

# **Chapter 6: A Scientific Review of the Remarkable Benefits of Happiness for Successful and Healthy Living**

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## **Introduction**

Subjective wellbeing, often called “happiness” in layperson terminology, refers to peoples’ sense of wellness in their lives – in both thoughts and feelings (Diener, 1984). Subjective well-being includes satisfaction with one’s life, marriage, job, and other important domains of life such as health, as well as positive feelings and experiences such as pleasure, enjoyment, contentment, and love. High subjective well-being also includes low levels of fear, anger, and depression. Thus, a person high in well-being experiences satisfaction with their lives, feels pleasant most of the time, and only experiences occasional negative feelings. In sum, the portrait of a happy person is someone who thinks his or her life is going well and experiences feelings that are congruent with this evaluation.

Over the past several decades the science of subjective well-being, or happiness, has been developed and the findings help us understand many of the factors that lead to this positive state. Importantly, we discovered that happiness is more than a measure of individual welfare. It has a generative capability that brings about a host of beneficial effects. When people are happy they are more likely to be productive, creative, helpful, and have good health. Happiness does not merely feel good; it benefits both the person and the society. This discovery makes it imperative that societies monitor happiness, and consider happiness scores when deciding on new policies.

For many years scholars equated happiness with hedonism – where the experience of pleasure is an end in itself. Happiness was thought to be a desirable thing because it felt pleasurable. Research now shows that high levels of subjective well-being go beyond hedonism. This is because the experience of happiness accompanies the fulfillment of needs that are congruent with people’s values and goals. For instance, having basic necessities and a sense of freedom are associated with greater happiness (Inglehart et al., 2008), as are environmental factors such as clean air (Luechinger, 2009). Therefore happiness can index valued societal conditions. More importantly, happiness functions as a psychological and societal resource that is beneficial for achieving a wide variety of desirable outcomes, helping citizens to be better friends, neighbors,

employees, and citizens. In light of this, happiness is not synonymous with selfish hedonism, which can work against other values such as good citizenship and altruism. Instead, it is a characteristic that helps people achieve their values. Religion, self-help books, and accumulated wisdom point to the belief that the practice of happiness brings about benefits. Science has now analyzed the specific ways in which happiness generates tangible benefits. The experience of well-being encourages individuals to pursue goals that are resource-building to meet future challenges. In line with this, a sense of wellness helps individuals engage in new goals that promote gains rather than goals that only emphasize preventing losses. At the physiological level negative emotions have been found to hurt immune, cardiovascular, and endocrine functioning. In contrast, positive emotions improve them.

Because high subjective wellbeing is adaptive for both individuals and societies, it is not surprising that most people across the world have a positivity offset – that is, they experience mild levels of happiness above neutral most of the time (Diener and Diener, 1996; Diener, Oishi and Suh, 2012). Despite this inherent “positivity offset” in humans, the tendency to feel mildly positive in both neutral and positive conditions, circumstances in societies can make a large difference to levels of subjective well-being. Some societies produce much higher subjective well-being than others, and thus policy makers and other leaders can play a large role in the happiness of citizens.

In the following sections we review how happiness benefits major life domains.

### **Subjective well-being aids health and longevity**

There are many factors that influence health, such as having strong social support, and practicing good health behaviours such as exercising and not smoking. Although being happy is only one of those factors, it is an important one. This is because higher levels of subjective well-being can directly and indirectly influence health. Many studies demonstrate that happy people experience better health (see reviews by Chida and Steptoe, 2008; Cohen and Pressman, 2006; Diener and Chan, 2011; Howell, Kern and Lyubomirsky, 2007; Lyubomirsky, King and Diener, 2005; Pressman and Cohen, 2005). How does this occur?

Happiness and unhappiness have been directly associated with physiological processes underlying health and disease. For example, Kubzansky and her colleagues (Appleton et al., 2011; Slopen et al., 2012) find that adversity and stress in childhood predict elevated markers of inflammation a few years later. Chronic inflammation that occurs over years can harm the cardiovascular system. Cohen et al. (2003) found that positive emotions were associated with stronger immune system responses to infection. Bhattacharyya et al. (2008)

found that positive feelings were associated with healthier levels of heart rate variability. Negative emotions harm cardiovascular, immune, and endocrine systems in humans, whereas positive emotions appear to help them (e.g., Edwards and Cooper, 1988; Kiecolt-Glaser et al., 2002). Thus, there is a clear path of causation established. Levels of subjective well-being influence health, with positive levels helping health and negative levels harming it. Through an accumulation of studies, we are beginning to understand not just that subjective well-being influences health, but how this occurs. The physiological pathway by which subjective well-being influences health are important for establishing the causal connection going from subjective well-being to health and longevity.

