. Diener et al., 1999), it was not here. Likewise, the consistent relationship of marital status to happiness or well-being (e.g., Mastekaasa, 1994) was not replicated. Most participants in our sample were married, however, precluding a

meaningful analysis of this association. Happiness was also unrelated to age, living arrangement (alone or not), and time since widowhood. The only demographic variable in this sample to hold a significant relationship with happiness was gender, with females reporting slightly higher levels of happiness than males, $t(611) = 2.15$; $p < 0.04$, $d = 0.17$.

Self-Esteem

Higher education was significantly related to higher self-esteem ($r = 0.12$; $p < 0.003$), as was younger age ($r = -0.12$; $p < 0.003$). Additionally, married respondents reported a higher level of self-esteem than non-married ones, $t(614) = -2.38$; $p < 0.02$, $d = 0.19$, but self-esteem was not significantly associated with living arrangement or gender.

Confirmatory Factor Analysis of the Target Variables

According to the results of the CFA, the single factor solution yielded the following fit indices: $\lambda^2(77) = 558.51$, CFI = 0.87, RMSEA = 0.10. In contrast, the two factor solution yielded these fit indices: $\lambda^2(76) = 340.89$, CFI = 0.93, RMSEA = 0.08. Thus, a two factor solution fit the data significantly better than a one factor solution, $\Delta\lambda^2(1) = 217.62$, $p < 0.001$. So, although happiness and self-esteem are highly correlated ($r = 0.58$, $p < 0.001$; $r = 0.63$ when placed in the model and corrected for measurement error), they are indeed separable constructs.

Associations Among the Target Variables and the Measured Variables

Zero-Order Correlations and Partial Correlations

Displayed in Table II are the zero-order correlations (columns one and three) and partial correlations (columns two and four) for each target variable with the set of measured variables. (Pearson r 's ≥ 0.50 and partial correlations r_p 's ≥ 0.30 are displayed in bold). For each set of zero-order correlations (e.g., happiness with extraversion and self-esteem with extraversion), a dependent sample Z -test (Meng et al., 1992) was conducted to determine whether the two observed effect sizes are significantly different (see column five). Despite the fact that differences in reliability between each of the measured variables could

pose limits on the correlations, these analyses proved useful in examining differences in the magnitude of associations between the target and measured variables. Along with the hierarchical regression analyses (see below), these three sets of results displayed in Table II – simple correlations, partial correlations, and *Z*-tests – were subsequently used to determine the substantive differences between our two target variables, happiness and self-esteem – that is, to establish their unique “nomological nets.” The results of these analyses thus will be described in detail in the Discussion section.

Hierarchical Regression Analyses

Two hierarchical regression models were computed. In each model, the target variable (happiness or self-esteem) was regressed onto the measured variables. Specifically, the *other* target variable (the covariate) was entered into the model at Step 1, and then the measured variables were entered into the model at Step 2. In this manner, we obtained the unique contribution to variance of each measured variable on the target variable (e.g., happiness) while controlling for the *other* target variable (e.g., self-esteem).

To reduce multicollinearity, and for the sake of parsimony, we included in the models only the variables with the greatest theoretical importance with regard to happiness and self-esteem; thus, the health measures were omitted. Furthermore, we omitted the life satisfaction and mood scales from the analyses to reduce theoretical construct overlap between these variables and the target variable happiness, as happiness is often defined as a combination of life satisfaction and hedonic tone (Diener et al., 1985a, b, 1991).

As shown on the left side of Table III, the first model indicates that happiness is best predicted (in order of beta coefficient size) by: (1) domain satisfaction, (2) purpose in life, (3) loneliness (inversely), (4) extraversion, and (5) neuroticism (inversely). Together, the measured variables accounted for a fair proportion of happiness variance ($\Delta R^2 = 0.25$; adjusted $R^2 = 0.58$ with self-esteem added).

In contrast, the dominant unique predictors of self-esteem were (1) optimism and (2) hopelessness (inversely), followed by (3) need satisfaction and (4) domain satisfaction ($\Delta R^2 = 0.38$; adjusted $R^2 = 0.71$ with happiness added). It is noteworthy that overall domain satisfaction was the only measured variable that emerged as a unique predictor of both target variables, albeit to a different degree.

TABLE II

Correlational results for happiness and self-esteem and their differences across the measured variables

Measured variable	Happiness		Self-esteem		Z-score
	Zero-order	Partial	Zero-order	Partial	
Domain satisfaction (All)	0.68	0.50	0.60	0.35	2.47
Area live in	0.29	0.17	0.27	0.13	–
Education	0.27	–	0.39	0.30	–3.48
Family relations	0.41	0.28	0.34	0.14	2.07
Finances	0.35	0.18	0.38	0.23	–
Friendships	0.50	0.36	0.39	0.14	3.41
Health	0.43	0.29	0.35	0.14	2.39
Housing	0.43	0.28	0.37	0.17	–
Life right now	0.68	0.53	0.56	0.27	4.60
Marital status	0.37	0.27	0.28	0.09	2.41
Recreation	0.51	0.38	0.39	0.13	3.73
Religion	0.28	0.21	0.19	–	2.25
Self-esteem	0.62	0.42	0.60	0.37	–
Transportation	0.34	0.20	0.31	0.15	–
Energy level	0.52	0.35	0.46	0.23	–
Extraversion	0.36	0.24	0.31	0.13	–
Health Perceptions	0.44	0.28	0.41	0.21	–
Hopelessness	0.54	–0.19	0.74	0.63	–8.05
Loneliness	0.60	0.41	0.53	–0.29	–2.15
Mood State	0.74	0.64	0.52	0.15	8.73
Need satisfaction (All)	0.62	0.39	0.67	0.48	–
Achievement	0.50	0.21	0.63	0.48	–4.35
Affiliation	0.51	0.32	0.49	0.27	–
Change	0.50	0.29	0.52	0.32	–
Cognitive structure	0.56	0.32	0.59	0.40	–
Control	0.47	0.23	0.53	0.36	–2.07
Creativity	0.32	0.10	0.41	0.29	–2.78
Exhibition	0.37	0.18	0.40	0.25	–
Impulsivity	0.32	0.18	0.32	0.17	–
Play	0.41	0.25	0.38	0.20	–
Purpose and meaning	0.53	0.28	0.60	0.42	–2.32
Self-esteem	0.57	0.30	0.66	0.49	–3.29
Sentience	0.41	0.26	0.36	0.16	–
Social recognition	0.46	0.26	0.47	0.28	–
Succorance	0.42	0.28	0.36	0.16	–
Understanding	0.34	0.12	0.43	0.30	–2.65
Negative affect	–0.49	– 0.38	–0.35	–0.09	–4.31
Negative events	–0.28	–0.21	–0.19	–	–2.41
Neuroticism	– 0.50	– 0.34	–0.44	–0.21	–2.06
Optimism	0.60	0.28	0.80	0.69	–8.52

TABLE II

Continued

Measured variable	Happiness		Self-esteem		Z-score
	Zero-order	Partial	Zero-order	Partial	
Pain severity	-0.24	-0.11	-0.28	-0.17	-
Physical symptoms	-0.29	-0.15	-0.29	-0.16	-
Positive affect	0.54	0.40	0.42	0.16	3.81
Positive events	-	-	-	-	-
Purpose in life	0.67	0.48	0.63	0.40	-
Satisfaction with life	0.67	0.53	0.49	0.18	6.06
Sense of mastery	0.55	0.29	0.62	0.45	-2.69
Social support	0.33	0.18	0.34	0.19	-

Note: All correlation coefficients and *Z-values* are significant at $p < 0.05$ except those marked “-.” Pearson r 's ≥ 0.50 and partial correlations r_p 's ≥ 0.30 are in bold.

Although the results are not shown here, we reran the models with mood state and life satisfaction as additional predictors. When mood and life satisfaction were included in the happiness model, they emerged as the dominant predictors and accounted for an additional 11% of happiness variance; however, they failed to be significantly related to self-esteem in the self-esteem model and did not account for any additional variance in that model.

