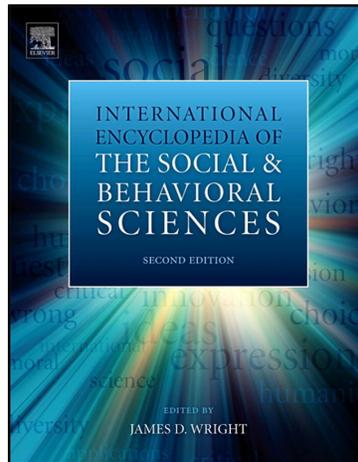


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Subjective Wellbeing, Psychology of

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Abstract

Although people have been intrigued by happiness for centuries, subjective well-being became a thriving topic of scientific inquiry only relatively recently, with the creation of valid and reliable well-being measures. Growing evidence suggests that happiness is associated with success in multiple domains, such as relationships, work, and health. However, objective life circumstances do not impact well-being as much as people believe, in part because of hedonic adaptation – one of the biggest obstacles in the pursuit of happiness. Fortunately, researchers have found that positive activities, like expressing gratitude or doing acts of kindness, can have a significant impact on well-being.

Historical Background

Although people have contemplated what makes life meaningful and worthwhile for millennia (Keyes, 2006), happiness did not become a subject of scientific inquiry until relatively recently. Prior to the 1970s, researchers focused on topics such as obedience, conformity, and aggression in an attempt to understand the devastation of World War II. As the world began to recover from the effects of wartime, psychological scientists became interested in monitoring and improving social change. This interest led to a newfound appreciation of the individual, as many believed that the key to understanding social change could be found in the study of the individual's attitudes, expectations, and values. The outcome was an increased focus on the importance of an individual's sense of meaning and views on life. Measures of quality of life were developed to monitor social change and influence social policy, and subjective well-being began to emerge as a field of scientific study.

Definition and Measurement

Today, researchers generally agree that subjective well-being is a broad construct that refers to evaluations of the quality of one's life and includes both an affective and a cognitive component (Diener et al., 1999). The affective component refers to the frequency of experienced emotions, such that individuals with high levels of subjective well-being report high levels of positive affect (i.e., many pleasant emotions) and low levels of negative affect (i.e., few unpleasant emotions). The cognitive component comprises overall life satisfaction, as well as a person's evaluations of multiple life domains, such as work, health, and relationships. Importantly, because respondents determine whether their own lives are worthwhile and meaningful, the concept of well-being is inherently subjective and democratic. Hence, researchers commonly use the term subjective well-being (SWB), as well as happiness, and these terms are used synonymously throughout this article.

Since the field's beginnings, researchers have relied almost exclusively on self-report measures of happiness. As such, multiple self-report scales of well-being are now widely used.

Investigators initially developed simple measures prompting participants to make general evaluations about their lives (Krueger and Schkade, 2008). Specifically, participants are asked a single general question about their overall happiness or satisfaction with life. Such global measures are still most popular, having been incorporated into large-scale surveys, such as the Gallup World Poll and World Values Survey. Indeed, global scales have been invaluable for gaining insight on well-being around the world and have allowed for comparisons in happiness and satisfaction in large representative samples across cultures and across decades (Helliwell et al., 2013).

Although single-item measures of well-being are simple and easy to administer, it is difficult to capture how happy a person is with a single question. To address this limitation, global, multiitem measures of well-being were created and validated. Today, a number of validated self-report measures of happiness, affect, and life satisfaction are in common usage, including the Satisfaction with Life Scale (Diener et al., 1985), Positive and Negative Affect Scale (Watson et al., 1988), and Subjective Happiness Scale (Lyubomirsky and Lepper, 1999).

Other measures of well-being are intended to capture its affective component. For example, with the Experience Sampling Method, participants are prompted to report their current emotions and thoughts at random intervals throughout the day (see Csikszentmihalyi and Larson, 1987). This method, however, can be difficult to administer because it requires a large time commitment from participants. The Day Reconstruction Method (DRM) is another popular approach to measuring well-being. Participants are asked to consider the preceding day, break it up by time into different episodes, describe each episode, and report their well-being during that part of the day (Kahneman et al., 2004). Given that people in a happy mood are relatively more likely to recall positive information (Schwarz and Clore, 2003), with their current mood coloring their interpretations of the past, memory biases may be minimized with the DRM because participants are pressed to recall what they were feeling during a specific time (e.g., while commuting to work) after describing the episodes of the previous day.