Because subjective wellbeing influences physiological processes underlying health and disease, it is predictive of lower rates of heart disease and lower susceptibility to infection. For example, positive affect is associated with lower rates of strokes in senior citizens (Ostir et al., 2001). Davidson, Mostofsky and Whang (2010) found in a prospective longitudinal study that those without positive feelings were at a higher risk for heart disease than those with some positive feelings, who in turn had higher levels of heart disease than those with moderate positive feelings. Cohen et al. (2003) found that those exposed to cold viruses had more objective cold symptoms if they were low in positive feelings at the outset. Stress can even hinder wound healing after an injury (Christian et al., 2006).

One indirect route from happiness to health is that individuals who are high in subjective well-being are more likely to practice good health behaviors and practices. Blanchflower, Oswald and Stewart-Brown (2012) found that happier individuals have a healthier diet, eating more fruits and vegetables. Ashton and Stepney (1982) reported that neurotic individuals, people who are prone to more stress, are more likely to smoke. Pettay (2008) found that college students high in life satisfaction were more likely to be a healthy weight, exercise, and eat healthy foods. Schneider et al. (2009) found that happier adolescents, as assessed by brain scans of the left prefrontal area, showed a more positive response to moderate exercise. Garg, Wansink and Innman (2007) found that people put in a sad mood as part of the experiment tended to eat tasty but fattening foods such as buttered popcorn rather than healthy fruit.

In a large representative sample of the USA, Strine and her colleagues (2008a; 2008b) found that depressed individuals are more likely to be obese, twice as likely to smoke, and parallel results were found for those very high in anxiety. Lack of exercise was associated with depression, and excessive drinking of alcohol was associated with anxiety. Grant, Wardle and Steptoe (2009) found in a large sample across 21 nations that life satisfaction was associated across regions with a greater likelihood of exercising and a lower likelihood of

smoking. Kubzansky, Gilthorpe and Goodman (2012) found that distressed adolescents are more likely to be overweight. Thus, not only is there a direct biological path from happiness to healthier bodily systems, but unhappiness is associated with destructive behaviours that can exacerbate health problems.

Another indirect effect of happiness, as will be described more fully in the next section, is that higher happiness can lead to more positive and fulfilling social relationships. Having these relationships promotes health (Tay et al., 2012). For instance, the experience of prolonged stress can lead to poor health, but the presence of supportive friends and family can help individuals during this time. In contrast, lonely individuals experience worse health (Cacioppo and Patrick, 2008).

One potential concern with the research findings is that healthier people are happier because of their good health, and not the other way around. While this may be true, scientific studies also show support for a causal link going from happiness to health. Research findings have established a link from happiness to better physiological functioning. Ong (2010) and Steptoe et al. (2009) review various possible explanations for the effects of positive feelings on health. Steptoe, Wardle and Marmot (2005) found among middle-aged men and women that those high in positive feelings had reduced inflammatory, cardiovascular, and neuroendocrine problems. For instance, happiness was associated with a lower ambulatory heart rate and with lower cortisol output across the day. Similarly, Rasmussen, Scheier and Greenhouse (2009) found that optimism predicted future health outcomes such as mortality, immune function, and cancer outcomes, controlling for factors such as demographics, health, and negative feelings. Boehm and her colleagues (Boehm and Kubzansky, 2012; Boehm et al., 2011) found that optimism and positive emotions protect against cardiovascular disease, and also predict slower disease progression. They discovered that those with positive moods were more often engaged in positive health behaviours such as exercising and eating a nutritious diet. Furthermore, positive feelings were associated with beneficial biological markers such as lower blood fat and blood pressure, and a healthier body mass index. These associations held even controlling for level of negative moods.

Another piece of evidence supporting happiness causing health is that positive emotions can undo the ill-effects of negative emotions on health. Negative emotions generate increased cardiovascular activity, and redistribute blood flow to specific skeletal muscles. It has been shown that positive emotions can undo harmful physiological effects by speeding physiological recovery to desirable levels (Fredrickson, 2001; Fredrickson and Levenson, 1998; Fredrickson et al., 2000).