DISCUSSION

In this study, several criteria were used to determine the substantive differences between our two target variables, happiness and self-esteem. At the outset, however, we needed to establish that happiness and self-esteem are distinguishable constructs. The CFA provided empirical evidence that, although happiness and self-esteem are related, they are indeed separable. Next, we set out to identify which measured variables were most strongly associated with each of these two target variables. A strong unique relationship was established by satisfying the four criteria represented in Table IV – namely, the relation between the measured variable and the target variable needed (1) to be strong (i.e., $r \geq 0.50$); (2) to be stronger for one target variable than another; (3) to remain moderately strong after controlling for the other target variable (i.e., $r_p \geq 0.30$); and (4) to remain sig-

TABLE III

Hierarchical regression analyses predicting happiness and self-esteem from the measured variables

Measured variables	Target variables					
	Happiness			Self-esteem		
	B	SEB	β	B	SEB	β
Step 1						
Covariate	1.31	0.08	0.58	0.25	0.02	0.58
$\Delta R^2 =$		0.33			0.33	
Step 2						
Domain satisfaction	0.35	0.05	0.27	0.05	0.02	0.09
Extraversion	0.40	0.12	0.10	0.00	0.04	0.00
Hopelessness	-0.05	0.09	-0.03	-0.24	-0.03	-0.27
Loneliness	-0.25	0.07	-0.17	-0.03	0.02	-0.05
Mastery	0.08	0.09	0.03	0.05	0.03	0.04
Need satisfaction	0.10	0.05	0.09	0.09	0.02	0.17
Negative events	-0.02	0.01	-0.04	0.00	0.01	0.02
Neuroticism	-0.36	0.16	-0.08	0.02	0.06	0.01
Optimism	0.20	0.12	0.08	0.42	0.04	0.41
Positive events	-0.03	0.03	-0.03	0.00	0.01	0.00
Purpose in life	0.22	0.06	0.17	-0.02	0.02	-0.03
Social support	-0.07	0.04	-0.06	-0.01	0.01	-0.02
$\Delta R^2 =$		0.25			0.38	

Note: Correlation coefficients significant at $p < 0.05$ are in bold.

nificant after controlling for the other measured variables. Because the third and fourth criteria were the most stringent, the variables that satisfied these criteria for happiness and self-esteem, respectively, were considered to have the strongest unique relationships with these constructs. Indeed, the variables that met these last two criteria for one target variable, but not the other, are the ones that underscore the differences between happiness and self-esteem.

Figure 1 offers an alternative presentation of our data. Included in the figure are measured variables that were considered theoretically important based on prior research or were variables that satisfied either both criterion one and two in Table IV or at least criterion three or four.² Hence, Figure 1 is, in essence, the “master” visual presentation of our findings. The reader should be forewarned that this figure is not a mathematical representation, but, rather, a simple visual display of the

TABLE IV
The variables most highly related to happiness and self-esteem

Variable	Criteria ^a							
	Happiness				Self-Esteem			
	1	2	3	4	1	2	3	4
Domain satisfaction (All)	X	X	X	X	X		X	X
Friendships	X	X	X					
Life right now	X	X	X		X			
Recreation	X	X	X					
Self-esteem	X		X		X		X	
Energy level	X		X					
Extraversion				X				
Hopelessness	X				X	X	X	X
Loneliness	X	X	X	X	X			
Mood State	X	X	X		X			
Need satisfaction (All)	X		X		X		X	X
Achievement	X				X	X	X	
Affiliation	X		X					
Cognitive structure	X		X		X		X	
Control					X	X	X	
Purpose and meaning	X				X	X	X	
Self-esteem	X		X		X	X	X	
Understanding						X	X	
Negative affect		X	X					
Neuroticism	X	X	X	X				
Optimism	X				X	X	X	X
Positive affect	X	X	X					
Purpose in life	X		X	X	X		X	
Satisfaction with life	X	X	X					
Sense of mastery	X				X	X	X	

Note: X = satisfied criterion. ^aThe five columns reflect the following criteria: (1) the measured variable's zero-order correlation with the target variable is greater than 0.50; (2) the measured variable's zero-order correlation with the target variable is significantly larger than that with the comparison target variable; (3) the measured variable's partial correlation with the target variable, controlling for the comparison target variable, is greater than 0.30; and (4) the measured variable is a significant predictor of the target variable in a hierarchical multiple regression.

results, which will help guide our discussion. Specifically, this figure is a two-dimensional presentation of the magnitude of partial correlations between the measured variables and the two target variables. Partial

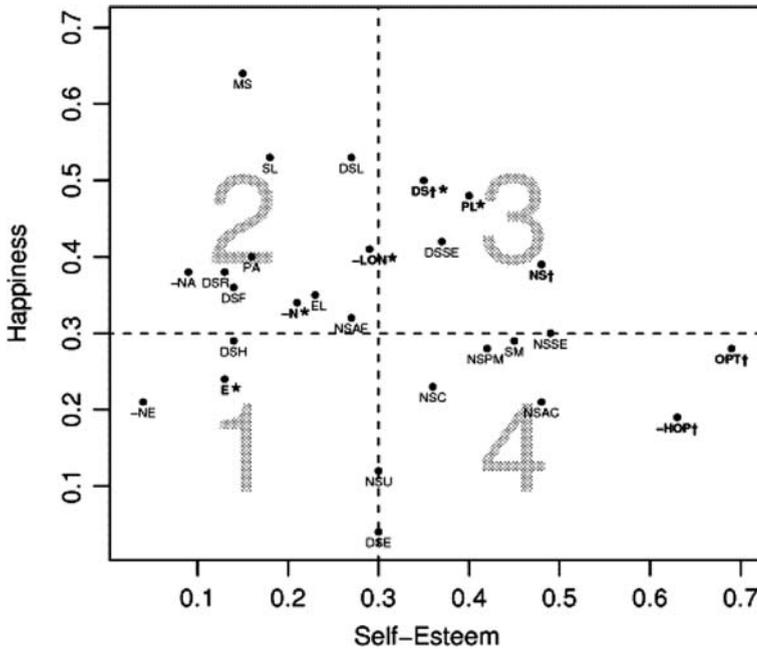


Figure 1. Visual display of partial correlations between the target variables (happiness and self-esteem) and the measured variables.

correlation coefficients for self-esteem are represented on the x -axis, and partial correlation coefficients for happiness are represented on the y -axis. Thus, Figure 1 shows the relative unique associations between our measured variables and our target variables. Variables that were inversely related to the target variables carry a minus sign. Furthermore, variables that emerged as dominant predictors in the multiple regression analysis are displayed in bold and marked with an asterisk (indicating a dominant predictor of happiness) or a dagger (indicating a dominant predictor of self-esteem).

The dashed lines at $r_p = 0.30$ represent our third criterion (i.e., partial correlation ≥ 0.30). These dotted lines serve to divide the two-dimensional space into four quadrants. The variables located in Quadrants 1 and 3 are reasonably equally related to happiness and self-esteem. Variables in Quadrant 1 are empirically less important, showing partial correlation coefficients less than 0.3. Variables in Quadrant 3, by contrast, showed strong partial correlations with both of the target variables, but they do not serve to discriminate our

target variables. The variables in Quadrants 2 and 4 are more closely related to one target variable than to another; variables in Quadrant 2 are uniquely related to happiness, whereas variables in Quadrant 4 are uniquely related to self-esteem. Because the variables in Quadrants 2 and 4 serve to highlight the differences between happiness and self-esteem, they serve as the focus of our discussion.

Two general conclusions can be derived from Figure 1. The first is simple and undisputed and that is that happiness and self-esteem are clearly, and at times predictably, related to different constructs. The second one, subject to debate, concerns the exact nature of these differences.

