

CHARACTER STRENGTHS, EMPLOYEE  
WELL-BEING, AND PERFORMANCE:  
A FIELD EXPERIMENT

by

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## **Abstract**

Character strength and virtues play a significant role in the Positive Psychology's effort to build positive qualities both at the individual and at the group level. Seligman's (2002) model of happiness suggests a fundamental link between character strengths and well-being, and specifically suggests that the behavioral manifestation (or the demonstration) of strengths is linked to well being. Furthermore, it has been found that five strengths (Curiosity, love, gratitude, zest, and optimism) are more related to happiness than others. Following her "broaden and build" theory Fredrickson (2001) suggests that positive emotions positively affect performance. Despite these theoretical links between strength demonstration, well-being, and performance, the empirical examination of these relationships is still in its initial stages.

The aim of this study was to examine the effect of the demonstration of character strengths on employee well being and performance. More specifically, we hypothesized that the demonstration of the five "happy people's strength" – love, curiosity, zest, gratitude and optimism will positively affect employee's well being and performance.

We tested the effect of the demonstration of these specific strengths on well-being and performance of 85 employees working in a call center of an Israeli cellular phone company. Findings partially support the hypothesis. The demonstration of strengths had a significant positive impact on employee's performance measured as the average number of calls handled by the employee at each hour. However, the demonstration had no effect on employees' levels of well being. Implications are discussed.

## **Introduction**

Positive Psychology, a new field of research first introduced by Martin Seligman in 1998, represents a shift in emphasis from pathology to fulfillment and flourishing. It is an umbrella term used to describe the study of positive emotions, positive character traits, and the institutions enabling them. Seligman and Csikzentmihalyi (2000) suggested that positive psychology should catalyze a shift in focus from the preoccupation of repairing and fixing the worst things in life to building positive qualities at three distinct levels: 1) the subjective level, concerning valued subjective experiences; 2) the individual level, concerning positive individual traits; 3) the group level, concerning civic virtues and institutions that promote better citizenship.

As in the field of Psychology, a similar shift from the negative to the positive perspective emerged in the field of Organizational Behavior. Scholars critically argued that the field of OB had focused almost exclusively on the negative rather than positive (Cameron & Caza, 2004; Luthans, 2002). As a result, OB scholars sought to adapt and incorporate the principles, theories, and concepts of Positive Psychology into the theory and practice of Organizational Behavior. One of the most dominant concepts presented in the positive psychology literature was the concept of “character strengths”. Character strengths are twenty-four positive traits or characteristics that comprise (good) characters, which are divided into six core virtues (Peterson and Seligman, 2004) (see appendix A). Peterson and Seligman (2004) introduced the concept in order to focus on building positive qualities both at the individual and group level. They provided the field with scientific tools for the measurement, cultivation, and assessment of positive traits in people.

While people can occasionally manifest all 24 character strengths, Peterson and Seligman argued that people possess "signature strengths" which are a sub-set of three to seven character strengths that one "owns, celebrates, and frequently exercises," (pp. 18). An individual's signature strengths are distinguished from other character strengths by one's sense of ownership, and feelings of excitement, invigoration, and inevitability while using them. Furthermore, the authors suggest that one has intrinsic motivation to use signature strengths as well as a rapid learning curve in matters concerning these strengths. Peterson and Seligman (2004) hypothesize that the exercise of signature strengths is inherently fulfilling, generates well-being, and improves performance. Furthermore, according to Seligman's happiness model (2002) the demonstration of signature strengths leads to satisfaction, which is one of the three distinct routes to happiness. In addition, in her "broaden and build" theory Fredrickson (2001) suggests that positive emotions positively affect performance. Despite these theoretical links between signature strength demonstration, well-being, and performance, the empirical examination of these relationships is still in its initial stages in general and in the organizational setting specifically (Seligman et al., 2005; Seligman, Tayyab, & Parks, 2006). Furthermore, Park, Peterson and Seligman, (2004) found that some strengths (optimism, love, gratitude, zest and curiosity) are more related to happiness than others. In other words, people whose dominant strengths are of the above five strengths, appear to be happier than those who do not. However, neither causality nor directionality was established.

Based on the literature, we hypothesized that the demonstration of the five strengths that are related to happiness (curiosity, love, zest, gratitude and optimism) will positively affect well-being and performance. In the current research we tested

the effect of the demonstration of these specific strength on well-being and performance in an organizational setting.

As opposed to most organizational interventions designed exclusively to either improve performance or improve employee well-being (and consequently performance), the intervention we used is designed to simultaneously impact both well-being and performance. In the following sections, we review the background of positive psychology and positive organizational behavior, character strengths and well-being, and then present the studies designed to examine the relationship between strengths, performance, and well-being.

### **Positive Psychology**

Positive Psychology emerged as a distinct new field of research in 1998 when Martin Seligman, then president of the American Psychological Association (APA), announced Positive Psychology as his “presidential theme” for that year. He contended that the focus of psychology was on repairing damage within a disease model of human functioning and consequently directed almost exclusive attention to pathology while neglecting the fulfilled individual. Seligman and Csikzentmihalyi (2000) suggested that Positive Psychology should catalyze a shift in focus to build positive qualities at three distinct levels: 1) the subjective level, concerning valued subjective experiences; 2) the individual level, concerning positive individual traits; and 3) the group level, concerning civic virtues and institutions that promote better citizenship. Positive Psychology is not an entirely new body of research but rather a shift on emphasis to a large number of existing research topics such as hope, resilience, self-efficacy, optimism, and subjective well-being, among others.

Since its emergence as a distinct field, Positive Psychology has been the focus of numerous studies, books, and articles. New journals, university programs, and

degrees (as well as conferences) blossomed in the field (Linley, Joseph, Harrington, & Wood, 2006; Seligman, Steen, Park, & Peterson, 2005). According to Linley and his colleagues (2006), one of the main purposes and outcomes of Positive Psychology, besides balancing the focus of research between positive and negative, is the creation of a shared language for the study of positive human experiences, states, traits, and outcomes. What may be Positive Psychology's most ambitious project (Seligman et al., 2005) is the classification of character strengths and virtues by Peterson and Seligman (2004).

### **Character Strengths**

As part of their efforts to provide the field of Positive Psychology with scientific tools for the measurement, cultivation, and assessment of the positive in people, Peterson and Seligman (2004) introduced the term “character strengths”: positive traits or characteristics that comprise (good) character. The two scholars argue that while “good character” is something well valued and looked for, there has been little or no scientific attention devoted to defining it, documenting its origins, and so forth. Peterson and Seligman provide a starting point for the systematic scientific study of good character; they formulate “a legitimized vocabulary for psychologically-informed discussion of the personal qualities of individuals that make them worthy of moral praise” (Park & Peterson, 2009, p67). An underlying assumption to this classification project is that character is plural rather than singular, and as such should be studied accordingly- as a family of (positive) characteristics shown in feelings, thoughts, and actions which exists along a continuum (Peterson & Seligman, 2004; Park & Peterson, 2009).

Peterson and Seligman proposed the "Values in Action" (VIA) classification

of strengths, a taxonomy of 24 character strengths which are divided into six core virtues and their corresponding character strengths (Peterson & Seligman, 2004) (see Appendix A). This classification distinguishes between three conceptual levels:

***Virtues:*** These are the core characteristics valued by moral philosophers and religious thinkers. Virtues are universal, perhaps even grounded in biology through an evolutionary process. The six broad categories of virtues are wisdom, courage, humanity, justice, temperance, and transcendence.

***Character Strengths:*** The psychological ingredients, processes, or mechanisms that define virtues or constitute distinct routes to displaying the virtues. Strengths are "positive traits," but not every positive trait is a strength (this issue will be discussed in the next section).

