

Running Head: Interventions to Increase Worker Happiness

Happiness at work: Using positive psychology interventions
to increase worker well-being

By
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Abstract

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Abstract: Being happy has many benefits such as being more successful, more socially engaged and healthy (Seligman, Steen, Park, & Peterson, 2005). In organizations, individuals who are happy at work have greater productivity and organizational citizenship behaviour, and less job withdrawal (Lyubomirsky, King, & Diener, 2005). Given these potential benefits, this study attempted to increase and sustain worker happiness over a one month period, using two interventions from Seligman's positive psychotherapy (Seligman et al., 2005). The effectiveness of these two interventions was evaluated against a neutral control condition using a pre-post design. The study was internet-based and the participants were required to complete their intervention six times over a 10 day work period. It was found that the *gratitude* condition showed some potential to increase happiness, but the results were not significant. Limitations and future research directions are discussed.

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Introduction

In general, being happy has many benefits such as being more successful, more socially engaged and healthy (Seligman, Steen, Park, & Peterson, 2005). In organizations, individuals who are happy at work have greater productivity and organizational citizenship behaviour, and less job withdrawal (Lyubomirsky, King, & Diener, 2005). Given these potential benefits, the natural question is can workplace happiness be increased?

The purpose of this study is to address this question. Specifically, drawing on a range of studies showing the effectiveness of positive psychotherapy interventions (e.g., Seligman et al, 2005; Seligman, Rashid, & Parks, 2006), I evaluated the effectiveness of similar interventions in a sample of working individuals. Therefore, the goal of this study was to use a number of specific interventions from Seligman's positive psychotherapy (Seligman et al., 2005) with a working population to attempt to increase chronic happiness levels at work. The following discussion outlines happiness theory and the premise for this study.

Background of Positive Psychology

Positive psychology, or the study of the positive aspects of human experience, has flourished in the last 10 years (Seligman et al., 2005), with the American Psychologist devoting its millennium issue to the science of positive psychology and many books, meetings, courses and conferences being devoted to this emerging science (Seligman et al., 2005). The idea of studying positive subjective experience, positive individual traits and positive institutions is not a new phenomena, being exemplified by such work as Terman's studies on giftedness (Terman, 1939), Jung's work concerning the search and

discovery of the meaning of life (Jung, 1933) and Maslow's self-actualization on the Hierarchy of Needs (Maslow, 1971).

Generally, however, there has been an exclusive focus by the discipline of psychology on pathology, which has resulted in a model of human psychological health lacking the positive features that make life worth living (Seligman & Csikszentmihalyi, 2000). Health has been historically equated to the absence of illness, rather than the presence of wellness (Fava & Ruini, 2003).

The renewed interest in positive psychology has been spurred by a number of factors, including a new interest of psychologists in the prevention of mental illness, and prevention researchers having discovered that there are human strengths that act as buffers against mental illness, such as courage, optimism and hope (Seligman & Csikszentmihalyi, 2000). Another factor is that many people, especially in Western individualistic societies, have been preoccupied with attaining greater well-being and the pursuit of happiness has become one of the most meaningful, desirable and significant life goals (Diener, Suh, Smith, & Shao, 1995). There have also been increasing numbers of people who have their basic needs met and therefore have turned their focus on psychological fulfillment (Boehm & Lyubomirsky, 2009). This idea stems from Maslow's Hierarchy of Needs, where once the biologically-based needs and the need for safety and attachment are met, people will look to "the full use and exploitation of talents, capabilities, potentials" (Maslow, 1971, p. 150).

Research findings within the umbrella term of positive psychology are intended to supplement what is known about human suffering, weakness and disorder so that we have a more complete and balanced scientific understanding of the human experience,

including suffering and happiness and the interactions between the two (Seligman et al., 2005). The aim of positive psychology is to begin to change the focus of psychology from a preoccupation with repairing only the worst things in life, to also building positive qualities and improving human condition. According to positive psychologists, it is not enough to help those who suffer, but it is also important to understand that the majority of “normal” people are also in need of guidance and advice so that they can reach a richer and more fulfilling existence (Seligman & Csikszentmihalyi, 2000). Positive psychology looks to increase individual happiness, through an enhanced understanding of how, why and under what conditions positive emotions, positive characteristics, and the institutions that enable them flourish (Seligman et al., 2005).