Quadrant 1: Empirically Relatively Less Important Variables Equally Related to Happiness and Self-Esteem

First among the variables that are empirically relatively less important to happiness and self-esteem are demographic variables (not included in the figure). As expected, demographic variables and “objective” life circumstances were not strongly related to happiness. Indeed, such variables account for no more than a small proportion of the variance in individual differences in levels of well-being (e.g., Costa et al., 1987; Diener et al., 1999; Lyubomirsky, 2001). Thus, age, marital status, level of education, living arrangement, and time since widowhood did not discriminate happy and unhappy individuals. Similarly, demographic variables were, in general, not strongly related to self-esteem.

Unlike demographic variables, however, extraversion (E) and negative events (NE) are theoretically important to happiness and self-esteem, and, therefore, deserve mention. Although extraversion did not meet our first three criteria, it did demonstrate a stronger partial correlation to happiness ($r = 0.24$) than to self-esteem ($r = 0.13$) and was a dominant predictor of happiness in the regression analysis (criterion four). The zero-order correlation between extraversion and happiness found in this investigation ($r = 0.36$) was somewhat larger than the average correlation ($r = 0.17$) found in a meta-analysis of 137 studies, but was within the range of correlations reported (DeNeve and Cooper, 1998). Thus, our findings for extraversion are consistent with previous theoretical

propositions and empirical research concerning the links between traits and happiness (Costa and McCrae, 1980; McCrae and Costa, 1991; DeNeve and Cooper, 1998).

Similarly, although negative life events (NE) fell within Quadrant 1 of our figure, this factor was clearly related more to happiness than to self-esteem in this population. The small correlation between negative events and happiness is not surprising, given research showing that, although life's events certainly influence well-being, these effects tend to dissipate over time (e.g., Brickman et al., 1978; Suh et al., 1996). Furthermore, the lack of an association between negative events and self-esteem may be due to the nature of the negative events measured. Specifically, the types of negative events listed (e.g., death or illness of a family member, behavior of a family member or friend been a problem, and something stolen) might prompt a negative emotional response, but not necessarily self-blame.

Quadrant 3: Empirically Important Variables Equally Related to Happiness and Self-esteem

In contrast to the variables in Quadrant 1, the variables in Quadrant 3 – namely, purpose in life (PL), general domain satisfaction (DS), and general need satisfaction (NS) – were found to be equally, and *strongly*, related to both happiness and self-esteem.

Although purpose and meaning in life – that is, having valued goals, objectives for living, and a sense of directedness – emerged as a dominant predictor of happiness in the hierarchical regression analyses, it also fell into Quadrant 3 of our visual display. These mixed results may be a product of the nature of the construct of purpose in life and its potential effects on both psychological well-being *and* self-esteem. For example, Ryff and colleagues have found that feeling that one's life is purposeful and meaningful is associated with psychological well-being (Ryff, 1989; Ryff and Keyes, 1995). Furthermore, this factor is likely to gain significance as one ages – an important consideration given the age range of our sample. Therefore, it is not surprising that purpose in life emerged as a dominant predictor of happiness. Importantly, however, Ryff's (1989) conclusions about positive psychological functioning center on agentic themes (e.g., self-

directedness and valued goals). Thus, we would expect purpose in life also to be strongly related to an individual's sense of worth and competency – that is, his or her self-esteem.

The composites for domain satisfaction and need satisfaction were equally related to our two target variables. However, it is worth noting that, with the exception of satisfaction with one's self-esteem (DSSE), specific individual domain and need satisfaction items were uniquely related to either happiness *or* self-esteem. Consequently, it is not surprising that the composite scores, which incorporate all the individual facets, were relatively equally related to both target variables. Because the unique relations involving the individual domain-specific items may highlight the differences between happiness and self-esteem, they will be discussed further below.

Quadrant 2: Empirically Important Variables Closely Related to Happiness

Several measured variables were uniquely related to happiness but not to self-esteem – namely, present mood state (MS), satisfaction with life (SL), positive affect (PA), negative affect (NA), loneliness (LON), energy level (EL), and neuroticism (N). Specifically, each of these variables showed (1) a high zero-order correlations with happiness, (2) a significantly higher zero-order correlation with happiness than with self-esteem, and (3) high correlations with happiness after partialling out self-esteem. Furthermore, with the exception of loneliness, these variables did not have strong correlations with self-esteem, after partialling out happiness. Emerging as dominant predictors of happiness in the hierarchical regression analysis (criterion four) were extraversion, neuroticism, loneliness, domain satisfaction, and purpose in life. Although the last factor, purpose in life, emerged as a dominant predictor of happiness, the zero-order and partial correlations identified it as being equally related to the two target variables. In sum, these findings are in line with our expectations, as well as with the results of much previous research.

Temperamental Vs. Instrumental Influence

Together, the strong links between these measured variables and happiness indirectly support McCrae and Costa's (1991) proposition that certain traits may have a *temperamental* influence on well-being –

that is, that extraversion leads to positive affect and neuroticism leads to negative affect, and then, in turn, both traits *and* affect influence happiness. In our sample, happy people were indeed more extraverted, reported being in a better mood and experiencing more positive affect, were less emotionally unstable, and experienced less negative affect than did their unhappy peers.

Interestingly, our findings also support McCrae and Costa's (1991) notion that traits may additionally have an *instrumental* bearing on happiness and well-being – that is, that traits may lead individuals to seek out situations that affect mood and, ultimately, well-being. Consistent with this argument, we found that happy individuals were more extraverted, reported experiencing better-quality social relationships (i.e., less loneliness), and more positive affect than did unhappy ones.

Domain Satisfaction

Happiness was also uniquely related to satisfaction in a number of domains – namely, satisfaction with one's life right now (DSL), one's recreational activities (DSR), and one's friendships (DSF). Because these unique relations may highlight the differences in happiness and self-esteem, we discuss each of these domain satisfactions in turn.

Overall, satisfaction with social relationships appeared to be more closely related to happiness than to self-esteem. For example, satisfaction with friendships showed strong unique relationships with happiness, and, although satisfaction with marriage and family did not meet the criteria for inclusion, these variables were moderately associated with happiness, and less strongly related to self-esteem. Social relationships, such as friendships, have been one of the biggest predictors of well-being at all ages (see Lyubomirsky et al., in press, for a review).

Closely related to friendship satisfaction is satisfaction with one's recreation or leisure time, which has also been found to predict well-being in both the young and old (e.g., Argyle, 1987; Eysenck, 1990; Lepper, 1996). Leisure often affects marriage and other aspects of social life (Wilson, 1980), which are important sources of happiness, and can help compensate for stressful, demanding jobs. Also, leisure or recreation is, by definition, pleasurable, consisting of “activities that people do simply because they want to, for their own sake” (Argyle, 1987, pp.73–74). Thus, recreation leads to positive affect,

and thereby enhances happiness. Finally, recreation often consists of “flow,” an established source of happiness (Csikszentmihalyi, 1990). As this finding suggests, for happy individuals, life may just be “fun.”

Our findings that happy people are particularly inclined to be satisfied with their recreation and their friendships, as well as to be extraverted and not lonely, reveals a “social activity” component to happiness. To quote Wilson’s oft-cited review (1967), “perhaps the most impressive single finding lies in the relation between happiness and successful involvement with people” (p. 304). Some forty years later, the importance of a satisfying and active *social* environment to individual happiness – especially to older people – cannot be understated.

Although health perceptions did not meet our rigorous criteria, satisfaction with one’s health (DSH) was more strongly linked with happiness than with self-esteem. This finding is consistent with previous research showing a reliable association between happiness and a variety of health outcomes (Pressman and Cohen, in press). However, Russell and Wells (1994) showed that among older adults, health status did not significantly predict happiness when family satisfaction and relationships with children were assessed. Likewise, in our study, perceived global health was not a significant predictor of happiness after other variables were controlled.