Further, Diener and Chan (2011) reviewed eight types of evidence that point to a causal connection going from subjective well-being to health and longevity. They reviewed longitudinal studies with adults, animal experiments, experiments in which participants' moods are manipulated and biomarkers are assessed, natural quasi-experiments, and studies in which moods and biomarkers are tracked together over time in natural settings. Diener and Chan (2011) concluded that the evidence is "clear and compelling" that positive feelings are causally related to health.

Happiness on average leads not only to health, but to a longer life. Danner, Snowdon and Friesen (2001) found that happier nuns lived about 10 years longer than their less happy colleagues. Because the nuns all had similar diets, housing, and living conditions, and the happiness measure was collected at a very early age many decades before death (at age 22 on average), the study suggests a causal relation between positive moods and mortality. In another study, Pressman and Cohen (2012) found that psychologists who used aroused positive words (e.g., lively, vigorous) in their autobiographies lived longer. In a longitudinal study of individuals 40 years old and older, Wiest et al. (2011) found that both life satisfaction and positive feelings predicted mortality, controlling for SES variables. Conversely, Russ et al. (2012) reviewed ten cohort studies and found that psychological distress predicted all-cause mortality, as well as cardiovascular and cancer deaths. Russ et al. found that even mild levels of psychological distress led to increased risk of mortality, controlling for a number of possible confounding factors. Whereas risk of death from cardiovascular diseases or external causes such as accidents was significant even at lower levels of distress, cancer death was only related to high levels of distress. Bush et al. (2001) found that even mild depression increased the risk of mortality after people had experienced a heart attack.

A systematic review by Chida and Steptoe (2008) on happiness and future mortality in longitudinal studies showed that happiness lowered the risk of mortality in both healthy and diseased populations, even when initial health and other factors were controlled. Moreover, the experience of positive emotions predicted mortality over and above negative emotions, showing that the effects of subjective well-being go beyond the absence of negativity. Therefore not only do negative emotions predict mortality, but positive emotions predict longevity. One reason this may be so, besides the toll that cardiovascular and immune diseases take on unhappy people, is that stress might lead to more rapid aging. Epel et al. (2004) found shorter telomeres (the endcaps protecting DNA) in women who had significant stress in their lives. Because DNA must replicate with fidelity for an individual to remain healthy over the decades of life, and because the telomeres protect our DNA during

replication, the reduction of telomeres due to stress leads to more rapid aging when a person chronically experiences unhappiness.

Even in animals happiness can affect longevity. Weiss, Adam and King (2011) found that orang-utans who were rated as happier by their caretakers lived longer. Indeed, the difference between the apes that were one standard-deviation above versus below the mean in happiness was 11 years. Because these animals often live about 50 years in captivity, happiness accounted for a very large increase in longevity.

The positive benefits of subjective well-being on health at the individual level generalize to the societal level as well. Lawless and Lucas (2011) found that places with higher life satisfaction had greater life expectancies, with lower levels of mortality from heart disease, homicide, liver disease, diabetes, and cancer. Similarly, Blanchflower and Oswald (2008) found that higher levels of national well-being were related to lower levels of national hypertension in a sample of 16 nations. Blanchflower and Oswald (2009) also found that regions in the United Kingdom reporting more stress also had higher rates of blood pressure. Moum (1996) found that low subjective well-being is both a short- and long-term predictor of suicide, and Koivumaa-Honkanen et al. (2001) uncovered similar findings in a 20-year study. Across 32 nations it was found that experiencing higher life satisfaction and happiness was related to lower suicide rates (Bray and Gunnell, 2006). These findings suggest that happiness can influence health outcomes for both individual citizens and entire societies.

### **Subjective wellbeing improves social relationships**

Having supportive relationships boosts subjective well-being, but having high subjective well-being in turn leads to better social relationships (Lyubomirsky, King and Diener, 2005; Myers, 2000). Thus, good relationships both cause happiness and are caused by it. Two major reasons why happiness benefits social relationships are because happiness increases a person's level of sociability and also improves the quality of social interactions. Happier people have a larger quantity and better quality of friendships and family relationships (Diener and Seligman, 2002).