***Situational Themes:*** The specific habits that lead people to manifest given character strengths in given situations. As opposed to character strengths, themes are rooted in specific situations (e.g., work themes are distinct from family themes). More importantly, while strengths are conceptualized as innately "good" and are morally valued, themes are neither good nor bad.

Thus, these three levels are ordered from the abstract (moral virtues) to the concrete (themes), with character strengths as the intermediate level, combining and balancing abstract and concrete components. Peterson and Seligman (2004) presented a list of ten criteria by which to determine whether a trait should be recognized in the list of character strengths (see Appendix B). They emphasized that these criteria are neither necessary nor sufficient for inclusion in the list, but they nevertheless shed a light on the essence of the strengths and their nature. Among other aspects, these criteria relate to the moral value accompanying the strengths, their potential to fulfill the individual and their stability across time and situations. At the group level criteria,

Peterson and Seligman mention the strengths' cultivation by society through rituals and institutions.

Character strengths are conceptually distinct from talents and abilities given that the strengths, as opposed to abilities and talents, fall in the moral domain. Another difference between these concepts is that effort and will play a dominant role in the exercise of strengths, but play no such role regarding abilities and talents. More explicitly, "all people can aspire to have strong character in a way that they cannot aspire to be good-looking or physically resilient" (p. 20). Finally, talents and abilities seem valued more for their tangible consequences than for their own inherent value. That is, "talents and abilities can be squandered, but strengths and virtues cannot" (p. 20). The six core virtues and the strengths constructing them are as follows: 1) Wisdom and Knowledge: creativity, curiosity, open-mindedness, love of learning, and perspective; 2) Courage: authenticity, bravery, persistence, and zest; 3) Humanity: kindness, love, and social intelligence; 4) Justice: fairness, leadership, and teamwork; 5) Temperance: forgiveness, modesty, prudence, and self-regulation; 6) Transcendence: appreciation of beauty and excellence, gratitude, hope, humor, and religiousness.

The classification of character strengths and virtues introduced by Peterson and Seligman is presented as the Positive Psychology equivalent of the DSM (The Diagnostic and Statistical Manual of Mental Disorders (text revision; DSM-IV-TR) (American Psychiatric Association's, 2000).

Of the three distinct levels of Positive Psychology, Peterson and Seligman's classification is derived from the individual level of positive individual traits. Their perspective is that good character can and should be built and cultivated using the concept of character strengths. The classification is grounded in historical and cross-

cultural reviews, and refers to previous classification endeavors of character strengths and virtues in psychology (Cawley et al., 2000; Erikson, 1963; Goldberg, 1993; Greenberger & Sorenson, 1974; Jahoda, 1958; Maslow, 1970; Ryff, 1989).

### **Signature Strengths**

While people can occasionally manifest all 24 character strengths, Seligman and Peterson (2004) maintain that people possess "signature strengths," a sub-set of three to seven character strengths that one "owns, celebrates, and frequently exercises," (p. 18). An individual's signature strengths are distinguished from other character strengths by one's sense of ownership and excitement while using them. An individual will experience a rapid learning curve in matters concerning signature strength use, as well as an intrinsic motivation to use them. This characterization of signature strengths highlights the relationship between character strengths and happiness or well-being. Peterson and Seligman (2004) hypothesize that the exercise of signature strengths is inherently fulfilling, generates well-being, and improves performance. However, the empirical examination of this hypothesis, which is the aim of this research, is still in its initial stages in general and specifically within an organizational setting (Seligman et al., 2005; Seligman, Tayyab, & Parks, 2006).

Since it was first introduced, the concept of character strengths has gained more and more scientific attention, resulting in a growing body of literature. Character strengths served not only as a basis for positive interventions (Perloiro, Neto, Marujo, 2010; Rust, Diessner, & Reade, 2009; Seligman et al., 2005; Seligman, Tayyab, & Parks, 2006; Wong, 2006) but also as a predictor of various outcomes from post traumatic stress to spiritual growth (Diessner, Davis, & Toney, 2009; Kashdan, Julian, Merritt, & Uswatte, , 2006; Park & Peterson, 2010; Proyer & Ruch, 2009),

well-being (Park, Peterson, & Seligman, 2004), and performance, both academically (Lounsbury, Fisher, Levy, & Welsh, 2009; Park & Peterson, 2008) and militarily (Duckworth, Peterson, Matthews, & Kelly, 2007). Furthermore, efforts have been made to validate the Values in Action Inventory of Strengths (VIA-IS) (Peterson, Park, & Seligman, 2005) the instrument for the assessment of character strengths on diverse samples (Biswas-Diener, 2006; Brdar, Kashdan, & Todd, 2010; 2006; Park & Peterson, 2006; Shimai, Otake, Park, Peterson, & Seligman, 2006; Singh & Choubisa, 2010). Several studies have addressed possible applications of character strengths in various domains (Pearce, Chuikova, Ramsey, Galyautdinova, 2010; Peterson, Park, & Sweeney, 2008;). It is important to note that while the concept of character strength is a relatively new concept it actually encompasses 24 different strengths that may each stand alone as a unique research topic. Indeed, this is the case for some strengths. Some of the strengths have been studied decades ago and still serve as a well defined, stand alone research topic such as Emmons and McCullough's work on gratitude (McCullough, Emmons, & Tsang, 2002), Seligman's work on optimism (Seligman, 1992), Snyder's (2002) work on hope, the work of Worthington (2001) and McCullough on forgiveness (McCullough, & Worthington, 1999), as well as more recent research that investigated specific strengths as part of the bigger construct of the VIA character strength (Breen, Kashdan, Todd, Lenser, & Fincham, 2010, Otake, Shimai, Tanaka-Matsumi, Otsui & Fredrickson, 2006).

### **Positive Organizational Behavior**

Soon after the emergence of Positive Psychology as its own discipline, a similar shift from the negative to the positive perspective emerged in the field of Organizational Behavior (OB). This change was driven by discontentment with the

lack of progress in the field and its failure to remain relevant (Luthans & Avolio, 2009; Cameron, Dutton & Quinn, 2003; Luthans, 2002; Wright, 2003). Scholars critically argued that the field of OB had focused until then almost exclusively on the negative rather than positive: negative affect rather than positive affect, resistance to change rather than acceptance, and deficiencies, problems and dysfunctions of managers rather than their strengths (Cameron & Caza, 2004; Luthans, 2002). As a result, scholars sought to adapt and incorporate the principles of positive psychology into the theory and practice of organizational behavior.

Different terms were developed to define the new positive approach within the organizational field. Adopting a micro-level focus, Luthans (2002) referred to the new perspective as Positive Organizational Behavior (POB), while the Michigan Business School group (e.g. Cameron & Caza, 2004; Cameron, Dutton, & Quinn, 2003) proposed a more macro-level analysis referred to as Positive Organizational Scholarship (POS). Other scholars are less rigorous in their use of this distinction and use either term regardless of the level of analysis of their research (Emmons, 2003; Frederickson, 2003). Despite the broad effort to extend the boundaries of the field of organizational behavior, Positive Psychology and Positive Organizational Behavior/Scholarship merely offered a shift in focus, and therefore these inconsistencies in terminology do not undermine the research efforts to explore positive aspects of organizations, at all levels.