Conclusion

In sum, our findings from the correlational and regression analyses repeatedly demonstrate that the measured variables most uniquely related to happiness are three in character: (1) mood and temperament (i.e., mood, positive affect, negative affect, extraversion, and neuroticism,); (2) global satisfaction with life (i.e., the Satisfaction With Life scale and domain satisfaction with one’s “life right now”); and (3) social relationships (i.e., loneliness, satisfaction with friendships, and, to a lesser extent, satisfaction with family and marriage).

Quadrant 4: Empirically Important Variables Closely Related to Self-Esteem

Quadrant 4 of our figure presents the measured variables that are uniquely related to self-esteem (rather than to happiness) – namely, optimism (OPT), (lack of) hopelessness (HOP), a sense of mastery

(SM), satisfaction with one's education (DSE), and several areas of need satisfaction (self-esteem (NSSE), achievement (NSAC), purpose and meaning (NSPM), control (NSC), and understanding (NSU)). Although many of these variables also showed moderately strong zero-order and partial correlations with *happiness*, they appear to be much more closely related to self-esteem. Each had (1) a high zero-order correlation with self-esteem; (2) a significantly higher zero-order correlation with self-esteem than with happiness; and (3) a high correlation with self-esteem, after partialling out happiness. Finally, optimism and (low) hopelessness (along with general domain and need satisfaction) emerged as dominant predictors of self-esteem while controlling for the other measured variables in the hierarchical regression analysis. These findings suggest that feeling optimistic, efficacious, and not hopeless, and having one's various needs fulfilled, reliably distinguish HSE and LSE older individuals.

Optimism and Hopefulness

Self-esteem has been strongly related to optimism in prior studies (e.g., Lucas et al., 1996) and, given that hopelessness is conceptually similar to pessimism (or vice versa) (cf. Smith et al., 1989, who used it as an alternative measure of optimism), it is not surprising that a lack of hopelessness also came out as a significant predictor of self-esteem. Indeed, what is surprising is that *both* optimism and hopelessness significantly predicted self-esteem (but not happiness) in a multiple regression analysis, despite their conceptual and empirical intercorrelations. Interestingly, the simple correlations between these two measured variables and happiness are quite high and have been reported in the literature as evidence of the strong relationship between optimism and *happiness*. However, the zero-order correlation between happiness and optimism ($r = 0.60$) was reduced to 0.28 after partialling out self-esteem, and the correlation between happiness and hopelessness shrank from -0.54 to -0.19 , implicating the importance of self-esteem. In sum, these findings, as well as those of Lucas and colleagues, deserve re-examination in future work.

Having a bright outlook has a number of esteem-promoting benefits. For example, optimism can be instrumental to gaining a sense of competency and self-worth. According to Carver and Scheier (1981), an optimistic outlook is critical to initiating or continuing working towards a goal. Thus, optimists might increase their odds at

success, and ultimately, experience a greater sense of accomplishment and self-worth than pessimists. Furthermore, when optimists do encounter difficulties, they appear to approach them relatively more effectively, by using more active and direct coping strategies (Aspinwall and Taylor, 1992). Thus, again, optimists may increase their chances of success. Finally, the association between optimism and task initiation also holds for prominent long-term goals, such as career-related goals (Creed et al., 2002; Patton et al., 2004).

Sense of Mastery

Following our expectations about the agentic nature of self-esteem, a sense of mastery was also found to be highly related to self-esteem. In general, success in past endeavors promotes efficacy, which, in turn, predicts higher future goals (Bandura, 1986; Locke and Latham, 1990). Moreover, efficacy also promotes future task performance, higher standards, and more effective task strategies (Bandura, 1997). If these competencies are in areas deemed important to the individual, the individual will benefit with feelings of greater self-worth (Harter, 1993). Unexpectedly, however, mastery failed to emerge as a dominant predictor of self-esteem in the regression analysis. This result may have been due to the relations of mastery to similar variables included in the same analysis, such as optimism and hopelessness.

Combined, the present study's findings, as well as those of past research, suggest that the cognitive dispositions of optimism and mastery may have an instrumental influence on task initiation and perseverance, on career planning, and ultimately, on self-esteem.

Need Satisfaction

The satisfaction of one's needs (at any age) has not been systematically tested with regard to self-esteem. However, it might be expected to be related to positive evaluations of one's self based on theoretical work, especially that of Maslow (1954). The results showed that self-esteem was uniquely related to the satisfaction of one's needs in a number of specific areas – namely, self-esteem, achievement, purpose and meaning, control, and understanding. Again, having one's basic needs fulfilled presumably allows individuals to enhance their self-esteem. Consequently, those with high self-esteem have attained greater satisfaction of their needs. Another perspective comes from

Murray (1938), who conceptualized a need as an impulse or “a push from the rear.” Thus, people who are able to satisfy or appease their needs are likely to have greater levels of mastery or efficacy (and, thus, higher levels of self-esteem). Alternatively, it may be that people who feel more efficacious may be more capable of actually fulfilling their needs.

Overall, two observations can be made with respect to the best predictors of self-esteem. First, the majority of the measured variables most strongly associated with self-esteem appear to be enduring global dispositions related to agency or goal attainment. Second, unlike the unique associations between temperamental traits and happiness found in Quadrant 2, the agentic traits related to self-esteem in Quadrant 4 are also related to happiness (albeit to a lesser degree).

Limitations

Because our participants were comprised of primarily older, Caucasian, retired males, our ability to generalize these findings is somewhat reduced. Alternatively, one could argue that the use of this population represents an advance over previous research on happiness and self-esteem. Sears (1986) cautioned against solely using undergraduates to study psychological phenomena, as these young people do not yet have “crystallized” attitudes or a well-formulated conception of the self. By contrast, our study focused on adults whose ages spanned more than 40 years. In addition to leaving behind the identity conflicts typifying youth, these older folks may have lived sufficiently long lives to be qualified to judge their happiness, self-esteem, and many other characteristics. Likewise, the large proportion of males may be more an advantage than a limitation of our study, as most empirical research on older populations tends to be based on overwhelmingly female samples.

A more serious source of concern in our study was the exclusive reliance on self-report measures – a procedure that nevertheless allowed us to obtain a large and representative sample of retirees. We were fortunate, however, that the use of informant ratings has been found to validate a number of the measures used in our particular data set (see Lepper, 1998). These findings increase our confidence that the sole use of self-report in this study did not increase the risk of

response set biases and other potential artifacts (e.g., Diener, 1994; Watson and Walker, 1996). Related to this issue is the large, but still limited, set of variables that we examined. For example, although extraversion and neuroticism were measured, the remaining three traits of the “Big Five” (Costa and McCrae, 1992) – namely, conscientiousness, agreeableness, and openness to experience – were not. We did not include these three variables because, unlike extraversion and neuroticism, they have not been consistently found to be related to either well-being or to self-esteem. The omission of still other variables – e.g., internality or anxiety – was unavoidable, given the heavy respondent burden already produced by our large number of self-reports.

Another limitation was created by the use of intercorrelated variables in our multiple regression analyses. Inclusion of such variables was necessitated by our review of the constructs that showed relationships with happiness and self-esteem in prior research. Moreover, we tried to address this potential problem through the use of multiple analyses (i.e., correlations, partial correlations, and hierarchical multiple regression analyses). This strategy also allowed us to overcome the problems inherent in any one statistical analysis by triangulating and “building” on one another. Consequently, the variables that were found to be strongly related to happiness and self-esteem, respectively, emerged as strong predictors in most or all of these analyses, bolstering our confidence in our conclusions.

Conclusions

Our findings support much of prior research and provide intriguing clues into the link between happiness and self-esteem. By examining a large number of constructs in a single study, we were able to provide evidence for the separability of these two target variables. Our analyses boosted our confidence in the notion that despite the high degree of relatedness between happiness and self-esteem, they are separable constructs with potentially different sources.