Frequent positive emotions create a tendency in people to be more sociable. In a laboratory experiment people placed in a positive mood expressed greater interest in social and prosocial activities compared to those in a neutral condition, whereas those placed in a negative mood indicated lower interest in social activities (Cunningham, 1988b). This pattern was replicated in a second study that found an interest in social and prosocial activities among those in a good mood. People who were placed in a good mood expected social activities to be more rewarding than those not placed in a good mood. Similarly, other

experimental studies have demonstrated that inducing happiness, in contrast to sadness, makes people more likely to express liking for others they meet for the first time (Baron, 1987; 1990). On the other hand, the absence of positive feelings is accompanied by feeling bored, unsociable, uninterested in things, and slowed down and unenergetic (Watson et al., 1995), reflecting a lack of active involvement with the environment and other people. It has also been shown that depressed individuals cause others to react in a negative manner (Coyne, 1976). This can lead to unwillingness to have future interactions with those who have low happiness.

In our laboratory a group of college students was studied for a period of six weeks, during which time they were signalled at random moments each day. When signalled, the respondents reported on their feelings and tendencies. Reported happiness at the moment was associated with feeling sociable, caring and in harmony with others, energetic, interested, and optimistic. For example, people very high in happiness at the moment were 13 times more likely to say they felt sociable rather than wanting to be alone. In contrast, those low in momentary happiness were twice as likely to want to be alone. Those who were very happy at the moment were 30 times more likely than those low in happiness to be interested in what they were doing, as opposed to bored, which was the strongest feeling in those low in momentary happy mood. Another study demonstrated that happier individuals have more social interactions and spend more time in social activities than less happy individuals (Berry and Hansen, 1996).

The associations between positive moods and sociability are not just in terms of *feeling* sociable, but are carried out in behaviour. Cunningham (1988a) discovered that people in an induced positive mood condition compared to a negative mood condition were more talkative. Mehl et al. (2010) monitored people's everyday conversations for four days, and assessed happiness through both self-reports and informant reports. They found that happy participants spent about 25% less time alone and about 70% more time talking when they were with others. Furthermore, the happy participants engaged in less small talk and more substantive conversations compared to their unhappy peers.

Recent evidence shows the happiness-relationship link occurs across cultures. Lucas et al. (2000) found that across the world positive feelings were associated with tendencies for affiliation, dominance, venturesomeness, and social interaction. Similarly, a world survey of 123 nations found that the experience of positive feelings was strongly related to good social relationships across different socio-cultural regions (Tay and Diener, 2011).

Happy people are not just more sociable; they also experience higher-quality social relationships. Kazdin, Esveltd-Dawson and Matson (1982) found that children put in a positive mood showed greater social skills and confidence in social behaviour than those not put in a good mood. Boehm and Lyubomirsky (2008) reviewed evidence showing that happy people tend to be more popular and likable. One study showed that reports of better interaction quality were not merely a function of the happy person's perceptions, but that observers similarly rated happier individuals as having better interactions with strangers (Berry and Hansen, 1996).

Happiness can also have effects on the long-term quality of relationships. Luhmann et al. (2013) found that unmarried people high in life satisfaction are more likely to get married in the following years, and less likely to get separated or divorced if they get married. Conversely, Stutzer and Frey (2006) found low life satisfaction prior to courtship predicted later dissolution of the marriage.

In sum, there is substantial evidence connecting positive moods to higher sociability and better quality of social relationships. Happier people enjoy the company of others, and find that interacting with people is more rewarding compared to less happy individuals. Others in turn enjoy interacting with happy individuals. Those high in subjective well-being thus have more rewarding and stable social relationships.

Happiness can generate positive snowball effects for the society. Research has shown that people who are happier are likely to bring happiness to those around them, resulting in networks of happier individuals. Happiness extends up to three degrees of separation and longitudinal models show that individuals who are surrounded by happy people are likely to become happier in the future (Fowler and Christakis, 2008).

### **Subjective wellbeing increases workplace success**

The experience of happiness is beneficial to workplace success because it promotes workplace productivity, creativity, and cooperation. There are several reasons why this is the case. The experience of positive feelings motivates people to succeed at work, and to persist at their goals as well. As we have shown, individuals who are happier are more likely to be healthy and so take fewer unnecessary sick days and are more productive. In addition, individuals who are happier integrate information leading to new ideas, which leads to creativity and innovation. Finally, individuals who are happier tend to have better social relations. In the context of work this leads to greater cooperation, trust, and the loyalty of coworkers and customers.