The study of character strengths and virtues in organizations has taken various forms. Park and Peterson (2003) suggested that a list of organizational level virtues should be created by reviewing previous discussions and identifying commonalities similar to the process used to generate the list of six core virtues. They later succeeded in isolating five organizational-level virtues: fairness, safety, purpose, humanity, and

dignity (Peterson & Park, 2006). Cameron (2003) took a different approach by defining three criteria for virtuousness, whether manifest in individual or group activities: human impact, moral goodness, and social betterment. He also focused on organizational enablers that foster and perpetuate virtuousness. These criteria prompted him to focus on specific factors such as forgiveness (Cameron, 2003, Cameron & Caza, 2002). Others suggested “importing” individual level virtues or character strengths such as gratitude (Emmons, 2003) and self-efficacy (Judge & Bono, 2001) to the organizational level. Other specific character strengths investigated in an organizational setting were zest (Peterson, Park, Hall & Seligman, 2009) love (Fredrickson, Cohn, Coffey, Pek, & Finkel, 2008) and optimism (West, Patera, & Carsten, 2009). Luthans (2002) suggested criteria for individual strengths to be studied within an organizational context: state-like strengths that are measurable, manageable, and can be developed to contribute to performance. He suggested self-efficacy, hope, optimism, subjective well-being, emotional intelligence, and resiliency as strengths meeting these criteria, which later were used to form in to the concept of Positive Psychological Capital (PSYCAPP) (Luthans, Avolio, Avey, & Norman, 2007; Luthans, Youssef, & Avolio 2007). PSYCAPP was later investigated in relation to performance, well-being, and attitudes (Avey, Luthans, Youssef, 2010; Luthans, Avey, Avolio, Peterson, 2010). These research efforts to integrate character strengths in OB literature were put forth in an article titled "Character is not Dead in Management," (Wright & Goodstein, 2007) asserting that the study of strengths at the organizational level is of importance and significance to the field of management and holds a promise both to organizational research and practice. Finally, a recent preliminary attempt to examine the relationship between character strengths and job satisfaction has found that some character strengths (curiosity, zest, hope, gratitude,

and spirituality) were most strongly associated with job satisfaction (Peterson, Stephens, Park, Lee, & Seligman, 2009)

The current study focuses on five specific strengths out of the 24 VIA character strengths (Peterson and Seligman, 2004) displayed in an organizational setting. More specifically, we examine the implications of individual level demonstration of these strengths on well-being (broadly defined) as well as performance.

### **Subjective Well-Being**

This section addresses three related terms: Subjective Well Being (SWB), life satisfaction, and happiness. Despite extensive research efforts over the past decades (Diener, Suh, Lucas & Smith, 1999), the distinct definitions of each of these terms and the relationship between them are still the subject of debate (Diener, Oishi & Lucas, 2003; Kozma, Stone, & Stones, 2000; Ryff, 1989; Veenhoven, 2000). In this section, we will delineate some of the predominant definitions and findings in the field, as well as the controversies.

SWB is defined as a “broad category of phenomena that includes people’s emotional response, domain satisfactions, and global judgments of life satisfaction” (Diener et al., 1999). This definition combines two approaches to SWB. The first approach conceptualizes SWB as an overall satisfaction with life. The second approach equates SWB with affect: specifically, “the preponderance of positive over negative affect” (Bradburn, 1969). An integration of these approaches became a consensual singular construct comprised of *life satisfaction* defined as a cognitive evaluation of one's overall life, and *happiness* defined as the absence of negative affect and existence of positive affect (Ryff, 1989). Nevertheless, over the years, these

definitions have been challenged by various researchers (e.g., Ryff, 1989; Ryan & Deci, 2001; Seligman, 2002). Ryan and Deci (2001) challenged the above definitions, which assert that the components of well being are life satisfaction, the presence of positive affect (PA), and the absence of negative affect (NA). Ryan and Deci dubbed these approaches “hedonic,” whereby the goal of life is to experience the maximum amount of pleasure. In contrast, they identify a different approach, called “eudemonic” (from the Greek “*eudemonia*”). The eudemonic approach is based on Aristotle who posited that true happiness (*eudemonia*) is found in the expression of virtue: doing what is worth doing. According to this approach, not all pleasurable acts generate well being (Ryan & Deci, 2001).

Seligman and his colleagues (Peterson, Park, & Seligman, 2005; Seligman, 2002; Seligman et al., 2005) incorporated both approaches into yet another definition of happiness that is comprised of three components: 1) Positive emotion and pleasure (a pleasant life, based on the hedonic approach to well being), 2) Engagement (an engaged life, based on the eudemonic approach to well being), and 3) Meaning (a meaningful life). Peterson and Seligman (2004) asserted that the very exercise of signature strengths is fulfilling (Seligman, 2002). This assertion is fundamental to the research hypotheses I will later present.

### **Malleability, Stability and Antecedents of Subjective Well-Being**

The malleability of well being has been of major interest over the years. Positive Psychology researchers continue to explore the possibility of influencing the well-being of individuals, groups, or nations (Cameron & Caza, 2004; Kahneman, Krueger, Schkade, & Stone, 2004; Seligman et al., 2005). One of the keys to that question lies in understanding the antecedents of well being, which will be presented

in the next section, followed by a discussion of SWB stability and malleability.

Diener (1984) distinguished between top-down and bottom-up approaches to subjective well being. In the bottom-up approach, well being is influenced by external events, situations, and demographics. The top-down approach focuses on individual differences: personality differences, cognitive processes, and so forth. Demographics are among the most extensively studied bottom-up factors. However, when demographic factors such as age, sex, income, race, education, and marital status were compiled and tested against SWB scores, they made only a small contribution (8%-20%) to explained variance in SWB (Argyle, 2000; Campbell et al., 1976). Findings of studies examining the relationship between specific demographic variables and SWB show either insignificant, temporal, (Brickman, Coates, & Janoff Bulman, 1978; Diener et al., 1993) or weak correlations between personal income and SWB (Clark & Oswald, 1994; Haring, Okun, & Stock, 1984; Sandvik, Diener, & Seidlitz, 1993), SWB and age (Butt & Beiser, 1987; Diener & Suh, 1998; Herzog & Rodgers, 1981; Horley & Lavery, 1995; Okun, Stock, Haring, & Witter, 1983), and between education and SWB (Campbell et al., 1976; Cantril, 1965; Diener et al., 1993, Witter et al., 1984). Several researchers found that men and women report equal average levels of well being, although women tend to report stronger levels of both positive and negative affect (Lee, Seccombe & Shehan, 1991; Nolen-Hoeksema & Rusting, 1999; Wood, Rhodes and Whelan, 1989). Several studies showed that married people report greater happiness than unmarried people (Gove & shin, 1989; Mastekaasa, 1995; White, 1992), although the causal direction of the relation between marital status and SWB is unclear. Similarly, health was found to be strongly correlated to SWB (George & Landerman, 1984; Larson, 1978; Okun, Stock, Haring & Witter, 1984; Røysamb, Tambs, Reichborn-Kjennerud, Neale, & Harris, 2003) when based on

self-reported health status, but the correlations weakened considerably when objective measures of health were examined (Okun & George, 1984; Røysamb et al., 2003; Watten et al., 1997). An exception to the rather limited predictive power of external circumstances on SWB, are the relatively high correlations between domain satisfaction and life satisfaction (Argyle, 2000; Heller, Watson, & Ilies, 2004). Specifically, in a meta analysis investigating the correlations between domain satisfaction and life satisfaction, job satisfaction and marital satisfaction had a relatively high correlations with life satisfaction ( $r = .35$  and  $r = 0.42$  respectively) (Heller, Watson, & Ilies, 2004). Given the rather weak relationship between demographic factors and SWB, it is clear why researchers had to seek other, more robust predictors of SWB.

The top-down approach to SWB focuses on the relationship between personality factors and SWB. Researchers confirmed that personality was a strong predictor of subjective well being (for a review, see De Neve & Cooper, 1998; Diener et al., 1999; Diener & Lucas, 2000; Heller, Watson & Ilies, 2004). The Big Five personality model has been the focus of such studies. For example, studies showed that Extraversion was positively related to PA, whereas neuroticism correlated positively with NA (Costa & McCrae, 1980). Since PA and NA are components of SWB, it is clear why extraversion and neuroticism are strong predictors of SWB. However, agreeableness and conscientiousness also showed correlations ( $r = .13$ ,  $r = .20$  respectively) with life satisfaction, similar to the correlations between neuroticism ( $r = -.24$ ) and extraversion ( $r = .19$ ), in a meta analyses study (Heller, Watson, Ilies, 2004). Self-esteem yielded even stronger correlations with SWB of up to  $r = .47$  (Diener & Diener, 1995; Kwan, Bond, & Singelis, 1997; Lucas, Diener, & Suh, 1996), although cultural differences moderated the correlations (Diener & Diener,

1995). The AIM model (Attention, Interpretation, Memory) suggests that individuals with high SWB tend to focus their attention on positive stimuli, interpret events positively, and recall past events with a positive bias (Diener & Ryan, 2009; Diener & Biswas Diener, 2008).