One of the most frequently asked questions of well-being researchers is, what is the difference between happiness and self-esteem? To some, this question seems a simplistic and obvious one – of course, happiness and self-esteem are not the same. Although this study cannot offer any definitive answers to that question, we offer data. Relative to

self-esteem, happiness appears to be more uniquely related to mood, temperamental traits, global life satisfaction, and social affiliation. Self-esteem, by contrast, appears to be more closely related to the agentic dispositions of optimism and mastery. The incontrovertible conclusion of this paper, we happily and confidently submit, is that happiness and self-esteem are indeed distinct.

NOTES

¹ Because our happiness target variable was assessed with a relatively new 4-item scale, the Subjective Happiness Scale (SHS; Lyubomirsky and Lepper, 1999), its measurement deserves further discussion. The first two items on the scale ask respondents to characterize themselves using absolute ratings (1 = *a very unhappy person*; 7 = *a very happy person*) and relative to their peers (1 = *much less happy*; 7 = *much more happy*), respectively. The third and fourth items respectively characterize happy people (“Some people are generally very happy; they enjoy life regardless of what is going on, getting the most out of everything”) and unhappy people (“Some people are generally not very happy; although they are not depressed, they never seem as happy as they might be”) and ask participants to what extent each characterization describes them (1 = *not at all*; 7 = *a great deal*). Two items were purposefully created as relatively specific and two items as relatively general, allowing respondents to define happiness for themselves. Although the general items in part involve appraisals of “resources” that happy people possess and unhappy people lack, this 4-point scale is not multi-dimensional.

Responses to the four items are averaged to provide a single composite score, ranging from 1 to 7. This measure of global subjective happiness has been found to have good to excellent validity and reliability in 14 studies ($N = 2732$). Data have been collected in the United States from students on two college campuses and one high school campus, from community adults in two California cities, and from retired adults. Students and community adults in Moscow, Russia also participated in these studies to assess the scale’s reliability and construct validity. The SHS has demonstrated high internal consistency (α s range from 0.85 to 0.95 in seven different studies), a unitary structure, and high test–retest stability (Pearson’s $r = 0.90$ for 4 weeks and 0.71 for 3 months). It further has been shown to correlate highly with informant ratings of happiness ($r = 0.65$). As expected, strong correlations have been found with other widely used scales of subjective well-being, such as Bradburn’s (1969) Affect-Balance Scale (r ’s range from 0.49 to 0.64), and his Global Happiness item (r ’s range from 0.57 to 0.69), and Andrews and Withey’s (1976) Terrible-Delighted Scale (r ’s range from 0.59 to 0.71). As expected, no significant correlations have been found between the SHS and college GPA, math and verbal ability, age, sex, and education. For further information on the characteristics of this measure, see Lyubomirsky and Lepper (1999).

² A number of individual items from the Domain Satisfaction and Need Satisfaction scales met these criteria, but were theoretically less important, and, therefore, were omitted for the sake of clarity. These variables are listed in Table III.

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REFERENCES

- Andrews, F.M.: 1991, 'Stability and change in levels and structure of subjective well-being: USA 1972 and 1988', *Social Indicators Research* 25, pp. 1–30.
- Andrews, F.M. and S.B. Withey: 1976, *Social Indicators of Well-Being: America's Perception of Life Quality* (Plenum Press, New York).
- Argyle, M.: 1999, 'Causes and correlates of happiness', in D. Kahneman, E. Diener and N. Schwarz (eds.), *Well-Being: The Foundations of Hedonic Psychology* (Russell Sage Foundation, New York), pp. 353–375.
- Argyle, M.: 1987, *The Psychology of Happiness* (Methuen, London).
- Aspinwall, L.G. and S.E. Taylor: 1992, 'Modeling cognitive adaptation: A longitudinal investigation of the impact of individual differences and coping on college adjustment and performance', *Journal of Personality and Social Psychology* 63, pp. 989–1003.
- Atchley, R.C.: 1994, *Social Forces and Aging*, 7th edn. (Wadsworth, Belmont, CA, US).
- Baker, L.A., I.L. Cesav, M. Gatz and C. Mellins: 1992, 'Genetic and environmental influences on positive and negative affect: Support for a two-factor theory', *Psychology and Aging* 7, pp. 158–163.
- Bandura, A.: 1977, *Social Learning Theory* (Prentice-Hall, Englewood Cliffs, NJ, US).
- Bandura, A.: 1986, *Social Foundations of Thought and Action* (Prentice-Hall, Englewood Cliffs, NJ, US).
- Bandura, A.: 1997, *Self-Efficacy: The Exercise of Control* (W.H. Freeman, New York).

- Baruch, G.K. and R.C. Barnett: 1986, 'Role quality, multiple role involvement, and psychological well-being in midlife women', *Journal of Personality and Social Psychology* 51, pp. 578–585.
- Block, J. and A.M. Kremen: 1996, 'IQ and ego-resiliency: Conceptual and empirical connections and separateness', *Journal of Personality and Social Psychology* 70, pp. 349–361.
- Bradburn, N.M.: 1969, *The Structure of Psychological Well-Being* (Alpine, Chicago).
- Brandtstadter, J. and W. Greve: 1994, 'Explaining the resilience of the aging self: Reply to Carstensen and Freund', *Developmental Review* 14, pp. 93–102.
- Brebner, J., J. Donaldson, N. Kirby and L. Ward: 1995, 'Relationships between happiness and personality', *Personality and Individual Differences* 19, pp. 251–258.
- Brickman, P., D. Coates and R. Janoff-Bulman: 1978, 'Lottery winners and accident victims: Is happiness relative?', *Journal of Personality and Social Psychology* 36, pp. 917–927.
- Campbell, A.: 1981, *The Sense of Well-Being in America* (McGraw-Hill, New York).
- Campbell, A., P. Converse and W. Rodgers: 1976, 'The Quality of American Life' (Russell Sage Foundation, New York).
- Campbell, J.D.: 1990, 'Self-esteem and clarity of the self-concept', *Journal of Personality and Social Psychology* 59, pp. 538–549.
- Campbell, J.D. and L.F. Lavalley: 1993, 'Who am I? The role of self-concept confusion in understanding the behavior of people with low self-esteem', in R.F. Baumeister (ed), *Self-esteem: The Puzzle of Low Self-Regard* (Plenum Press, New York), pp. 3–20.
- Cantor, N. and C.A. Sanderson: 1999, 'Life task participation and well-being: The importance of taking part in daily life', in D. Kahneman, E. Diener and N. Schwarz (eds.), *Well-Being: The Foundations of Hedonic Psychology* (Russell Sage Foundation, New York), pp. 230–243.
- Carver, C.S. and J.G. Gaines: 1987, 'Optimism, pessimism, and post-partum depression', *Cognitive Therapy and Research* 11, pp. 449–462.
- Carver, C.S. and M.F. Scheier: 1981, *Attention and Self-Regulation: A Control-Theory Approach to Human Behavior* (Springer-Verlag, New York).
- Creed, P.A., W. Patton and D. A. Bartrum: 2002, 'Multidimensional properties of the LOT-R: Effects of optimism and pessimism on career and well-being related variables in adolescents', *Journal of Career Assessment* 10, pp. 42–61.
- Cohen, J.: 1977, *Statistical Power Analysis for the Behavioral Sciences*, 2nd edn. (Academic Press, New York).
- Coleman, P.G., C. Ivani-Chalian and M. Robinson: 1993, 'Self-esteem and its sources: Stability and change in later life', *Aging and Society* 13, pp. 171–192.
- Coopersmith, S.: 1967, *The Antecedents of Self-Esteem* (W.H. Freeman, San Francisco).
- Costa, P.T. Jr., and R.R. McCrae: 1980, 'Influence of extraversion and neuroticism on subjective well-being: Happy and unhappy people', *Journal of Personality and Social Psychology* 38, pp. 668–678.
- Costa, P.T. Jr., and R.R. McCrae: 1992, *NEO PI-R: Professional Manual* (Psychological Assessment Resources Inc., Odessa, FL, US).