Happy individuals are motivated to pursue long-term goals despite short-term costs (Aspinwall, 1998). Fry (1975) found that children placed in a happy mood better resisted temptation. Lerner et al. (in press) found that induced sadness made adults less willing to make present sacrifices for future gains. Unhappy individuals were less likely to exhibit what psychologists call “delay of gratification.” Indeed, sad subjects in the experiment were on average more willing to accept five dollars in pay at the moment rather than receive 100 dollars in a year. Such a pattern suggests that unhappy individuals might have difficulty saving for the future, or foregoing current rewards for future greater gains. Moreover, happy individuals are more likely to focus on external challenges rather than on themselves (Green et al., 2003). They more often pursue what psychologists call “promotion goals” (attaining new things), rather than prevention goals (avoiding possible bad things) (Lyubomirsky, King and Diener, 2005). In addition, positive emotions help people to focus their attention broadly, and thus see new connections between information, and engage in novel activities (Fredrickson, 2001).

Oswald, Proto and Sgroi (2012) investigated how positive feelings influence productivity. In an experiment involving piece-rate pay for research participants across a number of days, the economists found that those who were put in a positive mood had a greater quantity of work output, but no less quality of output. Those performing the task at low and medium levels were helped most by being put in a good mood. In a second study, Oswald et al. found that a bad mood induced by family illness or bereavement had a detrimental impact on productivity.

Employees who are high in subjective well-being are more likely to achieve more while at work. Peterson et al. (2011) found that happy workers – optimistic and hopeful, resilient and high in self-efficacy – were more likely to be high in supervisor-rated performance and in financial performance. Conversely, whereas positive feelings reduce absenteeism from work, negative feelings increase absenteeism as well as turnover (Pelled and Xin, 1999).

In an ever-increasing competitive business environment where innovation is a key driver of success, it is noteworthy that happiness has been shown to enhance curiosity and creativity. Foremost, positive feelings are associated with curiosity and creativity (Ashby, Valentin and Turken, 2002; Jovanovic and Brdaric, 2012). Further, there is a large experimental research literature showing that people put in a good mood tend to be more original, creative, and show greater cognitive flexibility (e.g., Isen, Daubman and Nowicki, 1987). Both Amabile et al (2005) and George and Zhou (2007) found that workers are more creative when they experience positive moods. Indeed, two recent meta-analyses of experimental and non-experimental studies showed that although

the strength of effects depend on the context and motivational focus, happiness is related to and generates creativity (Baas, Dreu and Nijstad, 2008; Davis, 2009).

A major reason for the success of happy individuals and organizations is that they experience on average more positive social relationships. Research clearly shows that happy workers are more cooperative and collaborative in negotiations than unhappy ones. In general, positive emotions boost cooperative and collaborative behaviour in negotiations rather than withdrawal or competition (e.g., Baron, Fortin et al., 1990; Barsade, 2002; Carnevale, 2008; Forgas, 1998). People put in a positive mood are more willing to make more concessions during negotiations (Baron, 1990; Baron, Rea and Daniels, 1992). Through cooperation, they reach a better joint solution in negotiations (Carnevale and Isen, 1986). Also, people put in a positive mood are more likely to make cooperative choices in a prisoner's dilemma game (Lawler, Thye and Yoon, 2000) and are more likely to show cohesion with their group. Recent experimental studies have shown positive emotions leads to trust and cooperation when specific conditions are met (Hertel et al., 2000; Lount, 2010). Overall, happiness leads to cooperation and collaboration in the workplace, particularly for negotiations.

One indicator of worker subjective well-being is job satisfaction (Judge and Kinger, 2007). A quantitative review found that job satisfaction is a key predictor of job performance, showing that happy employees are better performers in their workplace (Judge et al., 2001). To establish the causal relation, a meta-analysis of panel data demonstrated that job satisfaction predicted future performance but performance did not predict future job satisfaction (Riketta, 2008).

Erdogan et al. (2012) reviewed the research showing that individuals with higher life satisfaction are more likely to have higher levels of career satisfaction, lower turnover intentions, and higher organizational commitment. In line with the notion that happier workers are better workers, higher well-being is associated with higher income (Judge et al., 2010) and future income (Diener, Nickerson et al., 2002; Graham, Eggers and Sandip, 2004; Marks and Fleming, 1999). DeNeve and Oswald (in press) used siblings as comparison control participants, and also controlled factors such as intelligence and health, and found that both positive feelings and life satisfaction predicted higher income in the future. Thus, four longitudinal studies have found that happiness at one point in time predicts higher future income, controlling other relevant factors such as intelligence and parental income.