Self-report measures of well-being have their limitations. Fortunately, researchers have found that self-report ratings of

happiness are reliable over time (Diener, 1994), correlate with theoretically relevant constructs (Larsen et al., 1985), and converge with non-self-report measures, such as reports of family and friends (Sandvik et al., 1993). With the creation of valid and reliable measures of well-being, research on happiness has grown rapidly and developed into a thriving new field. The ability to assess well-being has opened the door for researchers to investigate numerous previously elusive questions, such as what are the determinants and correlates of happiness, what are its benefits or costs, and, perhaps most important, whether and how happiness can be increased.

Benefits of Subjective Well-Being

Happiness involves much more than simply an emotion that feels good. The experience of positive affect allows happy people to build social, intellectual, physical, and psychological resources (Fredrickson, 2001). It may also signal to the individual that everything is going well, thus allowing him or her to be more creative, productive, approach oriented, and social. Accordingly, happiness leads to a variety of beneficial outcomes via an increase in behaviors that offer individuals the opportunity to achieve success in multiple domains (Lyubomirsky et al., 2005a). For example, happy individuals have a relatively greater tendency to seek out relationships, exhibit helping behavior, be productive at work, and cope successfully with life changes. As such, happiness has been found to benefit one's interpersonal relationships, work life, and health.

Social Relationships

Happy individuals tend to have successful social relationships. For example, happier people are relatively more likely to seek out both formal and informal social activities (Okun et al., 1984), and, thus, engage in frequent social interactions. This high level of social engagement may allow them to build stronger, deeper bonds with others. It is therefore not surprising that happy people tend to report having more friends and social support than their less happy peers (Baldassare et al., 1984; Mishra, 1992). Happier individuals are also relatively more likely to get married and to report higher marital satisfaction (Harker and Keltner, 2001; Headey and Veenhoven, 1989; Marks and Fleming, 1999). In turn, having a solid social network may make people relatively better equipped to handle negative life events. Belonging to a social group promotes better mental and physical health, granting people the resources to manage life changes and cope with illnesses (Jetten et al., 2012).

Work

A large portion of an individual's time and energy is spent at work or pursuing work-related activities. Indeed, work is a vital source of income and self-esteem for many people. Importantly, happier individuals are relatively more likely to have successful work lives and tend to be more satisfied with their jobs. For example, happy people are more likely to obtain a job, have high job satisfaction, and feel financially

independent at a young age than their less happy counterparts (Roberts et al., 2003). Furthermore, supervisors tend to rate happy workers relatively higher on productivity, work quality, creativity, and dependability (Cropanzano and Wright, 1999). Happiness has also been found to predict increases in income and lower rates of unemployment over time (Graham et al., 2004; Marks and Fleming, 1999).

Physical Health

Subjective well-being is associated with a number of positive health outcomes. For example, happy people report having better health, missing less work due to illness, and making fewer visits to the hospital than less happy people (Graham et al., 2004). One possible reason for superior physical health may be the association between happiness and strong immune functioning. For example, one study found that healthy individuals with a positive emotional style were relatively less likely to get a cold after exposure to a rhinovirus (Cohen et al., 2003). Notably, happiness is even related to longevity (Chida and Steptoe, 2008). Happy people are relatively less likely to experience be diagnosed with cardiovascular disease (Davidson et al., 2010) or suffer fatal accidents (Kirkcaldy and Furnham, 2000), and they are more likely to survive illnesses like HIV (Ickovics et al., 2006).

The Role of Genetics in Well-Being

Researchers have found that well-being is moderately stable (Headey and Wearing, 1989; Lykken and Tellegen, 1996), such that, for example, happier individuals tend to remain consistently happy over time. One of the reasons for this stability is that people show shifts in well-being after positive and negative events, but, as described in greater detail below, gradually return to their previous happiness levels over time. A growing literature has accumulated evidence that this baseline level of happiness is in part influenced by genetics (Bartels and Boomsma, 2009; Lykken and Tellegen, 1996; Rietveld et al., 2013). The genetic component of well-being is investigated by comparing the correlations between the reported SWB of monozygotic (identical) twins to that of dizygotic (fraternal) twins. Identical twins have been found to report more similar levels of happiness than fraternal twins, even if they were raised in different households (Bartels and Boomsma, 2009; Lykken and Tellegen, 1996). For example, one study found that up to 80% of the stable component of happiness is heritable, with nonshared environmental factors accounting for the remaining variance (Lykken and Tellegen, 1996). Although studies have found varying heritability coefficients (ranging from 0.25 to 0.55), the overwhelming conclusion of this research is that happiness has a large genetic component.