- Costa, P.T., R.R. McCrae and A.H. Norris: 1981, 'Personal adjustment to aging: Longitudinal prediction from neuroticism and extraversion', *Journal of Gerontology* 36, pp. 78–85.
- Costa, P.T. Jr., R.R. McCrae and A.B. Zonderman: 1987, 'Environmental and dispositional influences on well-being: Longitudinal follow-up of an American national sample', *British Journal of Psychology* 78, pp. 229–306.
- Crocker, J. and B. Major: 1989, 'Social stigma and self-esteem: The self-protective properties of stigma', *Psychological Review* 96, pp. 608–630.
- Crumbaugh, J.: 1968, 'Cross-validation of a purpose in-life test based on Frankl's concepts', *Journal of Individual Psychology* 24, pp. 74–81.
- Csikszentmihalyi, M.: 1990, *Flow: The Psychology of Optimal Experience* (Harper and Row, New York).
- Csikszentmihalyi, M. and J. Hunter: 2003, 'Happiness in everyday life: The use of experience sampling', *Journal of Happiness Studies* 4, pp. 185–199.
- Csikszentmihalyi, M. and M.M. Wong: 1991, The situational and personal correlates of happiness: A cross-national comparison, in N.M.F. Strack and S. Argyle (eds), *Subjective Well-Being: An Interdisciplinary Perspective*. International Series in Experimental Social Psychology (Pergamon Press, Oxford, England), pp. 193–212.
- Deci, E.L. and R.M. Ryan: 1985, *Intrinsic Motivation and Self-Determination in Human Behavior* (Plenum, New York).
- DeNeve, K.M. and H. Cooper: 1998, 'The happy personality: A meta-analysis of 137 personality traits and subjective well-being', *Psychological Bulletin* 124, pp. 197–229.
- Diener, E.: 1984, 'Subjective well-being', *Psychological Bulletin* 95, pp. 542–575.
- Diener, E.: 1994, 'Assessing subjective well-being: Progress and opportunities', *Social Indicators Research* 31, pp. 103–157.
- Diener, E.: 1996, Personality and subjective well-being, in D. Barone, M. Hersen and V. Van Hasselt (eds.), *Advanced Personality* (Plenum Press, New York).
- Diener, E. and M. Diener: 1995, 'Cross-cultural correlates of life satisfaction and self-esteem', *Journal of Personality and Social Psychology* 68, pp. 653–663.
- Diener, E., R.A. Emmons, R.J. Larsen and S. Griffin: 1985a, 'The Satisfaction With Life Scale', *Journal of Personality Assessment* 49, pp. 71–75.
- Diener, E., R.J. Larsen, S. Levine and R.A. Emmons: 1985b, 'Intensity and frequency: Dimensions underlying positive and negative affect', *Journal of Personality and Social Psychology* 48, pp. 1253–1265.
- Diener, E., E. Sandvik and W. Pavot: 1991, 'Happiness is the frequency, not the intensity, of positive versus negative affect', in F. Strack, M. Argyle and N. Schwarz (eds.), *Subjective Well-Being: An Interdisciplinary Perspective*. International Series in Experimental Social Psychology (Pergamon Press, Oxford), pp. 119–139.
- Diener, E., E.M. Suh, R.E. Lucas and H.L. Smith: 1999, 'Subjective well-being: Three decades of progress', *Psychological Bulletin* 125, pp. 276–302.
- Dietz, B.E.: 1996, 'The relationship of aging to self-esteem: The relative effects of maturation and role accumulation', *International Journal of Aging and Human Development* 43, pp. 249–266.
- Di Paula, A. and J.D. Campbell: 2002, 'Self-esteem and persistence in the face of failure', *Journal of Personality and Social Psychology* 83, pp. 711–724.

- Dunning, D., A. Leuenberger and D.A. Sherman: 1995, 'A new look at motivated inference: Are self-serving theories of success a product of motivational forces?', *Journal of Personality and Social Psychology* 69, pp. 58–68.
- Emmons, R.A. and E. Diener: 1985, 'Personality correlates of subjective well-being', *Personality and Social Psychology Bulletin* 11, pp. 89–97.
- Emmons, R.A., E. Diener and R.J. Larsen: 1986, 'Choice and avoidance of everyday situations and affect congruence: Two models of reciprocal interactionism', *Journal of Personality and Social Psychology* 51, pp. 815–826.
- Epstein, S.: 1973, 'The self-concept revisited or a theory of a theory', *American Psychologist* 5, pp. 404–416.
- Eysenck, H.J. and M.W. Eysenck: 1985, *Personality and Individual Differences: A Natural Science Approach* (Plenum Press, New York).
- Eysenck, M.W.: 1990, *Happiness: Facts and Myths* (Lawrence Erlbaum Publishers, East Sussex, England).
- Feist, G.J., T.E. Bodner, J.F. Jacobs, M. Miles and V. Tan: 1995, 'Integrating top-down and bottom-up structural models of subjective well-being: A longitudinal investigation', *Journal of Personality and Social Psychology* 68, pp. 138–150.
- Fenichel, O.: 1945, *The Psychoanalytic Theory of Neurosis* (Norton, New York).
- Fleming, J.S. and B.F. Courtney: 1984, 'The dimensionality of self-esteem: II. Hierarchical facet model for revised measurement scales', *Journal of Personality and Social Psychology* 46, pp. 404–421.
- Fordyce, M.W.: 1988, 'A review of research on the happiness measures: A sixty second index of happiness and mental health', *Social Indicators Research* 20, pp. 355–381.
- Freedman, J.: 1978, *Happy People: What Happiness is, Who Has It, and Why* (Harcourt Brace Jovanovich, New York).
- George, L.K.: 1978, 'The impact of personality and social status factors upon levels of activity and psychological well-being', *Journal of Gerontology* 33, pp. 840–847.
- Gove, W.R., S.T. Ortega and C. Briggs: 1989, 'The maturational and role perspectives on aging and self through the adult years: An empirical evaluation', *American Journal of Sociology* 94, pp. 1117–1145.
- Grob, A., A. Stetsenko, C. Sabatier, L. Botcheva and P. Macek: 1999, A cross-national model of subjective well-being in adolescence, in F.D. Alsaker, A. Flammer and N. Bodmer (eds.), *The Adolescent Experience: European and American Adolescents in the 1990s* (Erlbaum, New York), pp. 115–130.
- Gurin, G., J. Veroff and S. Feld: 1960, *Americans View Their Mental Health* (Basic Books, New York).
- Harter, S.: 1993, Causes and consequences of low self-esteem in children and adolescents, in R.F. Baumeister (ed), *Self-Esteem: The Puzzle of Low Self-Regard* (Plenum Press, New York), pp. 87–116.
- Hays, R.D. and M.R. DiMatteo: 1987, 'A short-form measure of loneliness', *Journal of Personality Assessment* 51, pp. 69–81.
- Headey, B. and A. Wearing: 1989, 'Personality, life events, and subjective well-being: Toward a dynamic equilibrium model', *Journal of Personality and Social Psychology* 57, pp. 731–739.
- Heider, F.: 1958, *The Psychology of Interpersonal Relations* (John Wiley, New York).
- Henderson, S., D. Byrne and P. Duncan-Jones: 1981, *Neurosis and the Social Environment* (Academic Press, Sydney).