According to Seligman and Csikszentmihalyi (2000, p. 6) “the field of positive psychology at the subjective level is about valued subjective experience: well-being, contentment, and satisfaction (past), hope and optimism (future), and flow and happiness (present). At the individual level, it is about positive individual traits -- the capacity for love and vocation, courage, interpersonal skill, aesthetic sensibility, perseverance, forgiveness, originality, future-mindedness, spirituality, high talent, and wisdom. At the group level it is about the civic virtues and the institutions that move individuals toward better citizenship: responsibility, nurturance, altruism, civility, moderation, tolerance, and work ethic.”

Happiness Defined

Happiness, or subjective well-being, is defined throughout the psychology literature in a number of ways including breaking it down into three primary components: frequent positive affect, high life satisfaction and infrequent negative affect

(Lyubomirsky, Sheldon, & Schkade, 2005). Happiness has also been defined in the literature as, life satisfaction and an appreciation of life to momentary feelings of pleasure. Happiness is defined here, broadly as, the frequent experience of positive emotions (Lyubomirsky, Sheldon et al., 2005). Happiness has been termed in the literature in a number of ways including, chronic happiness, trait positive affect, or subjective well-being. The terms happiness and well-being are used throughout this paper to label the overall aim of positive psychology, and refer to the pursuit of meaning, engagement and positive emotion (Seligman et al., 2005).

Hundreds of empirical articles have examined how objective circumstances (including marriage, age, sex, culture, income, and life events) relate to happiness and the results show that these factors explain relatively little variation in people's levels of well-being (Boehm & Lyubomirsky, 2009). Therefore, it is believed that happy and unhappy people differ considerably in their subjective experience and construal of the world. Happy people are inclined to perceive and interpret their environment differently than their less happy peers (Boehm & Lyubomirsky, 2009). Chronically happy people have a tendency to feel more frequent positive emotion because they are sensitive to the rewards in the environment. They are more likely to approach, rather than avoid, rewarding situations (Lyubomirsky, King, et al., 2005).

Success does not just lead to happiness, but positive affect also engenders success. Positively valenced moods and emotions lead people to think, feel, and act in ways that promote both resource building and involvement with approach goals (Lyubomirsky, 2001). An individual experiencing a positive mood or emotion is encountering circumstances that he or she interprets as desirable. In these situations, as Fredrickson

(2001) described, people are ideally situated to “broaden and build.” In other words, because all is going well, individuals can expand their resources and friendships; they can take the opportunity to build their repertoire of skills for future use; or they can rest and relax to rebuild their energy after expending high levels of effort. Fredrickson’s model (Fredrickson, 2001) suggests that a critical adaptive purpose of positive emotions is to help prepare the organism for future challenges (Lyubomirsky, et al., 2005).

Examples of happiness leading to success include a cross-sectional study by Staw and Barsade (1993), that found that, as rated by objective observers, those high in dispositional positive affect performed objectively better on a manager assessment task (including leadership and mastery of information). Longitudinal studies corroborate the correlational literature linking happiness and desirable work outcomes. In a prospective longitudinal study, employees high in dispositional positive affect had jobs 1.5 years later that allowed them more autonomy, meaning, and variety (Staw, Sutton, & Pelled, 1994).

In order to research the phenomenon of happiness it is usually appropriate to use a subjectivist definition of happiness, one that relies on self-reports because happiness is primarily a subjective phenomenon and one that should be judged from the perspective of the person (Lyubomirsky, Sheldon, et al., 2005). There are two main approaches adopted by researchers when studying happiness: the hedonic one and the eudemonic one.

According to the former, well-being consists of subjective happiness, pleasure, and pain avoidance, which equates happiness with the experience of positive emotions versus negative emotions and with satisfaction in various domains of one’s life (Fava & Ruini, 2003). According to the eudemonic perspective, well-being consists of fulfilling one’s potential in a process of self-realization; this includes concepts such as self-actualization,

meaningfulness and vitality. These two approaches are different and have led to different areas of research, but they complement each other in defining well-being (Fava & Ruini, 2003). Both hedonism and eudemonia are routes to happiness and both points of view are supported by the data (Ryan & Deci, 2000).

Recently Peterson, Park, and Seligman, (2005) have described a third orientation to happiness, the pursuit of engagement. This third orientation surfaced from the literature on flow, which is the psychological state that accompanies highly engaging activities, where time passes more quickly (Csikszentmihalyi, 1990). People in this flow state have their attention focused on the activity and the sense of self is lost, with the aftermath of the flow experience being extremely invigorating (Peterson et al., 2005). Flow is not the same as sensual pleasure and although the pursuit of meaning (eudemonia) can produce flow, it does not always do so, for example, volunteering in a hospice (Peterson et al., 2005).