Related work suggests that personality may underlie the genetic influence on happiness. Subjective well-being is highly positively correlated with extraversion and negatively correlated with neuroticism (Costa and McCrae, 1980; DeNeve, 1999; Furnham and Brewin, 1990; Hayes and Joseph, 2003), with mixed evidence on its relationship with other personality factors, such as agreeableness and conscientiousness. Because, much like SWB, personality has a genetic component,

a relationship between the genetic influence on personality and the genetics of happiness may exist. One study found evidence to suggest that the genetic influence on extraversion, neuroticism, and conscientiousness entirely explains the heritability of SWB (Weiss et al., 2008).

Correlates of Subjective Well-Being

The nonheritable correlates of subjective well-being can be broadly divided into two categories: objective environmental circumstances (such as income or marital status) and intentional cognitions and behaviors (such as prosocial behavior; Lyubomirsky, 2001). Laypeople are often surprised to learn that objective circumstances or demographic variables are weaker predictors of well-being than volitional behaviors. For example, men and women in nations across the world report being happy and satisfied with their lives with equal frequency (Inglehart, 1990), although the two sexes tend to be unhappy in different ways (Myers, 2000). Furthermore, the well-being gains or losses from major life events, such as winning the lottery or sustaining a debilitating injury, tend to be short-lived (Clark et al., 2008). Nevertheless, despite the finding that life circumstances account for only a small portion of individual differences in happiness (Diener et al., 1999), research on the objective correlates of happiness has revealed a number of important links between subjective well-being and such factors as wealth, spirituality, and social relationships.

As it is with most life circumstances, the relationship between wealth and well-being is nuanced and often unexpectedly small. Contrary to popular perceptions that more money is the key to greater happiness, more money appears to be more important for avoiding unhappiness: At income levels above those needed to fulfill basic sustenance needs, increasing income is not strongly associated with more positive feelings (Diener and Biswas-Diener, 2002; Myers, 2000). At the global level, income is associated with well-being far more strongly between nations than within them: People in wealthier nations tend to be happier, on average, than people in less developed countries, but the wealthiest people in a nation are not necessarily happier than their poorer compatriots (see Diener and Biswas-Diener, 2002). Furthermore, wealth is more strongly associated with certain kinds of well-being than with others: Both personal and national income are highly correlated with global life evaluations, but only modestly so with positive feelings (Kahneman and Deaton, 2010). Challenging these findings, however, recent research has found that increases in household income, but not national income (i.e., gross domestic product), are associated with sustained increases in subjective well-being (Diener et al., 2013).

Despite the weak correlation between general life circumstances and well-being, two objective psychosocial variables have consistently been found to be important to happiness. First, as mentioned earlier, people with strong, close social relationships tend to have high levels of happiness and psychological health (e.g., resilience to stress) (Myers, 2000). For example, married individuals in 16 nations reported higher levels of well-being than nonmarried individuals (Stack and Eshleman, 1998), although the happiness boost from getting

married does not often persist past the first few years of marriage (Lucas et al., 2003; Lucas and Clark, 2006). Second, when controlling for other life circumstances, religious people tend to be slightly happier than nonreligious people, a relationship that may be due to greater social support and feelings of purpose from religious activity (Diener et al., 2011; Ellison and Levin, 1998).

Hedonic Adaptation as a Barrier to Well-Being

The relatively small impact of life circumstances on well-being may be due to the phenomenon of hedonic adaptation. People experience boosts in well-being following positive life events and declines after negative ones, but, interestingly, these shifts in well-being do not last. A growing literature has shown that individuals become accustomed to changes in their lives via hedonic adaptation (Frederick and Loewenstein, 1999). How rapid and how complete this adaptation is differs for negative versus positive experiences. To begin, longitudinal panel studies suggest that individuals have a remarkable capacity to adapt to traumatic life events, such as disability, widowhood, and unemployment (Clark and Georgellis, 2012; Lucas, 2005, 2007), although the amount of adaptation depends on the individual and the type of event. Some studies have found that individuals only partially adapt to events such as divorce (Lucas, 2005) and widowhood (Lucas et al., 2003), whereas others have found evidence for complete adaptation following these adverse negative events (Clark et al., 2008).

By contrast, the evidence is fairly consistent that people, on average, adapt completely to major positive life changes such as getting married, acquiring a new job, and even winning the lottery (Boswell et al., 2005; Brickman et al., 1978; Clark and Georgellis, 2012). This tendency to adapt to positive events explains in part why changing one's circumstances (e.g., receiving a raise) contributes little to a person's well-being. Although adaptation to many circumstances may be evolutionarily adaptive, becoming accustomed to positive changes in one's life is an obstacle in the pursuit of happiness (Lyubomirsky, 2011).