Another personality model that has been proposed as an SWB predictor is Peterson and Seligman's (2004) "character strengths" model. Park, Peterson, and Seligman (2004) examined all 24 character strengths in relation to life satisfaction. They found correlations exceeding  $r=.50$  between hope and zest to life satisfaction, and correlations exceeding  $r=.40$  between gratitude, love, and curiosity to life satisfaction. These strong correlations will be the basis of one of the proposed interventions.

The bottom-up/top-down debate has not been resolved, but the two approaches can be integrated into more complex models, which include both traits and situational factors (Heller, Watson & Ilies, 2004). Another line of research focused directly on SWB stability and malleability from various perspectives. Heritability studies estimated that genes account for between 40%-55% of emotionality (Lykken & Tellegen, 1996; Watson et al., 1988), although others found a more modest genetic basis (e.g., Baker, Cesa, Gatz, & Mellins, 1992; McGue & Christensen, 1997). One of the complicating findings here is that genes have an effect on life events (Plomin, Lichtenstein, Pedersen, McClearn, & Nesselroade, 1990); therefore, genes may also have an indirect effect on SWB.

Genetic evidence and temporal stability led researchers to conclude that happiness represents a trait (Costa, McRae & Zonderman, 1987). However, this approach has been criticized (Veenhoven, 1994). For example, Heller, Watson and Ilies (2006) asserted that as much as 18% of the variation in life satisfaction was due

to intra individual fluctuations, specifically resulting from variations in domain satisfaction (Heller, Watson, Ilies, 2006). However, Based on findings supporting the stability of SWB over time (Headey & Wearing, 1989) and situations (Diener & Larsen, 1984), Heady and Wearing suggested a “dynamic equilibrium” model, asserting that personality determines baseline levels from which people can move up or down due to life events, but to which they eventually return.

The role of adaptation was examined as a mechanism moderating the effects of life events on SWB. Adaptation is the “diminished responsiveness to repeated or continued stimuli” (Helson, 1947, in Diener et al., 1999). Adaptation was the basis of the “hedonic treadmill model,” which claims that people briefly react to life events but return to their baseline in a short period of time (Brickman & Campbell, 1971). Adaptation was also suggested as an explanation by Brickman, Coates, and Janoff-Bulman (1978), to their findings that lottery winners were not significantly happier than a control group, and people who suffered a spinal cord injury were only slightly less happy than a control group. However, other studies show contradicting results with more long-lasting major effects of life events on SWB (Stroebe, Stroebe, Abakoumkin, & Schut 1996; Vitaliano, Russo, Young, Becker, & Maiuro, 1991).

Recently, Diener, Lucas, and Scollon (2006) have proposed major revisions to the hedonic treadmill model, arguing that “neutrality” varies across people. In other words, different people have different set points. Furthermore, a single person may have multiple happiness set points in the various components of well being. Under some conditions, well being set points can change in a variety of ways for different individuals since individuals vary in their adaptation to events. Clearly, these revisions offer a more optimistic picture for the potential of SWB change and the usefulness of interventions such as the one proposed herein, since they suggest

individuals can change their set points. A similar emphasis on change can be found in the model of happiness put forth by Lyubomirsky, Sheldon, and Schkade (2005). They suggest three factors that account for "chronic happiness levels": genetics (approximately 50% of the variance), situational-circumstantial factors (approximately 10% of the variance), and intentional activity (the remaining 40%). Consequently, they indicate intentional activity as the key to a sustainable change in happiness levels.

This research is based on the assumption that well being is malleable, drawing on Lyubomirsky, Sheldon and Schkade's (2005) model of sustainable change. By integrating situational and dispositional models of SWB, this study is grounded in the assumption that people have specific traits (character strengths), but it is possible for people to demonstrate different strengths that are not necessarily their dominant ones, in a way that will positively influence their subjective well being.

### **Character Strengths and Subjective Well-Being**

Prior to discussing the relationship between character strengths and well being, it is essential to distinguish between two distinct concepts: possession of strengths (or signature strengths) and demonstration of strengths. According to Peterson and Seligman (2004), signature strengths are a sub-set of strengths towards which one has a sense of ownership (herein referred to as possession). Demonstration of strengths is the exercise, behavioral manifestation, or application of strengths, whether signature strengths or not. While individuals often demonstrate their signature strengths, they occasionally demonstrate any one of the remaining 24 strengths that are not identified as their own signature strengths. For example, one may demonstrate forgiveness, while forgiveness is not identified as one of that person's signature strengths. On the

other hand, the same person may have the signature strengths of humor, but choose to not behaviorally manifest it during work hours. Signature strengths are stable across time, regardless of their momentary manifestation. Thus, as opposed to signature strengths themselves, the actual demonstration of signature strengths varies across time and situations, can increase or decrease according to circumstances, and hence can be manipulated. Over long time periods people may find that certain strengths may become more or less dominant, or in other words, signature strengths may slowly change over time, although they are relatively stable. In the following section, I will discuss the relationship between subjective well being and each of these concepts (possession and demonstration of strengths).

### **The Demonstration of Signature Strengths and Subjective Well-Being**

According to Peterson and Seligman (2004), an inherent part of the demonstration of strengths is an accompanying sense of eudemonia, i.e.-a concept closely linked to well being. Eudemonia is either equated with happiness, according to the eudemonic well being conception (Ryan & Deci, 2001), or considered one of the three components of happiness (along with pleasure and meaning), according to a dominant model of happiness (Seligman et al., 2005). Both definitions reflect a close link between the demonstration of strengths and happiness or well being. Furthermore, signature strengths are defined as strengths whose display generates excitement and invigoration (Peterson & Seligman, 2004), and therefore are linked to PA as well. Seligman and his colleagues (Seligman et al., 2005; Seligman et al., 2006) as well as other researchers (Rust, Diessner, & Reade, 2009) examined the relationship between the demonstration of strengths and well being in a series of intervention studies. Their findings show that enhanced demonstration of signature strengths (along with other

exercises) lowered depressive symptoms significantly and increased life satisfaction in the long-term for research participants.

### **The Possession of Signature Strengths and Subjective Well-Being**

Signature strengths, the sub set of strengths that characterize an individual is relatively stable across time. Several studies attempted to establish a link between one's signature strengths and various outcomes. Some studies concentrated on the link between signature strengths and academic performance (Lounsbury, Fisher, Levy & Welsh, 2009), military performance (Duckworth, Peterson, Matthews, & Kelly, 2007), and even the city of residence (Park & Peterson, 2010). Park, Peterson, and Seligman (2004) investigated the link between signature strengths and well being. They found that some strengths are more correlated to well being than others: hope, zest, and to a lesser degree, gratitude, love and curiosity are more strongly related to life satisfaction than the rest of the strengths. They termed these strengths "happy people's strengths." However, no causality was established in their study and several explanations could be put forward to explain this link. Similar to the link between the big five traits to life satisfaction, one may suggest the temperamental explanation and the instrumental explanation (McCrae and Costa, 1991). The temperamental explanation emphasizes psychological mechanisms and endogenous biological processes linking strengths to well being- for example- grateful people tend to report higher levels of well being because they notice more things to be grateful for. On the other hand, the instrumental explanation emphasizes the role of mediators such as actions and circumstances- for example- grateful people tend to express gratitude, which in turn contributes to more positive emotions, and this is why they are happier than others. In other words we may ask whether the mere possession of these

strengths (the temperamental explanation) is related to well being, or whether the demonstration of these strengths (the instrumental explanation) is related to well being. Several studies linked the demonstration of these specific strengths to increased well being. For example, Emmons and McCullough (2003) found that enhanced demonstration of gratitude increased subjective well being, and Seligman (1990) found the same was true regarding optimism. Based on these findings we take the instrumental approach, hence we expect that the mere demonstration of “happy people’s strengths” (regardless of their possession as signature strengths) will increase SWB. Interestingly, although published after the conclusion of the experiment conducted here, a recent study has also confirmed the centrality of hope, zest, curiosity, and optimism (but not love) to job satisfaction (Peterson, Stephens, Park, Lee, Seligman, 2010). Next, we will discuss job satisfaction, as a specific, yet distinct aspect of well being.