Subjective wellbeing brings about greater success at the organizational level as well. Bockerman and Ilmakunnas (2012) found that job satisfaction predicts the

productivity of manufacturing plants. Harter et al. (2010) found in a longitudinal study of ten large organizations that worker engagement makes a difference to productivity. Work units in which employees were satisfied and otherwise felt highly engaged with their work led to improvements in the bottom-line indexed by revenue, sales, and profit. On the other hand, reverse causality going from company success to employee satisfaction was weaker. Similarly, Edmans (2011; 2012) found evidence consistent with the importance of employee satisfaction for firm performance. An analysis of the “100 Best Companies to Work For in America” revealed that they increased more in equity value compared to the industry benchmarks. The resulting higher returns were about 3 percent per year.

The study by Harter and his colleagues based on 2,178 work units in ten large companies found that engaged and satisfied workers led to a greater revenue, sales, and profits. The two factors that mediated the relation between employee engagement and the bottom-line outcomes were customer loyalty and employee retention. It is understandable that customers would prefer to interact with positive employees and thus frequent the business. Employee retention is a large challenge for modern companies both because it is expensive to replace employees, especially highly skilled ones, and because more senior employees have more experience on the job. Thus, it is not surprising that employee engagement, resulting in customer loyalty and employee retention, accounted for ten percent of the variability in the productivity of the corporations, a huge effect in today’s competitive business environment.

Finally, happy workers help keep costs down because they are healthier, as reviewed earlier. They take fewer sick days and thus the organization requires fewer employees for the same volume of work. Because of better health, happy workers can help reduce the healthcare costs of their organizations. Because healthcare is becoming a major expense for organizations and nations, the better health of happy workers is a significant asset.

### **Happiness contributes to prosocial citizenship**

Research studies indicate a link between high subjective well-being and being a better friend, neighbour, and citizen. The link also extends to the work situation. Good citizenship in the workplace is consistently related to job satisfaction (Ilies, Scott and Judge, 2006; Lee and Allen, 2002; Organ and Ryan, 1995). Organizational citizenship includes activities such as helping others on the job, even when it is not part of one’s job description. Furthermore, the “good citizen” at work is conscientious beyond the minimal requirements of the job, and does not perform counterproductive behaviours such as stealing from the workplace. Higher levels of subjective well-being at work lead individuals to engage in behaviours that go beyond their job such as voluntarily helping

others at work (Spector and Fox, 2002). Diary studies show that greater levels of job satisfaction predict lower workplace deviance (behaviours such as stealing, taking excessive breaks, intentionally working slowly, and spreading rumours about colleagues) (Judge, Scott and Ilies, 2006), whereas unhappiness at work predicts higher deviance (Yang and Diefendorff, 2009).

People who are in a positive mood see others more inclusively and sympathetically. For example, they are less biased against other ethnic groups (Johnson and Fredrickson, 2005). Nelson (2009) found that people in a positive mood induction condition compared to neutral and negative mood conditions showed greater compassion, perspective taking, and sympathy for a person experiencing distress.

Individuals high in subjective well-being give more to their communities—in both time and money. Morrison, Tay and Diener (2012) found that both life satisfaction and positive feelings predicted reports of donating money to charity, helping a stranger, and volunteering activities. Oishi, Diener and Lucas (2007) found that happier people volunteer more. Aknin et al. (2010) found in a study of 136 countries that prosocial uses of money by happy people generalized across regions of the world. Priller and Shupp (2011) found slightly higher rates of blood donation, and well as monetary giving to charity, among happier individuals. They also found that those who were satisfied with their incomes were more likely to donate money to worthy causes.

Do happy moods cause the helping behaviour and good citizenship? It is a consistent finding in social psychology experiments that when people are induced into a good mood, by various means, they are more likely to help others (e.g., Carlson, Charlin and Miller, 1988). These experimental studies in which people who are put into a good mood and compared to those in a neutral mood leave little doubt that happier feelings generally tend to increase helping. The fact that people give both more time and money when they are put into a positive mood in an experiment (see Anik et al., 2009) indicates that being happy causes the prosocial actions. Aknin, Dunn and Norton (2012) suggest that the relation between mood and helping is circular. When people are in a good mood they tend to help others; helping others in turn fosters a good mood. Thus, friends, family, neighbours, and the society as a whole tends to profit from happy people because these individuals are more likely to be helpful to others.