Increasing Subjective Well-Being

The fact that happiness is heritable and impacted only minimally by life circumstances does not mean that it cannot be intentionally and effortfully increased (Lykken, 1999; Lyubomirsky et al., 2005b). By observing the behaviors that happy people naturally engage in, researchers have found that happy individuals are not passive actors in their lives. Relative to their less happy peers, they seek out rewarding situations (Luhmann et al., 2013), interpret ambiguous events positively, and perceive the silver lining and reappraise negative situations (Lyubomirsky, 2001). This research suggests that happiness is not necessarily static, and that the activities individuals engage in are likely to influence their well-being. If naturally happy people perform particular behaviors, then deliberately choosing to perform those behaviors may increase well-being in less happy people. As such,

observations of happy people have steered researchers to specific ways to increase happiness and informed the designs of future interventions.

Interventions

Happiness is highly valued in cultures around the world (Diener, 2000) and is a subject of great interest to the general public. Fortunately, in recent years, growing work has revealed multiple ways that ordinary people can boost happiness in their daily lives. Specifically, researchers have designed positive activity interventions, which prompt participants to engage in brief, simple, self-administered activities, as an approach to increase well-being and uncover the mechanisms underlying their success (e.g., motivation, effort, and dosage). Many of these activities, such as doing acts of kindness, predicting a positive future, and expressing gratitude, are modeled after the behaviors that naturally happy people do. Notably, a meta-analysis of 51 randomized controlled experimental interventions has found support for the efficacy of positive activities both to increase well-being and to decrease depressive symptoms (Sin and Lyubomirsky, 2009). These efficacious intentional activities include writing letters of gratitude (Boehm et al., 2011; Lyubomirsky et al., 2011; Seligman et al., 2005), counting one's blessings (Emmons and McCullough, 2003; Froh et al., 2008), performing acts of kindness (Dunn et al., 2008; Layous et al., 2012; Sheldon et al., 2012), and practicing optimism (Boehm et al., 2011; Lyubomirsky et al., 2011).

Expressing Gratitude

Gratitude is the felt sense of thankfulness and appreciation toward an individual who has done something above and beyond what is expected or required (Emmons, 2008). Researchers typically induce gratitude in participants by prompting them to count their blessings (i.e., list things for which they are grateful) or write gratitude letters to important people in their lives. One random controlled intervention found that participants who counted their blessings felt better about their lives as a whole, were more optimistic about the coming week, complained less, and exercised more than did controls (Emmons and McCullough, 2003). Expressing gratitude was also found to reduce negative affect and increase positive affect. Another study randomly assigned participants over the course of 6 weeks either to write letters of gratitude to friends or family members who had done something for which they are grateful or to write about neutral weekly experiences (Boehm et al., 2011). Participants who expressed gratitude experienced relatively greater increases in satisfaction with life. The expression of gratitude may allow people to savor the positive experiences and situations in their lives and thus extract the maximum amount of satisfaction from them. Furthermore, gratitude may lead an individual to strengthen social bonds and friendships with others (Algoe et al., 2010) and to be inspired to pay back their benefactors by being a better person.

Performing Acts of Kindness

Naturally happy people report performing more altruistic acts, spending more time helping others, and helping their colleagues at work (Lyubomirsky et al., 2005a). Kind acts are often described as behaviors that are not expected or required

and involve some sacrifice in effort, time, and energy (Sheldon et al., 2012). A study by Dunn et al. (2008) found that participants randomly assigned to perform a kindness for another person (i.e., spend money on him or her) reported greater happiness than those assigned to do a kind act (i.e., spend money) for themselves. One possible account of this finding is that kindness tends to increase one's evaluation of oneself as a good person (Williamson and Clark, 1989). For example, after performing acts of kindness for another person, an individual may begin to view himself or herself as a compassionate, helpful person and thus increase in feelings of confidence and efficacy. Furthermore, kind acts may foster social rewards. For example, in a 4-week intervention, 9- to 11-year-old children were randomly assigned to perform three acts of kindness or to visit three places (the comparison group; Layous et al., 2012). Participants also listed classmates with whom they would like to spend time. Children who performed three acts of kindness were significantly more likely to be socially accepted by their peers. This finding suggests that people who perform acts of kindness may not only become happier but better liked by others.

Visualizing Best Possible Selves

Happier individuals are more optimistic and view their lives in more positive ways (DeNeve, 1999; Lyubomirsky, 2001). Furthermore, research has found that individuals prompted to practice optimism show increases in well-being. In one study, participants were instructed to write about their best possible selves – an activity that compels optimism about the future – and complete measures of SWB every day for 4 days (King, 2001). Cultivating optimism led to an increase in happiness that persisted at least until the 3-week follow-up. In another study, participants wrote narratives about their best possible future self with regards to family, friends, hobbies, career, romantic partner, and health – a different domain each week (Boehm et al., 2011). Those prompted to express optimism experienced relatively higher satisfaction in life across time. This activity may lead to greater happiness because it allows people to learn about themselves, restructure their priorities, and gain insight into their motives and desires.