### **Job Satisfaction**

Similar to the extensive research attention well being has gained, its OB equivalent, “job satisfaction” is one of the most researched topics in organizational behavior (Cranny, Smith, & Stone, 1992; Dormann & Zapf, 2001; Spector, 1997). Locke (1976) defines “job satisfaction” as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experience." His widely used definition (Brief, 1998) is comprised of both an affective reaction (positive emotional state) and a cognitive evaluation (appraisal) (Schleicher, Watt, & Greguras, 2004) and has been a source of disagreement in the field. While some argue that job satisfaction is an attitude, and hence a cognitive evaluation (Weiss, 2002), others regard it as an affective response (Patterson, War, & West, 2004). Some scholars have argued that

most existing measures consist exclusively of the cognitive dimension of job satisfaction and fail to represent the affective dimension (e.g., Brief, 1998; Brief & Roberson, 1989; Organ & Near, 1985).

### **Antecedents of Job Satisfaction**

Paralleling the study of the antecedents of WB, two distinct approaches, dispositional and situational, used to explain job satisfaction, have been the focus of a major dispute over the years (Bouchard, Arvey, Keller, & Segal 1992; Davis-Blake & Pfeffer, 1989; Heller & Watson, 2005, Judge & Hulin, 1993; Keller, Bouchard, Arvey, Segal, & Dawis, 1992; Staw & Cohen Charash, 2005; Staw & Ross, 1985; Staw, Bell, & Clausen, 1986;). The major antecedents of job satisfaction according to each approach are presented below.

The dispositional approach focuses on factors within the individual, most notably personality traits. Several studies estimated the relationship between affectivity (both positive and negative) and job satisfaction, and found common variance ranging from 8% to 34%, with higher correlations for positive affectivity (Brief & Roberson, 1989; Levin & Stokes, 1989; Staw et al., 1986; Watson & Slack, 1993). Judge and colleagues (Judge, Locke, Durham, 1997; Judge & Bono, 2001) introduced the concept of "core self evaluations": fundamental, subconscious conclusions individuals reach about themselves, other people, and the world, comprised of self-esteem, generalized self-efficacy, locus of control, and neuroticism. This concept was found as one of the best dispositional predictors of job satisfaction (and job performance) with correlations ranging from .19 to .45. A meta-analysis of the relationship between the "Big Five" personality model and job satisfaction showed significant correlations (up to .41), with neuroticism, extraversion and

conscientiousness, and to a lesser degree with openness to experience and agreeableness (Judge, Heller, & Mount, 2002). In contrast, the situational approach focuses on external or environmental factors relating to the job or the work place. Hackman and Oldham (1980) developed the “job characteristics” model, one of the most influential models representing this approach. This model identifies five core job characteristics (skill variety, task identity, task significance, autonomy, and job feedback) that affect the satisfaction of three psychological needs or states: meaningfulness, responsibility, and knowledge about the results. The satisfaction of these psychological needs determines how motivating a job is likely to be.

In this research we examine job satisfaction from a situational approach- we focus on the actual demonstration and the behavioral manifestation the five strengths.

### **Character Strengths and Job Satisfaction**

In a recent article, Peterson and his colleagues (Peterson, Stephens, Park, Lee, & Seligman, (2010) have examined the relationship between character strengths and job satisfaction. They found that some signature strengths (optimism, zest, gratitude, curiosity, and spirituality) related to job satisfaction more than other signature strengths. Prior to this article, this link has not been examined.<sup>1</sup>. Nevertheless, several reasons led us to hypothesize a positive relationship between the demonstration of character strengths and job satisfaction. First, the eudemonic approach asserts that the demonstration of strengths is accompanied by fulfillment and gratification. Peterson and Seligman (2004) claimed that the demonstration of one's signature strengths leads to excitement and invigoration. We therefore expect that the demonstration of the five specific strengths (hope, zest, love, curiosity and gratitude) will increase job

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<sup>1</sup> Despite its title, Buckingham and Clifton's (2001) book discusses situational themes and not strengths.

satisfaction due to the positive affect accompanying the demonstration of these specific strengths.

### **Character Strengths and Performance**

Only a few studies have tried to link performance to signature strengths in order to assess whether scoring highly on certain strengths is related to improved performance. Results of one study showed that the strengths persistence, prudence, judgment, perspective, self regulation, hope, love of learning, and fairness were more related than other strengths to academic success (Lounsbury, Fisher, Levy, & Welsh, 2009; Park & Peterson, 2008). Another study (Matthews, Kelly, Bailey, & Peterson, 2006) examined which strengths could predict military success. However, no published study discussed the causal link between the demonstration of character strengths and performance. Nevertheless, based on current theoretical models regarding strengths, we hypothesize a causal relationship—we expect that the demonstration of strengths will increase performance. The demonstration of signature strengths is defined as "invigorating" and as accompanied with "a rapid learning curve" (Peterson & Seligman, 2004). Therefore, one may assume that people who demonstrate their signature strengths will perform better. Furthermore, Fredrickson's (2001) "broaden and build" theory of positive emotions asserts that certain discrete positive emotions broaden people's repertoire of thought-action and build their enduring personal resources. Fredrickson (2001) and Wright (2005) link the "broaden and build" theory to improved performance. The positive emotions noted by Fredrickson (such as love, joy, interest, and contentment) are similar to some of these five character strengths. For example, Fredrickson suggests "love" as such positive emotion, contentment may be a close construct to gratitude and so forth) Despite

some conceptual differences between the two different models, we still expect that the increase in the demonstration of the five strength will lead directly to an increase in performance.

### **The Link between Well Being and Performance**

Despite being the subject of extensive research efforts, the link between well being and performance or the- "Happy-Productive Hypothesis" has suffered from inconsistent findings, mostly regarding magnitude and directionality (Judge, Thoresen, Bono & Patton, 2001; Iaffaldano & Muchinsky, 1985, Wright, 2005). The Happy-Productive thesis seeks to demonstrate the relationship between well being (broadly defined) and performance. In a recent meta-analysis Lyubomirsky, King and Diener (2005) argued that "happiness" (defined both as affect and life satisfaction) precedes successful outcomes, including job performance. A review by Judge and colleagues (Judge et al., 2001) specifies seven different models (e.g. satisfaction precedes performance, performance precedes satisfaction, the relationship is spurious and so forth) to explain the association between satisfaction and performance, all of which have gained partial support.

In this research, we expect that an increase in the demonstration of character strengths will increase well being and performance.

### **Positive Interventions**

Positive interventions that seek to enhance people's well being, "the bottom line of positive psychology's work," (Seligman, Steen, Park, & Peterson, 2005) while still at their initial stages, are "much sought after" (Seligman, Steen, Park, & Peterson, 2005; Diener & Ryan, 2009). In this section I will briefly review existing positive

interventions and then move on to discuss the underlying rationale for the interventions conducted and presented in this research.