### **The lack of happiness can be extremely detrimental to effective functioning**

There is now substantial evidence that depression interferes with good health. For example, depressed people are substantially more likely to have

cardiovascular problems such as heart disease and strokes. Rugulies (2000) found in a review of 11 studies that depressed feelings predict coronary heart disease, and that clinical levels of depression predict even more strongly. Similarly, when a person is angry and hostile they are more likely to suffer from coronary heart disease (Smith et al., 2004). Depression is associated with unhealthy physiological processes such as inflammation (Dinan, 2009), which is believed to be connected to the development of heart disease. Antidepressant medications can lower inflammation.

A review by Zorrilla et al. (2001) found that stress is related to a weaker immune system. The case of fertility show how detrimental negative emotions can be to healthy functioning. When couples are trying to have a baby they have a harder time achieving this goal if the woman is depressed (Gatz, Martin and Volker, 2008; Neggers et al., 2006; Wisner et al., 2009). If the unhappy woman does succeed in becoming pregnant, she is more likely to have a premature and low birth weight child (Field, Diego and Hernandez-Reif, 2006; Field et al., 2009; Orr and Miller, 1995; Williamson et al., 2008), both of which are strong risk factors for infant death or an abnormal child.

Depression, which as we noted is characterized by low or absent positive feelings, creates problems in social relationships such as divorce, limited social support, and distancing from one's neighbours (Gotlib and Hammen, 2002). Even minor depression results in problems in social relations, for example higher rates of divorce (Beck and Koenig, 1996). Even those recovering from depression show impairments in the social and occupational domains (Romera et al., 2010). In addition, clinical depression interferes with executive functioning, which is a hallmark of human's special adaptive abilities. For example, Fossati, Ergis and Allilaire (2002) review evidence indicating that depressed individuals suffer deficits in problem solving and planning. Snyder (2012) reviewed extensive evidence showing that depressed people suffer substantially from broad impairments in executive functions such as planning, with strong effect sizes varying from .32 to .97.

Negative emotions in the workplace, especially chronic or intense ones, can be very detrimental to the organization. For example, Felps, Mitchell and Byington (2006) found that a single negative individual in a work unit often brings down the morale and functioning of the entire group.

Kessler (2012) thoroughly reviewed the negative outcomes that results when people suffer from anhedonia, the lack of positive feelings or subjective well-being, as found in the psychiatric illness of depression:

1. A high rate of school dropout

2. A lower probability of marrying, but a higher probability of divorcing if the person does marry. In addition, there is a greater probability of being both a perpetrator and a victim of marital violence. The children of depressed parents also experience greater difficulties.
3. In the workplace a greater probability of being unemployed, of absenteeism from work, and of earning a lower income.
4. Worse health and a higher rate of mortality. The depressed are more likely to have arthritis, asthma, cardiovascular disease, diabetes, and chronic pain.

The devastating problems that arise when people lack positive feelings reveal how very necessary subjective well-being is for functioning well in life.

### **Happiness is not magic or a cure-all**

Although happy people and societies have a number of advantages, this does imply that high subjective well-being is a panacea that will prevent all problems and make everything fine. Societies must have other ingredients such as an educated workforce, people with integrity and honesty, employees who are motivated to work, and so forth in order to build a society with high quality of life. Happiness is helpful but not sufficient in itself. Similarly, factors such as education are helpful for success, but they are not sufficient by themselves. In order to succeed and have a high quality of life, nations need motivated workers who are honest and care about the society. It is beneficial if citizens are also happy.

In terms of health, happiness is like other factors that can facilitate good health. It helps health, but is not a guarantee of it. Happy people die at a young age in some cases. However, on average they will live longer. A few people who smoke live a very long time and some people who do not smoke die at a very early age, but on average people who do not smoke live substantially longer. Similarly, people who are happy on average live longer, despite the fact that there are exceptions. We can make statements about the effects of average happiness (economists use the label *ceteris paribus* to refer to other things being equal) because in particular cases there can be other factors that override the influence of subjective well-being.

Not every study has found positive benefits for long-term happiness. A few studies find no differences between happier and less happy individuals, and the rare study has shown opposite effects. This is common in research because of sampling, methodology, and other differences between studies. Nonetheless, reviews that summarize results across studies have virtually always shown benefits for high subjective well-being. One reason for the few null findings is that happiness will not show its value in all samples and contexts. For instance,

for young adults there might be no differences in health or longevity due to happiness because young adults very rarely die and mostly have healthy bodies. The results of happiness and unhappiness become more manifest as adults age. Similarly, one would not be surprised if happiness did not reduce divorce in a nation where divorce is virtually nonexistent.