Current and Future Directions

Over the past several decades, researchers have developed and tested a variety of positive activities that happiness seekers can practice. However, much of the research conducted thus far has relied on self-report measures of well-being. This approach can be problematic because self-report measures are subject to social desirability and memory biases (Diener et al., 2009). To this end, investigators are beginning to use more objective and unobtrusive measures of well-being. For example, Chancellor et al. (in press) conducted a study using technology that assessed participants' behavioral rhythm throughout the day over 6 weeks. In this study, behavioral data were collected using sociometric badges that monitor how an individual's body oscillates in three-dimensional space. These badges are sensitive enough to differentiate between a range of movements, including sitting, walking, and talking. The researchers found that participants who wrote down "three things that went well at

work" each week came to the office with more energy and engaged in less office chitchat than those who wrote down three tasks that they accomplished (Chancellor et al., in press).

The rapid growth in technology in recent years has revealed a largely untapped potential for new methods of measuring well-being. For example, the popularity of Facebook™ and Twitter™ gives researchers the opportunity to collect massive data sets from large diverse samples by coding updates for such variables as positive language, emoticons, and humor (see Young et al., 2009; Hughes et al., 2012). New technological advances have also led to innovative devices, such as the Electronic Activated Recorder, that allow researchers to obtain snippets of conversations throughout the day. These recordings can be coded for humor, laughter, or positive words to achieve a clearer and more precise portrait of naturalistic fluctuations in well-being – and its antecedents, correlates, and consequences – over the course of the day (Mehl et al., 2010).

Although subjective well-being is highly valued around the world, a great deal of cross-cultural variation has been observed (Diener, 2000). Some research suggests that carrying out specific positive activities may not be as accepted or endorsed in non-Western cultures. For example, one study found evidence to suggest that Asian-Americans benefit less from practicing gratitude and optimism (Boehm et al., 2011). In another set of studies, U.S. participants, but not S. Korean ones, reported increased well-being after writing gratitude letters (Layout et al., 2013). One possibility is that expressions of gratitude may elicit feelings of guilt or indebtedness in members of Eastern nations. Cultures vary on numerous dimensions, such as individualism/collectivism, power distance, hierarchy, and strength of the economy. Future research could inform positive interventions by considering how such cultural dimensions predict the extent to which individuals might benefit – or even be harmed – by positive activity interventions.

The scientific study of happiness has come a long way since Aristotle proclaimed that it is the meaning and the purpose of life, the whole aim and end of human existence. In the past several decades, researchers have developed valid and reliable measures to assess well-being, explored its correlates, determinants, and consequences, and revealed the ways and mechanisms by which it can be increased. Policy makers around the world have become concerned with the well-being of their citizens, and companies have become invested in implementing programs to boost the morale and well-being of their employees. As interest in happiness continues to spread, research on well-being will begin to inform social policies in countries around the world. Therefore, although research on well-being has a short past, it has a lengthy future.

See also: Happiness and Work; Social Psychological Theory, History of; Subjective Wellbeing and Culture.