Positive interventions are “treatment methods or intentional activities that aim to cultivate positive feelings, behaviors, or cognitions” (Sin & Lyubomirsky, 2009). It is important to note, though, that programs that are aimed at fixing or remedying something that is pathological, as opposed to building strengths, do not fit the definition of positive interventions (Sin & Lyubomirsky, 2009). The first documented attempt to increase well being levels, dating back to the late seventies (Fordyce, 1977; 1983) was a series of experiments conducted on student samples. In these interventions, Fordyce equipped his students with a list of happiness "fundamentals" to follow (for example: keep busy, socialize, be productive at meaningful work, develop positive optimistic thinking, and so forth) received a significant increase in well being compared with the control group. Ryff's psychological well being model (Ryff, 1989; Ryff & Singer, 1996) has been the center of a series of interventions held by Fava and his colleagues (Fava & Ruini, 2003; Fava, Rafanelli, Cazzaro, Conti, & Grandi, 1998; Fava, Rafanelli, Finos, Salmaso, Mangelli, et al. 2005), and has resulted in a significant reported increase in well being. It is important to note that these studies are considered precursors to, and not part of, the Positive Psychology movement.

Recent applications of positive psychology theories can be found in a series of interventions based on Seligman's model of happiness (Seligman, 2002). Naturally, with character strengths being a pillar of this model, strengths demonstration was a major part (if not the center) of these interventions, all showing a significant increase in well being as a result of demonstrating strengths as well as using other techniques (for example, a gratitude visit) (Seligman, Tayyab, & Parks, 2006; Seligman, Steen,

Park, & Peterson, 2005). Another type of positive interventions focuses on one or more strengths and aims to enhance well being through the enhanced demonstration of specific strengths. It is worth noting that the rationale of these interventions lies in the strengths and specific psychological mechanisms or theory linking the strength to well being, rather than on the VIA strengths model and the general link it proposes between strengths and well being. Such intervention studies, for example, are Emmons and McCullough's (2003) work on gratitude enhancement, Sheldon and Lyubomirsky's (2006) work on gratitude and love, Seligman's (1991) work on optimism and Luthans's work on "Psychological Capital" (Luthans, Avey, Patera, 2008).

### **The Current Study**

Despite the major significance attributed to character strengths in Positive Psychology and Positive Organizational Behavioral, no published research has examined the demonstration of individual strengths within an organizational context, or explored the relationship between the demonstration of individual character strengths and important outcomes such as job satisfaction and job/ task performance. Similarly, empirical efforts to identify the causal relationship between character strengths and individual well-being are in their initial stages (Park, Peterson & Seligman, 2004; Seligman et al., 2005; Seligman, et al., 2006).

This research focuses on the demonstration of strengths and investigates the effect that the demonstration of strengths has on employees' well being and performance. More specifically, this study aimed to positively affect employees' well being and performance through a deliberate intervention to increase the demonstration of strengths.

**"Happy People's Strengths" Demonstration**

Our hypothesis asserts that an increase in the demonstration of happy people's strengths (curiosity, love, zest, hope and optimism, and gratitude) will lead to an increase in well being and performance. as was mentioned earlier this study is not designed to address the happy- productive hypothesis, and thus implies a **direct** effect of strengths demonstration on performance that is not mediated by well being on one hand, and a **direct** effect of strength demonstration on well being that is not mediated by performance, on the other hand

*Hypothesis 1a: The demonstration of happy people's strengths will positively influence well being.*

*Hypothesis 1b: The demonstration of happy people's strengths will positively influence performance.*

Hypothesis 1a, which links the demonstration of happy people's strengths to well being, is based on observational findings that link hope, zest, gratitude, optimism, and curiosity to well being (Park, Peterson, and Seligman 2004). A few discrete interventions to enhance one specific strength from this group have shown an increase in well being levels (Emmons, & McCullough, 2003, Sheldon, & Lyubomirsky, 2006).

Hypothesis 1b, which asserts that the demonstration of happy people's strengths will improve performance, is also based on Fredrickson's broaden and build theory which links positive emotions to improved performance. It is important to note, though, that when it comes to performance, these five happy people's strengths have no "priority" over the rest of the strengths in enhancing performance, and the demonstration of these five strengths is as likely to improve performance as is the demonstration of any of the other strengths. This, is in contrast to hypothesis 1a

which uniquely links happy people's strengths to well being, implying (although not testing) that their demonstration will have a unique effect on well being based on the correlations between these specific strengths and well being.

## **Method**

The sample consisted of 85 employees (32 % male) working in a call center of a large cellular phone company. Participants average age was 25.3 (SD=3.3), with age ranging from 20 to 37. Their job involves answering calls and responding to various customer requests, providing technical support, and service and billing information. Employees in this call center attend routine training classes on an almost daily basis. These classes are mostly professional but some deal with a wide variety of "personal skills." Our "Positive Psychology" workshop was scheduled as part of these routine classes. To keep the workshop more intimate we divided the 85 participants into 6 groups of between 12 to 18 participants each. Participants were assigned to one of the six groups by their executives, taking into consideration their working shifts and other organizational constraints. The six groups were then randomly assigned to four strengths demonstration classes (the treatment group) and two general well being classes (control group). Two weeks later participants returned to a "booster session" in which each participant was assigned to the original group. The six classes were scheduled during three consecutive days (with two workshops each day).

### ***The Strengths Workshop***

The first session started with participants completing a base line well being assessment. I then explained the concept of character strengths in general, and the "happy people strengths" (zest, optimism, love, gratitude, curiosity) in particular, to the participants. Participants were presented with research findings showing that a

conscious demonstration of some of these strengths (optimism, gratitude) may lead to well being enhancement (Emmons & McCullough, 2003; Sheldon & Lyubomirsky, 2006). This short informative session concluded with the concept of the “sustainable happiness” model (or sustainable change in happiness) (Lyubomirsky, Sheldon, & Schkade, 2005). Participants were then given time to plan and discuss in small groups (of two to three participants each) how they can demonstrate the five “happiness” strengths more in their daily life. Participants were given a “homework assignment” to adhere to their plan during the two weeks until the next session

During the second session, participants shared their experience from the past two weeks. They were then requested to reconsider ways to apply the five strengths based on their experience during the past two weeks. Participants again worked in small groups to redesign their plans. The control group participated in a general well being workshop. At this workshop, participants learned about the antecedents of well being and discussed both bottom up and top down approaches to well being. The “sustainable happiness model” (Lyubomirsky, Sheldon, & Schkade, 2005) was also presented to them, as well as the concept of character strengths, but no practical “tips” or suggestions were given. Participants then discussed the effect that some of the mentioned processes had on their lives (e.g., the hedonic treadmill). Their homework assignment was to notice these processes in their lives. During the second session, participants shared their insights about well being and their prospects of establishing a sustainable change in happiness levels.

### *Measures*

**Performance:** Performance measures were computed using the organization's database. One of the organizations greatest concerns was the amount of calls that the call center was able to handle per hour. Many training programs were aimed at

improving the average number of calls employees could handle during a specific time limit. Representatives were aware that the number of calls per hour was a major factor in their performance evaluation and supervisor's report, and they received constant feedback regarding it. Due to the centrality of this parameter, we used the number of calls per hour as our dependent variable. Other qualitative measures were not available since they were obtained in a relatively infrequent process and referred to longer periods (every four to six months). We received the average number of calls per hour from the organization, which used weekly data that summed all the calls that representatives dealt with during that week, divided by the amount of work hours. We used measurements from four consecutive weeks: pre intervention, one week post intervention, two weeks post intervention, and three weeks post intervention.

#### *Well Being*

**Job satisfaction** was measured using two scales. 1) The Michigan Organizational Assessment Questionnaire (Cammann et al., 1983) is a short 3-item scale used for measuring overall satisfaction. Each item has seven response choices, ranging from "strongly disagree" to "strongly agree". An example item is, "All in all, I am satisfied with my job." 2) The 5-item Brayfield-Rothe (1951) scale, in which respondents indicate their agreement with statements such as "Each day at work seems like it will never end." (reverse score). A job satisfaction average score was computed (After reverse scoring some of the items).