Another caution about the conclusion that happiness is desirable is that people do not need to be constantly euphoric or ecstatic. Happy people most of the time feel merely pleasant – a mild positive state. Only occasionally do happy people feel intensely positive. Oishi, Diener and Lucas (2007) found that although the happiest individuals did very well in social relationships, the modestly happy – not 100 percent satisfied – often did the best in achievement domains. Similarly, there is evidence that frequent high-arousal emotions could be harmful to health (Pressman and Cohen, 2005). Thus, extremely high happiness is not absolutely necessary to effective functioning and sometimes moderate happiness can be most helpful.

An important fact to remember is that happy people occasionally do feel unhappy, and this is not necessarily undesirable. For instance, a person should feel sad at her mother's funeral, and some fear can help a person avoid dangerous situations. Gruber, Mauss and Tamir (2011) and Forgas (2007), as well as others, have shown that in some situations negative emotions can help people to respond more effectively. Thus, happiness does not mean that the person experiences no negative feelings whatsoever. The happy person, however, does not feel *chronic* negative feelings; he or she experiences negative feelings only occasionally, not frequently, and in appropriate situations. Similarly, when we measure the subjective well-being of a society, high life satisfaction is desirable, but it need not be complete satisfaction because people might have one or two mildly dissatisfying areas that they desire to improve.

Throughout this report we have treated life satisfaction and positive feelings together. Although they are related, researchers find that they are distinct and have some different causes and consequences. Nonetheless, for reasons of simplicity we treated them together in this report. Another reason for combining them is that research into the differences in the two types of subjective well-being is still a relatively underdeveloped area. Nonetheless, the two should be assessed separately when monitoring the subjective well-being of nations.

In summary, happy people function better, but this does not require perfect happiness. Individuals who experience positive feelings most of the time, who feel very satisfied with life but not perfectly satisfied, and who occasionally feel some negative emotions can function well. What is undesirable is to have many

citizens who are dissatisfied with life, who rarely feel positive, and who feel negative much of the time.

## **Conclusion**

Some have argued that measures of economic development are all we need to assess the progress of societies. Although economic progress can be desirable, it can produce some negative outcomes, such as environmental pollution, a reduction in social capital, inequality, and higher rates of major depression (Kessler, 2012). Thus, it is important to balance economic measures with measures of subjective well-being, to insure that economic progress leads to broad improvements across life domains, not just higher incomes. By assessing subjective well-being as well as economic variables, the society can gauge whether overall net progress is positive. Given the benefits to individuals and societies of high subjective well-being, it is surprising that measures of happiness have not thus far been in greater use. We outline in detail the case for national accounts of well-being in Diener et al. (2009).

Existing scientific evidence indicates that happiness causes benefits and does not simply follow from them. Experimental research in which moods and emotions are induced in some participants and their actions are compared to a control group show that positive moods lead to creativity, sociability, altruism, and beneficial physiological patterns. Levels of subjective well-being are found to predict future health, mortality, social success, business productivity, and income, controlling statistically for other possible causes. For example, young people who are less happy many years before they meet their future spouse later show higher rates of divorce compared to their happier peers. Furthermore, predictions in the other direction, from conditions to subjective well-being (that is, conditions influencing happiness), are sometimes weaker.

We now have initial evidence about the processes that mediate between happiness and the beneficial outcomes. For instance, happiness produces greater cooperation, energy, motivation, and creativity, which in turn are instrumental to business success. Conversely, depression creates problems such as illness, quitting one's job more frequently, and alcohol abuse that all lead to less success in the workplace. Similarly, positive feelings are associated with a stronger immune system and fewer cardiovascular problems, whereas anxiety and depression are associated with poorer health behaviors and problematical physiological indicators such as inflammation. Thus, the causal role of happiness on health and longevity can be understood with the mediating mechanisms that are now being uncovered.

Given the many benefits of happiness it seems risky to argue that we need yet more data before beginning to monitor the subjective well-being of nations. This



paper has shown that happy people function better, and therefore a happy society will also tend to be a healthier and more productive one. Furthermore, people high in subjective well-being tend to have better social relationships and perform more prosocial actions. In addition, people want high subjective well-being – they desire to be satisfied with life and enjoy it. Thus, true progress in a society demands attention both to the economy and to the subjective well-being of citizens.

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