Bibliography

- Algoe, S.B., Gable, S.L., Maisel, N.C., 2010. It's the little things: everyday gratitude as a booster shot for romantic relationships. *Personal Relationships* 17, 217–233.
- Baldassare, M., Rosenfield, S., Rook, K., 1984. The types of social relations predicting elderly well-being. *Research on Aging* 6, 549–559.
- Bartels, M., Boomsma, D.I., 2009. Born to be happy? The etiology of subjective well-being. *Behavior Genetics* 39, 605–615.
- Boehm, J.K., Lyubomirsky, S., Sheldon, K.M., 2011. A longitudinal experimental study comparing the effectiveness of happiness-enhancing strategies in Anglo Americans and Asian Americans. *Cognition & Emotion* 25, 1263–1272.
- Boswell, W.R., Boudreau, J.W., Tichy, J., 2005. The relationship between employee job change and job satisfaction: the honeymoon-hangover effect. *Journal of Applied Psychology* 90, 882–892.
- Brickman, P., Coates, D., Janoff-Bulman, R., 1978. Lottery winners and accident victims: is happiness relative? *Journal of Personality and Social Psychology* 36, 917–927.
- Chancellor, J., Layout, K., Lyubomirsky, S. Recalling positive events at work makes employees feel happier, move more, but interact less: a 6-week randomized controlled intervention at a Japanese workplace. *Journal of Happiness Studies*, in press.
- Chida, Y., Steptoe, A., 2008. Positive psychological well-being and mortality: a quantitative review of prospective observational studies. *Psychosomatic Medicine* 70 (7), 741–756.
- Clark, A.E., Diener, E., Georgellis, Y., Lucas, R.E., 2008. Lags and leads in life satisfaction: a test of the baseline hypothesis. *The Economic Journal* 118, F222–F243.
- Clark, A.E., Georgellis, Y., 2012. Back to baseline in Britain: adaptation in the British household panel survey. *Economica* 80, 496–512.
- Cohen, S., Doyle, W.J., Turner, R.B., Alper, C.M., Skoner, D.P., 2003. Emotional style and susceptibility to the common cold. *Psychosomatic Medicine* 65, 652–657.
- Costa, P.T., McCrae, R.R., 1980. Influence of extraversion and neuroticism on subjective well-being: happy and unhappy people. *Journal of Personality and Social Psychology* 38, 668–678.
- Cropanzano, R., Wright, T.A., 1999. A 5-year study of change in the relationship between well-being and job performance. *Consulting Psychology Journal: Practice and Research* 51, 252–265.
- Csikszentmihalyi, M., Larson, R., 1987. Validity and reliability of the experience-sampling method. *The Journal of Nervous and Mental Disease* 175, 526–536.
- Davidson, K.W., Mostofsky, E., Whang, W., 2010. Don't worry, be happy: positive affect and reduced 10-year incident coronary heart disease: the Canadian Nova Scotia Health Survey. *European Heart Journal*, ehp603.
- Diener, E., 1994. Assessing subjective well-being: progress and opportunities. *Social Indicators Research* 31, 103–157.
- Diener, E., 2000. Subjective well-being: the science of happiness and a proposal for a national index. *American Psychologist* 55, 34–43.
- Diener, E., Biswas-Diener, R., 2002. Will money increase subjective well-being? *Social Indicators Research* 57, 119–169.
- Diener, E.D., Emmons, R.A., Larsen, R.J., Griffin, S., 1985. The satisfaction with life scale. *Journal of personality assessment* 49, 71–75.
- Diener, E., Oishi, S., Lucas, R.E., 2009. Subjective well-being: the science of happiness and life satisfaction. In: Snyder, C.R., Lopez, S.J. (Eds.), *Oxford Handbook of Positive Psychology*. Oxford University Press, Oxford, pp. 187–194.
- Diener, E., Suh, E.M., Lucas, R.E., Smith, H.L., 1999. Subjective well-being: three decades of progress. *Psychological Bulletin* 125, 276–302.
- Diener, E., Tay, L., Myers, D.G., 2011. The religion paradox: if religion makes people happy, why are so many dropping out? *Journal of Personality and Social Psychology* 101, 1278–1290.
- Diener, E., Tay, L., Oishi, S., 2013. Rising income and the subjective well-being of nations. *Journal of Personality and Social Psychology* 104, 267–276.
- DeNeve, K.M., 1999. Happy as an extraverted clam? The role of personality for subjective well-being. *Current Directions in Psychological Science* 8, 141–144.
- Dunn, E.W., Aknin, L.B., Norton, M.I., 2008. Spending money on others promotes happiness. *Science* 319 (5870), 1687–1688.
- Ellison, C.G., Levin, J.S., 1998. The religion-health connection: evidence, theory, and future directions. *Health Education & Behavior* 25, 700–720.
- Emmons, R.A., 2008. Gratitude, subjective well-being, and the brain. In: Eid, M., Larsen, R.J. (Eds.), *The Science of Subjective Well-being*. Guilford Press, New York, pp. 469–489.
- Emmons, R.A., McCullough, M.E., 2003. Counting blessings versus burdens: an experimental investigation of gratitude and subjective well-being in daily life. *Journal of Personality and Social Psychology* 84, 377–389.
- Fredrickson, B.L., 2001. The role of positive emotions in positive psychology: the broaden-and-build theory of positive emotions. *American psychologist* 56, 218–226.
- Frederick, S., Loewenstein, G., 1999. Hedonic adaptation. In: Kahneman, D., Diener, E., Schwarz, N. (Eds.), *Well-being: The Foundations of Hedonic Psychology*. Russell Sage Foundation, New York, pp. 302–329.