**Affect:** Positive and Negative Affectivity (Pa and NA) were measured using the PANAS- Positive and Negative Affectivity Scale (Watson, Clark & Tellegen, 1985). PANAS is a 20-item scale including descriptors such as "enthusiastic", "inspired", (for PA) or "afraid", "hostile" (for NA). Respondents were asked to indicate the extent to which they experienced each mood state that day on a 5-point scale ranging from

"very slightly or not at all" to "extremely".

**Life Satisfaction:** Life satisfaction was measured using the Satisfaction with Life Scale (SWLS) (Diener, Emmons, Larsen, &, 1985). SWLS was designed to measure individuals' evaluation of global life satisfaction. It is a five-item self-report questionnaire that uses a 7-point Likert scale, ranging from "strongly disagree" to "strongly agree". Responses are summed to yield an overall score of life satisfaction. An example item is: "In most ways, my life is close to my ideal."

In all well being questionnaires respondents were requested to reflect on their last week.

### **Results**

Means, standard deviations, correlations and Cronbach alpha coefficients of variables are presented in table 1. We found moderate pre test- posttest correlations in the affect measures ( $r=.40$ ,  $p<0.01$  for PA and  $r=.38$ ,  $p<0.01$  for Na), and higher correlations for the satisfaction measures ( $r= 0.73$ ,  $p<0.01$  for life satisfaction and  $0.84$ ,  $p<0.01$  for job satisfaction. We found no statistically significant correlations between PA and NA, but we did find significant correlations between PA and life satisfaction ( $r=0.30$ ,  $0<0.01$ ) and job satisfaction ( $r=0.21$ )  $p<0.05$ ), as well as (negative) correlations between Na and life satisfaction ( $r=-0.37$ ,  $p< 0.01$ ) and job satisfaction  $r=-0.27$ ,  $p<0.01$ ). We found negative significant correlations between Time 1 performance and Na ( $r=-0.22$ ,  $p<0.05$ ) and Pre NA and time 3 performance ( $r=-0.32$ ,  $p<0.01$ ).

### ***Effects on Performance***

We used a randomized pretest-posttest with control-group design, extending the basic 2x2 into a 2x4 design, with two follow-ups (Time 3 & 4). To determine whether the intervention positively affected participants we conducted a 2X4 (Treatment X Occasion) repeated-measures analysis of variance (ANOVA). In these

analyses, the treatment’s main effect does not reflect the impact of the treatment. Rather, it is the Treatment X Occasion interaction that tests whether the experimental and control groups differed significantly in the amount of improvement in performance over time. We ran a simple t-test to check whether the experimental and the control groups did not differ significantly in their performance levels (number of calls) on Time 1.

**Table 1: means, standard deviations and correlations of well being and performance measures**

	M	SD	1	2	3	4	5	6	7	8	9	10
1.Pre PA	3.39	0.68	<b>0.84</b>									
2.Pre NA	2.09	0.78	-0.06	<b>0.89</b>								
3.Pre Life Sat	3.39	0.70	0.30**	-0.37**	<b>0.76</b>							
4.Pre Job Sat	3.33	0.76	0.21*	-0.27**	0.18	<b>0.90</b>						
5.No Calls Time1	7.60	4.66	-0.04	-0.22*	0.09	-0.15	1					
6.Post PA	3.49	0.56	0.40**	-0.12	0.01	0.18	0.03	<b>0.77</b>				
7.Post NA	2.10	0.73	0.04	0.38**	-0.06	-0.23	-0.02	0.00	<b>0.87</b>			
8.Post Life Sat	3.39	0.78	0.09	-0.15	0.73**	0.21	0.16	0.16	-0.15	<b>0.83</b>		
9.Post Job Sat	3.39	0.71	0.13	-0.29*	0.02	0.84**	-0.09	0.15	-0.18	<b>0.16</b>	<b>0.88</b>	
10.No Call Time 3	8.01	5.42	-0.04	-0.32**	0.18	-0.10	0.85**	0.12	-0.11	<b>0.22</b>	<b>-0.049</b>	1

\*.p < 0.05 (2-tailed). \*\* p <. 0.01 (2-tailed).

As expected, t-test results revealed that the experimental group (M=7.74, SD=4.45) did not differ initially from the control group (M=7.38, SD=5.17) significantly  $t(80) = -0.31$   $p = 0.75$ , assuring that the randomization did achieve pre

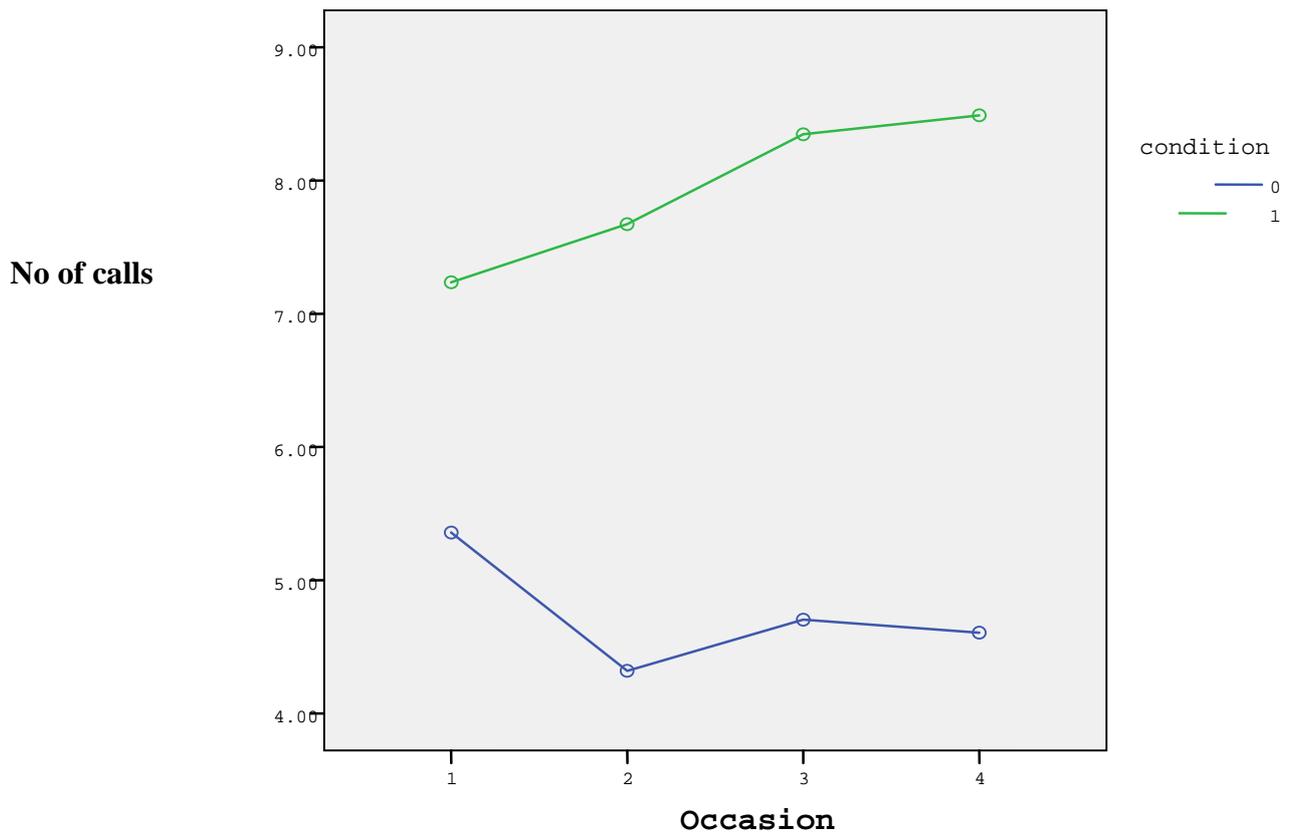
experimental equivalence between conditions. A summary of the repeated measure ANOVA is presented in Table 2