- Kahana, E., C. Redmond, G.J. Hill, B. Kahana, J.R. Johnson and R.F. Young: 1995, 'The effects of stress, vulnerability, and appraisals on the psychological well-being of the elderly', *Research on Aging* 17, pp. 459–489.
- Kernis, M.H., D.P. Cornell, C. Sun, A. Berry and T. Harlow: 1993, 'There's more to self-esteem than whether it is high or low: The importance of stability of self-esteem', *Journal of Personality and Social Psychology* 65, pp. 1190–1204.
- Kozma, A. and M.J. Stones: 1978, 'Some research issues and findings in the assessment of well-being in the elderly', *Canadian Psychological Review* 19, pp. 241–249.
- Kozma, A. and M.J. Stones: 1980, 'The measurement of happiness: Development of the Memorial University of Newfoundland Scale of Happiness (MUNSH)', *Journal of Gerontology* 35, pp. 906–912.
- Larsen, R., E. Diener and R. Emmons: 1985, 'An evaluation of subjective well-being measures', *Social Indicators Research* 17, pp. 1–17.
- Larsen, R.J. and T. Ketelaar: 1989, 'Extraversion, neuroticism, and susceptibility to positive and negative mood induction procedures', *Personality and Individual Differences* 10, pp. 1221–1228.
- Lee, G.R. and M. Ishii-Kuntz: 1987, 'Social interaction, loneliness, and emotional well-being among the elderly', *Research on Aging* 9, pp. 459–482.
- Lepper H.S.: 1996, 'In Pursuit of Happiness and Satisfaction in Later Life: A Study of Competing Theories of Subjective Well-being', Unpublished doctoral dissertation, Department of Psychology, University of California, Riverside, Riverside CA, US.
- Lepper, H.S.: 1998, 'Use of other-reports to validate subjective well-being measures', *Social Indicators Research* 44, pp. 367–379.
- Locke, E.A. and G.P. Latham: 1990, *A Theory of Goal Setting and Task Performance* (Prentice-Hall, Englewood Cliffs, NJ, US).
- Lubin, B., M. Zuckerman, L.M. Breytspraak and N.C. Bull: 1988, 'Affects, demographic variables, and health', *Journal of Clinical Psychology* 44, pp. 131–141.
- Lucas, R.E., E. Diener and E. Suh: 1996, 'Discriminant validity of well-being measures', *Journal of Personality and Social Psychology* 71, pp. 616–628.
- Lyubomirsky, S.: 2001, 'Why are some people happier than others?: The role of cognitive and motivational processes in well-being', *American Psychologist* 56, pp. 239–249.
- Lyubomirsky S., L.A. King and E. Diener: in press, 'The benefits of frequent positive affect: Does happiness lead to success?,' *Psychological Bulletin*.
- Lyubomirsky, S. and H.S. Lepper: 1999, 'A measure of subjective happiness: Preliminary reliability and construct validation', *Social Indicators Research* 46, pp. 137–155.
- Lyubomirsky, S. and L. Ross: 1997, 'Hedonic consequences of social comparison: A contrast of happy and unhappy people', *Journal of Personality and Social Psychology* 73, pp. 1141–1157.
- Lyubomirsky S., K.M. Sheldon and D. Schkade: 2005, 'Pursuing happiness: The architecture of sustainable change,' *Review of General Psychology*, pp. 111–131.
- Lyubomirsky, S. and C. Tkach: 2004, The consequences of dysphoric rumination, in C. Papageorgiou and A. Wells (eds.), *Depressive Rumination* (John Wiley and Sons Ltd, West Sussex, England), pp. 21–43.

- Lyubomirsky, S. and K.L. Tucker: 1998, 'Implications of individual differences in self-reported happiness for perceiving, thinking about, and recalling life events', *Motivation and Emotion* 22, pp. 155–186.
- Magnus, K., E. Diener, F. Fujita and W. Pavot: 1993, 'Extraversion and neuroticism as predictors of objective life events: A longitudinal analysis', *Journal of Personality and Social Psychology* 65, pp. 1046–1053.
- Markus, H.R. and S. Kitayama: 1991, 'Culture and the self: Implications for cognition, emotion, and motivation', *Psychological Review* 98, pp. 224–253.
- Maslow A.: 1970, *Motivation and Personality*, 2nd edn. (Harper, New York).
- Mastekaasa, A.: 1994, 'Marital status, distress, and well-being: An international comparison', *Journal of Comparative Family Studies* 25, pp. 183–205.
- McCrae, R.R., and P.T., Jr. Costa: 1991, 'Adding Liebe und Arbeit: The full five-factor model and well-being', *Personality and Social Psychology Bulletin* 17, pp. 227–232.
- Meng, X., R. Rosenthal and D.B. Rubin: 1992, 'Comparing correlated correlation coefficients', *Psychological Bulletin* 111, pp. 172–175.
- Michalos, A.C.: 1985, 'Multiple Discrepancies Theory (MDT)', *Social Indicators Research* 16, pp. 347–413.
- Murray, H.A.: 1938, *Explorations in Personality* (Oxford University Press, New York).
- Myers, D.G.: 1992, *The Pursuit of Happiness* (William Morrow, New York).
- Myers, D.G. and E. Diener: 1995, 'Who is happy?', *Psychological Science* 6, pp. 10–19.
- Okun, M.A., W.A. Stock, M.J. Haring and R.A. Witter: 1984, 'Health and subjective well-being: A meta-analysis', *International Journal on Aging and Human Development* 19, pp. 111–132.
- Omodei, M.M. and A.J. Wearing: 1990, 'Need satisfaction and involvement in personal projects: Toward an integrative model of subjective well-being', *Journal of Personality and Social Psychology* 59, pp. 762–769.
- Patton, W., D.A. Bartrum and P.A. Creed: 2004, 'Gender differences for optimism, self-esteem, expectations and goals in predicting career planning and exploration in adolescents', *Journal of Career Development* 30, pp. 277–294.
- Parducci, A.: 1995, *Happiness, Pleasure, and Judgment: The Contextual Theory and its Applications* (Lawrence Erlbaum Associates, Mahwah, NJ, US).
- Pavot, W. and E. Diener: 1993, 'The affective and cognitive context of self-reported measures of subjective well-being', *Social Indicators Research* 28, pp. 1–20.
- Pavot, W., E. Diener and F. Fujita: 1990, 'Extraversion and happiness', *Personality and Individual Differences* 11, pp. 1299–1306.
- L.A. Peplau and D. Perlman (eds.): 1982, *Loneliness: A Source Book of Current Theory, Research, and Therapy* (Wiley, New York).
- Pearlin, L., M. Lieberman, E. Menaghan and J. Mullan: 1981, 'The stress process', *Journal of Health and Social Behavior* 22, pp. 337–356.
- Pressman S.D., and S. Cohen: in press, 'The influence of positive affect on health: A review,' *Psychological Bulletin*.
- Reis, H.T.: 1984, *Social interaction and well-being*, in S. Duck (ed), *Personal Relationships, 5: Repairing Personal Relationships* (Academic Press, London)..
- Reis, H.T., K.M. Sheldon, S.L. Gable, R. Roscoe and R.M. Ryan: 2000, 'The role of autonomy, competence, and relatedness', *Personality and Social Psychology Bulletin* 22, pp. 419–435.