- Froh, J.J., Sefick, W.J., Emmons, R.A., 2008. Counting blessings in early adolescents: an experimental study of gratitude and subjective well-being. *Journal of School Psychology* 46, 213–233.
- Furnham, A., Brewin, C.R., 1990. Personality and happiness. *Personality and Individual Differences* 11, 1093–1096.
- Graham, C., Eggers, A., Sukhtankar, S., 2004. Does happiness pay? An exploration based on panel data from Russia. *Journal of Economic Behavior & Organization* 55, 319–342.
- Harker, L., Keltner, D., 2001. Expressions of positive emotion in women's college yearbook pictures and their relationship to personality and life outcomes across adulthood. *Journal of Personality and Social Psychology* 80, 112–124.
- Hayes, N., Joseph, S., 2003. Big 5 correlates of three measures of subjective well-being. *Personality and Individual Differences* 34, 723–727.
- Headley, B., Veenhoven, R., 1989. Does happiness induce a rosy outlook? In: Veenhoven, R. (Ed.), *How Harmful Is Happiness? Consequences of Enjoying Life or Not*. Universitaire Pers Rotterdam, Rotterdam, pp. 106–127.
- Headley, B., Wearing, A., 1989. Personality, life events, and subjective well-being: toward a dynamic equilibrium model. *Journal of Personality and Social Psychology* 57, 731.
- Helliwell, J.F., Layard, R., Sachs, J.D. (Eds.), 2013. *World Happiness Report 2013*. http://unsdsn.org/wp-content/uploads/2014/02/WorldHappinessReport2013_online.pdf.
- Hughes, D.J., Rowe, M., Batey, M., Lee, A., 2012. A tale of two sites: Twitter vs. Facebook and the personality predictors of social media usage. *Computers in Human Behavior* 28 (2), 561–569.
- Ickovics, J.R., Milan, S., Boland, R., Schoenbaum, E., Schuman, P., Vlahov, D., HIV Epidemiology Research Study (HERS) Group, 2006. Psychological resources protect health: 5-year survival and immune function among HIV-infected women from four US cities. *AIDS* 20, 1851–1860.
- Inglehart, R., 1990. *Cultural Shift in Advanced Industrial Society*. Princeton University Press, Princeton.
- Jetten, J., Haslam, C., Haslam, A.S., Alexander, S.H. (Eds.), 2012. *The Social Cure: Identity, Health and Well-being*. Psychology Press, Hove, England.
- Kahneman, D., Deaton, A., 2010. High income improves evaluation of life but not emotional well-being. *Proceedings of the National Academy of Sciences of the United States of America* 107, 16489–16493.
- Kahneman, D., Krueger, A.B., Schkade, D.A., Schwarz, N., Stone, A.A., 2004. A survey method for characterizing daily life experience: the day reconstruction method. *Science* 306, 1776–1780.
- Keyes, C.L., 2006. Subjective well-being in mental health and human development research worldwide: an introduction. *Social Indicators Research* 77 (1), 1–10.
- King, L.A., 2001. The health benefits of writing about life goals. *Personality and Social Psychology Bulletin* 27, 798–807.
- Kirkcaldy, B., Furnham, A., 2000. Positive affectivity, psychological well-being, accident-and traffic-deaths and suicide: an international comparison. *Studia Psychologica* 42, 97–104.
- Krueger, A.B., Schkade, D.A., 2008. The reliability of subjective well-being measures. *Journal of Public Economics* 92, 1833–1845.
- Larsen, R.J., Diener, E.D., Emmons, R.A., 1985. An evaluation of subjective well-being measures. *Social Indicators Research* 17, 1–17.
- Layouts, K., Lee, H., Choi, I., Lyubomirsky, S., 2013. Culture matters when designing a successful happiness-increasing activity: a comparison of the United States and South Korea. *Journal of Cross-cultural Psychology* 44, 1294–1303.
- Layouts, K., Nelson, S.K., Oberle, E., Schonert-Reichl, K.A., Lyubomirsky, S., 2012. Kindness counts: prompting prosocial behavior in preadolescents boosts peer acceptance and well-being. *PLOS One* 7, e51380.
- Lucas, R.E., 2005. Time does not heal all wounds: a longitudinal study of reaction and adaptation to divorce. *Psychological Science* 16, 945–950.
- Lucas, R.E., 2007. Long-term disability is associated with lasting changes in subjective well-being: evidence from two nationally representative longitudinal studies. *Journal of Personality and Social Psychology* 92, 717–730.
- Lucas, R.E., Clark, A.E., 2006. Do people really adapt to marriage? *Journal of Happiness Studies* 7, 405–426.
- Lucas, R.E., Clark, A.E., Georgellis, Y., Diener, E., 2003. Reexamining adaptation and the set point model of happiness: reactions to changes in marital status. *Journal of Personality and Social Psychology* 84, 527–539.