**Table 2: Repeated Measures ANOVA of Performance of the Control and Experimental Group**

Time	Experimental (N=42)		Control (N=16)		F (Time)	F (Treatment)	F (Treatment*Time)
	M	SD	M	SD			
1	7.24	0.65	5.36	1.06	(3,14)=0.97	(1,56)=5.71	(3,142)=2.98
2	7.67	0.67	4.32	1.09	p=0.40	P=0.02	P=0.04
3	8.35	0.83	4.70	1.34			
4	8.49	0.79	4.61	1.28			

Because the results of Mauchly’s test of sphericity show that the assumption of sphericity was not met, we corrected the significance level test using the Greenhouse-Geisser correction. The ANOVA shows a significant Treatment X Occasion interaction effect for the number of calls,  $F(3, 142) = 2.98, p = 0.04$ . Figure 1 displays the gradual increase in number of calls over time in the experimental group, along with the decrease in number of calls over time in the control group. While the overall decline in performance from Time 1 to Time 4 in the control condition was not significant,  $F(1,17) = 0.118, p = 0.30$ , the increase in number of calls at the experimental condition was significant  $F(2,92) = 4.33, p = 0.013$ .

**Figure 1: Mean Number of Calls of the Experimental and Control Groups, on Four Occasions (Time1-4)**



The overall conclusion is that as predicted, the interventions indeed improved participants' performance by increasing their average number of calls per hour. This is especially notable considering the control group's gradual decline during the same period.

*Effect on well being*

Well being measures were collected especially for this intervention during the two sessions: the first session as a base line- pretest assessment, and the second session, two weeks later as a post-test assessment. Means and standard deviations of well being measures of the control and experimental group are presented in Table 3

**Table 3: Means and Standard Deviations of Well Being Measures of the Control and Experimental Group.**

Variable	Time	Experiment		Control		Cohen's d
		M	SD	M	SD	
PA	Pretest	3.40	0.73	3.38	0.65	0.01
	Posttest	3.37	0.54	3.72	0.53	-0.65
NA	Pretest	2.05	0.76	2.23	0.77	-0.24
	Posttest	2.08	0.64	2.17	0.93	-0.12
Job Sat	Pretest	3.26	0.78	3.54	0.67	-0.37
	Posttest	3.32	0.73	3.60	0.65	-0.40
Life Sat	Pretest	3.45	0.66	3.33	0.70	0.18
	Posttest	3.37	0.80	3.34	0.76	0.04

In order to examine whether the intervention increased well being measures of the participants, we ran a repeated measure ANOVA on the four different measures of well being. Results show that the intervention had no significant effect on PA  $F(1,57) = 0.90$ ,  $p > 0.05$ , NA  $F(1,57) = 0.24$ ,  $p > 0.05$ , life satisfaction  $F(1,55) = 0.37$ ,  $p > 0.05$  or job satisfaction  $F(1,57) = 0.14$ ,  $p > 0.05$ .

## Discussion

The aim of this study was to examine the effect of the demonstration of character strengths on employee well being and performance. More specifically, we hypothesized that the demonstration of the five "happy people's strength" – love, curiosity, zest, gratitude and optimism will positively affect employee's well being and performance. While the intervention did not have an effect on the experimental group's well being it did have a significant and substantial effect on its performance.

In order to understand the mixed findings, it is important to note one more factor that may have been influential here: the performance measures were taken at four different times, while the well being measure were taken only twice. Hence while with performance we were able to examine a longer process with a more powerful intervention (based on two sessions rather than one), the well being measures reflect a shorter time period (two weeks rather than three) and half the effort (one intervention session rather than two). The length and depth of intervention may have played an important role in this study's findings. These findings coincide with Lyubomirsky, Sheldon, and their colleagues' (Sheldon et al., 2010) assertion that continuous effort is needed to attain a lasting change. Further research is required to assess why the intervention affected performance but not employees well being: Is it easier to influence performance rather than well being, or is it the nature of the interventions that is more suitable for enhancing different factors.

We have extended previous experimental interventions in several ways. First, whereas most workplace interventions are designed to either enhance employees' performance or enhance employees' well being, this intervention, due to the unique nature of the "VIA strengths classification" and its relationship to both well being and performance, was hypothesized to influence both well being and performance independently. Furthermore, no previous research included interventions aiming to enhance performance through the demonstration of strengths.

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## Appendix A

### **The list of character strengths and virtues**

1. **Wisdom and knowledge** – Cognitive strengths that entail the acquisition and use of knowledge

**Creativity:** Thinking of novel and productive ways to do things

**Curiosity:** Taking an interest in all of ongoing experience

**Open-mindedness:** Thinking things through and examining them from all sides

**Love of learning:** Mastering new skills, topics, and bodies of knowledge

**Perspective:** Being able to provide wise counsel to others

2. **Courage** – Emotional strengths that involve the exercise of will to accomplish goals in the face of opposition, external or internal

**Authenticity:** Speaking the truth and presenting oneself in a genuine way

**Bravery:** *Not* shrinking from threat, challenge, difficulty, or pain

**Persistence:** Finishing what one starts

**Zest:** Approaching life with excitement and energy

3. **Humanity** – Interpersonal strengths that involve “tending and befriending” others

**Kindness:** Doing favors and good deeds for others

**Love:** Valuing close relations with others

**Social intelligence:** Being aware of the motives and feelings of self and others

4. **Justice** – Civic strengths that underlie healthy community life

**Fairness:** Treating all people the same according to notions of fairness and justice

**Leadership:** Organizing group activities and seeing that they happen

**Teamwork:** Working well as member of a group or team

**5 .Temperance** – Strengths that protect against excess

**Forgiveness:** Forgiving those who have done wrong

**Modesty:** Letting one's accomplishments speak for themselves

**Prudence:** Being careful about one's choices; *not* saying or doing things that might later be regretted

**Self-regulation:** Regulating what one feels and does

**6 .Transcendence** – Strengths that forge connections to the larger universe and provide meaning

**Appreciation of beauty and excellence:** Noticing and appreciating beauty, excellence, and/or skilled performance in all domains of life

**Gratitude:** Being aware of and thankful for the good things that happen

**Hope:** Expecting the best and working to achieve it

**Humor:** Liking to laugh and tease; bringing smiles to other people

**Religiousness:** Having coherent beliefs about the higher purpose and meaning of life

Appendix B

**The ten criteria for strengths of character**

*Criterion 1:* Strength contributes to various fulfillments that constitute the good life, for oneself and for others. Although strengths and virtues determine how an individual copes with adversity, the focus is on how they fulfill an individual.

*Criterion 2:* Although strengths can and do produce desirable outcomes, each strength is morally valued in its own right, even in the absence of obvious beneficial outcomes.

*Criterion 3:* The display of strength by one person does not diminish other people in the vicinity.

*Criterion 4:* Being able to phrase the “opposite” of a putative strength in a felicitous way counts against regarding it as character strength.

*Criterion 5:* A Strength needs to be manifested in the range of an individual’s behavior – thoughts, feelings, and/or actions – in such a way that it can be assessed. It should be trait-like in the sense of having a degree of generality across situations and stability across time.

*Criterion 6:* The strength is distinct from other positive traits in the classification and cannot be decomposed into them.

*Criterion 7:* Character strength is embodied in consensual paragons.

*Criterion 8:* The existence of prodigies with respect to the strength.

*Criterion 9:* The existence of people who show – selectively – the total absence of a given strength.

*Criterion 10:* The larger society provides institutions and associated rituals for cultivating strengths and virtues and then for sustaining their practice.