- Roberts, B.W. and C.N. Chapman: 2000, 'Change in dispositional well-being and its relation to role quality: A 30-year longitudinal study', *Journal of Research in Personality* 34, pp. 26–41.
- Rogers, C.: 1961, *On Becoming a Person* (Houghton Mifflin, Boston).
- Rosenberg, M.: 1965, *Society and the Adolescent Self-Image* (Princeton University Press, Princeton, NJ, US).
- Ross, M., A. Eyman and N. Kishchuk: 1986, Determinants of subjective well-being, in J.M. Olson, C.P. Herman and M.P. Zanna (eds.), *Relative Deprivation and Social Comparison: The Ontario Symposium* (vol. 4) (Erlbaum, Hillsdale, NJ), pp. 79–93.
- Russell, R.J.H. and P.A. Wells: 1994, 'Predictors of happiness in married couples', *Personality and Individual Differences* 17, pp. 313–321.
- Rusting, C.L.: 1998, 'Personality, mood, and cognitive processing of emotional information: Three conceptual frameworks', *Psychological Bulletin* 124, pp. 165–196.
- 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, pp. 1069–1081.
- Ryff, C.D. and C.L.M. Keyes: 1995, 'The structure of psychological well-being revisited', *Journal of Personality and Social Psychology* 69, pp. 719–727.
- Scheier, M.F. and C.S. Carver: 1985, 'Optimism, coping, and health: Assessment and implications of generalized outcome expectancies', *Health Personality* 4, pp. 219–247.
- Scheier, M.F., C.S. Carver and M.W. Bridges: 1994, 'Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A reevaluation of the Life Orientation Test', *Journal of Personality and Social Psychology* 67, pp. 1063–1078.
- Schimmack, U., S. Oishi, R.M. Furr and D.C. Funder: 2004, 'Personality and life satisfaction: A facet-level analysis', *Personality and Social Psychology Bulletin* 30, pp. 1062–1075.
- Schulz R.: 1985, 'Emotion and affect', in J.E. Birren and K.W. Schaie (eds.), *Handbook of the Psychology of Aging*, 2nd edn. (Van Nostrand Reinhold Co, Inc., New York).
- Schwarz, N. and G. Bohner: 1996, Feelings and their motivational implications: Moods and the action sequence, in P.M. Gollwitzer and J.A. Bargh (eds.), *The Psychology of Action: Linking Cognition and Motivation to Behavior* (Guilford Press, New York), pp. 119–145.
- Schwarz, N. and G.L. Clore: 1983, 'Mood, misattribution, and judgments of well-being: Informative and directive functions of affective states', *Journal of Personality and Social Psychology* 45, pp. 513–523.
- Sears, D.O.: 1986, 'College sophomores in the laboratory: Influences of a narrow data base on social psychology's view of human nature', *Journal of Personality and Social Psychology* 51, pp. 515–530.
- Seery, M.D., J. Blascovich, M. Weisbuch and S.B. Vick: 2004, 'The relationship between self-esteem level, self-esteem stability, and cardiovascular reactions to performance feedback', *Journal of Personality and Social Psychology* 87, pp. 133–145.
- Seidlitz, L. and E. Diener: 1993, 'Memory for positive versus negative life events: Theories for the differences between happy and unhappy persons', *Journal of Personality and Social Psychology* 64, pp. 654–663.

- Seligman, M.E.P.: 1991, *Learned Optimism* (A.A. Knopf, New York).
- Sheldon, K.M. and A.J. Elliot: 1999, 'Goal striving, need satisfaction, and longitudinal well-being: The self-concordance model', *Journal of Personality and Social Psychology* 76, pp. 482–497.
- Sheldon, K.M. and T. Kasser: 1995, 'Coherence and congruence: Two aspects of personality integration', *Journal of Personality and Social Psychology* 68, pp. 531–543.
- Sheldon, K.M. and T. Kasser: 2001, 'Getting older, getting better? Personal strivings and psychological maturity across the life span', *Developmental Psychology* 37, pp. 491–501.
- Sheldon, K.M., R.M. Ryan and H.T. Reis: 1996, 'What makes for a good day? Competence and autonomy in the day and in the person', *Personality and Social Psychology Bulletin* 22, pp. 1270–1279.
- Sherbourne, C.D.: 1992, Pain measures, in A.L. Stewart and J.E. Ware (eds.), *Measuring functioning and well-being* (Duke University Press, London), pp. 220–234.
- Sherbourne, C.D. and A.L. Stewart: 1991, 'The MOS social support survey', *Social Science and Medicine* 32, pp. 705–714.
- Sherbourne, C.D., H.M. Allen, C.J. Kamberg and K.B. Wells: 1992, Physical/psychophysiological symptoms measure, in A.L. Stewart and J.E. Ware (eds.), *Measuring Functioning and Well-Being* (Duke University Press, Durham, NC), pp. 260–272.
- Smith, T.W., M.K. Pope, F. Rhodewalt and J.L. Poulton: 1989, 'Optimism, neuroticism, coping, and symptom reports: An alternative interpretation of the Life Orientation Test', *Journal of Personality and Social Psychology* 56, pp. 640–648.
- Spencer, S.J., R.A. Josephs and C.M. Steele: 1993, Low self-esteem: The uphill struggle for self-integrity, in R.F. Baumeister (ed), *Self-Esteem: The Puzzle of Low Self-Regard* (Plenum Press, New York), pp. 21–36.
- Stewart, A.L. and C.J. Kamberg: 1992, Physical functioning measures, in A.L. Stewart and J.E. Ware (eds.), *Measuring Functioning and Well-Being* (Duke University Press, London), pp. 86–101.
- Stewart, A.L., R.D. Hays and J.E. Ware: 1992, Health perceptions, energy/fatigue, and health distress measure, in A.L. Stewart and J.E. Ware (eds.), *Measuring Functioning and Well-Being* (Duke University Press, Durham, NC), pp. 143–172.
- Stones, M.J. and A. Kozma: 1986, "'Happy are they who are happy...": A test between two causal models of relationships between happiness and its correlates', *Experimental Aging Research* 12, pp. 23–29.
- Suh, E., E. Diener and F. Fujita: 1996, 'Events and subjective well-being: Only recent events matter', *Journal of Personality and Social Psychology* 70, pp. 1091–1102.
- Taylor, S.E. and J.D. Brown: 1988, 'Illusion and well-being: A social psychological perspective on mental health', *Psychological Bulletin* 103, pp. 193–210.
- Tennen, H. and G. Afleck: 1993, The puzzles of self-esteem: A clinical perspective, in R.F. Baumeister (ed), *Self-Esteem: The Puzzle of Low Self-Regard* (Plenum Press, New York), pp. 241–262.
- Tkach, C. and S. Lyubomirsky: 2005, 'How do People Pursue Happiness?: Relating Personality, Happiness-Increasing strategies, and Well-Being', Manuscript submitted for publication.
- Trzesniewski, K.H., B.M. Donnellan and R.W. Robins: 2003, 'Stability of self-esteem across the life span', *Journal of Personality and Social Psychology* 84, pp. 205–220.

- Tuinen, M. and N.V. Ramanaiah: 1979, 'A multimethod analysis of selected self-esteem measures', *Journal of Research in Personality* 13, pp. 16–24.
- Veenhoven R., 1997, 'The study of life satisfaction', Unpublished manuscript, Erasmus University Rotterdam, Netherlands.
- Watson, D. and L.M. Walker: 1996, 'The long-term stability and predictive validity of trait measures of affect', *Journal of Personality and Social Psychology* 70, pp. 567–577.
- Weeks, D.G., J.L. Michela, L.A. Peplau and M.E. Bragg: 1980, 'Relation between loneliness and depression: A structural equation analysis', *Journal of Personality and Social Psychology* 39, pp. 1238–1244.
- Whitbourne S.K.: 1985, 'The psychological construction of the life span', in J.E. Birren and K.W. Schaie (eds.), *Handbook of the Psychology of Aging*, 2nd edn., *The Handbooks of Aging* (Van Nostrand Reinhold Co, Inc, New York), pp. 594–618.
- White, R.W.: 1959, 'Motivation reconsidered: The concept of competence', *Psychological Review* 66, pp. 297–335.
- Whitley, B.E.: 1983, 'Sex role orientation and self-esteem: A critical meta-analytic review', *Journal of Personality and Social Psychology* 44, pp. 765–778.
- Wilson, J.: 1980, 'Sociology of leisure', *Annual Review of Sociology* 6, pp. 21–40.
- Wilson, W.: 1967, 'Correlates of avowed happiness', *Psychological Bulletin* 67, pp. 294–306.
- Wood, J.V., S.A. Heimpel and J.L. Michela: 2003, 'Savoring versus dampening: Self-esteem differences in regulating positive affect', *Journal of Personality and Social Psychology* 85, pp. 566–580.
- Wylie, R.C.: 1979, *The Self Concept*, vol. 2 (University of Nebraska Press, Lincoln, NE).

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