- Luhmann, M., Lucas, R.E., Eid, M., Diener, E., 2013. The prospective effect of life satisfaction on life events. *Social Psychological and Personality Science* 4, 39–45.
- Lykken, D., 1999. *Happiness: What Studies on Twins Show Us about Nature, Nurture, and the Happiness Set-Point*. Golden Books, New York.
- Lykken, D., Tellegen, A., 1996. Happiness is a stochastic phenomenon. *Psychological Science* 7, 186–189.
- Lyubomirsky, S., 2001. Why are some people happier than others? The role of cognitive and motivational processes in well-being. *American Psychologist* 56, 239–249.
- Lyubomirsky, S., 2011. Hedonic adaptation to positive and negative experiences. In: Folkman (Ed.), *Oxford Handbook of Stress, Health, and Coping*. Oxford University Press, New York, pp. 200–224.
- Lyubomirsky, S., Dickerhoof, R., Boehm, J.K., Sheldon, K.M., 2011. Becoming happier takes both a will and a proper way: an experimental longitudinal intervention to boost well-being. *Emotion* 11, 391–402.
- Lyubomirsky, S., King, L., Diener, E., 2005a. The benefits of frequent positive affect: does happiness lead to success? *Psychological Bulletin* 131, 803–855.
- Lyubomirsky, S., Sheldon, K.M., Schkade, D., 2005b. Pursuing happiness: the architecture of sustainable change. *Review of General Psychology* 9, 111–131.
- Lyubomirsky, S., Lepper, H.S., 1999. A measure of subjective happiness: preliminary reliability and construct validation. *Social indicators research* 46, 137–155.
- Marks, G.N., Fleming, N., 1999. Influences and consequences of well-being among Australian young people: 1980–1995. *Social Indicators Research* 46, 301–323.
- Mehl, M.R., Vazire, S., Holleran, S.E., Clark, C.S., 2010. Eavesdropping on happiness: well-being is related to having less small talk and more substantive conversations. *Psychological Science* 21, 539–541.
- Mishra, S., 1992. Leisure activities and life satisfaction in old age: a case study of retired government employees living in urban areas. *Activities, Adaptation & Aging* 16 (4), 7–26.
- Myers, D.G., 2000. The funds, friends, and faith of happy people. *American Psychologist* 55, 56–67.
- Okun, M.A., Stock, W.A., Haring, M.J., Witter, R.A., 1984. The social activity/subjective well-being relation: a quantitative synthesis. *Research on Aging* 6, 45–65.
- Rietveld, C.A., Cesarini, D., Benjamin, D.J., Koellinger, P.D., De Neve, J.E., Tiemeier, H., Johannesson, M., Magnusson, P.K.E., Pedersen, N.L., Krueger, R.F., Bartels, M., 2013. Molecular genetics and subjective well-being. *Proceedings of the National Academy of Sciences of the United States of America* 110, 9692–9697.
- Roberts, B.W., Caspi, A., Moffitt, T.E., 2003. Work experiences and personality development in young adulthood. *Journal of Personality and Social Psychology* 84, 582–593.
- Sandvik, E., Diener, E., Seiditz, L., 1993. Subjective well-being: the convergence and stability of self-report and non-self-report measures. *Journal of Personality* 61, 317–342.
- Schwarz, N., Clore, G.L., 2003. Mood as information: 20 years later. *Psychological Inquiry* 14, 296–303.
- Seligman, M.E., Steen, T.A., Park, N., Peterson, C., 2005. Positive psychology progress: empirical validation of interventions. *American Psychologist* 60, 410–421.
- Sheldon, K.M., Boehm, J.K., Lyubomirsky, S., 2012. Variety is the spice of happiness: the hedonic adaptation prevention (HAP) model. In: Boniwell, I., David, S. (Eds.), *Oxford Handbook of Happiness*. Oxford University Press, Oxford, pp. 901–914.
- Sin, N.L., Lyubomirsky, S., 2009. Enhancing well-being and alleviating depressive symptoms with positive psychology interventions: a practice-friendly meta-analysis. *Journal of Clinical Psychology* 65, 467–487.
- Stack, S., Eshleman, J.R., 1998. Marital status and happiness: a 17-nation study. *Journal of Marriage and Family* 60, 527–536.
- Watson, D., Clark, L.A., Tellegen, A., 1988. Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of personality and social psychology* 54, 1063–1070.
- Weiss, A., Bates, T.C., Luciano, M., 2008. Happiness is a personal(ity) thing: the genetics of personality and well-being in a representative sample. *Psychological Science* 19, 205–210.
- Williamson, G.M., Clark, M.S., 1989. Providing help and desired relationship type as determinants of changes in moods and self-evaluations. *Journal of Personality and Social Psychology* 56, 722–734.
- Young, S., Dutta, D., Dommety, G., 2009. Extrapolating psychological insights from Facebook profiles: a study of religion and relationship status. *CyberPsychology & Behavior* 12 (3), 347–350.