Seligman, Rashid and Parks (2006) proposed that happiness could be broken down into three scientifically manageable components, or three distinct and better defined routes to happiness, including positive emotion (the pleasant life), engagement (the engaged life) and meaning (the meaningful life). Peterson et al. (2005) found that each of these three orientations individually predicted life satisfaction and that the most satisfied people are those who orient their pursuits towards all three, with the greatest weight carried by engagement and meaning.

The pleasant life consists of having large amounts of positive emotion about the present, past and future, and learning the skills to amplify the intensity and duration of these emotions. The positive emotions about the past include satisfaction, contentment,

fulfillment, pride, and serenity (Seligman et al., 2006). Positive emotions about the future include hope, optimism, faith, trust and confidence. Positive emotions about the present include satisfaction derived from immediate pleasure. The engaged life is a life that pursues engagement, involvement and absorption in work, intimate relations and leisure (Seligman et al., 2006). The third happy life in Seligman's theory involves the pursuit of meaning. This consists of using ones talents and strengths to belong to and serve something that one believes is bigger than the self, such as religion, politics, family, community and nation. Regardless of the particular institution one serves to establish a meaningful life, doing so produces a sense of satisfaction and a belief that one has lived well (Seligman et al., 2006).

Benefits of Happiness

Many researchers and thinkers have argued that the ability to be happy and contented with life is a central criterion of adaptation and positive mental health (Lyubomirsky, Sheldon et al., 2005). Happiness has numerous positive by-products that appear to benefit individuals, families and communities (Fredrickson, 2001; Lyubomirsky, King et al., 2005). Happiness is causal and brings many more benefits than just feeling good. Happy people are healthier, more successful and more socially engaged, and the causal direction runs both ways (Seligman et al., 2005).

In Lyubomirsky, King and Diener's (2005) meta-analysis, they suggest that happy people tend to be more successful and accomplish more across multiple life domains because positive affect causes success, and success also leads to happiness. This meta-analysis reviewed numerous studies and found that happy people gain tangible benefits in many different life domains from their positive affect, including higher odds of marriage

and lower odds of divorce, more friends, stronger social support and richer social interactions (e.g., Harker & Keltner, 2001; Marks & Fleming, 1999; Okun, Stock, Haring & Witter, 1984). Happy people are more active, and have more energy and flow (e.g., Csikszentmihalyi & Wong, 1991). Further support for the argument that happiness is integral to mental and physical health is that happy people tend to have more self-control and better coping abilities (e.g., Aspinwall, 1998; Fredrickson & Joiner, 2002; Keltner & Bonanno, 1997). Happy people also have stronger immune systems and even tend to live longer (e.g., Danner, Snowdon, & Friesen, 2001; Dillon, Minchoff & Baker, 1985; Ostir, Markides, Black, & Goodwin, 2000). Happy people are not self-centered, with the literature suggesting that happy individuals tend to be more cooperative, pro-social, and charitable (e.g., Isen, 1970; Williams & Shiaw, 1999). Positive moods and emotions lead people to think, feel and act in ways that promote both resource building and goal attainment (Seligman et al., 2005). Experiments have shown that induced positive affect widens a person's scope of attention, broadens behavioural repertoires (Fredrickson & Branigan, 2005) and increases intuition (Bolte, Goschkey, & Kuhl, 2003) and creativity (Isen, Daubman, & Nowicki, 1987).

Benefits of Happiness at Work

Happy people also have superior work outcomes, including increased productivity, higher quality of work and higher income (e.g., Estrada, Isen, & Young, 1994; Staw, et al. 1995). According to cross-sectional evidence, happy workers enjoy multiple advantages over their less happy peers (Lyubomirsky, King et al., 2005). Individuals who are high in subjective well-being are more likely to secure job interviews, be evaluated more positively by superiors once they have obtained a job,

show superior performance and productivity and handle managerial jobs better (Lyubomirsky, King et al., 2005).

Even before entering the workforce, people with high subjective well-being are more likely to graduate from college (Frisch, Clark, Rouse, Rudd, Paweleck, Greenstone et al. 2004), and secure better jobs than less happy individuals (Lyubomirsky, King et al., 2005). There are also a number of studies showing that happy people are more satisfied with their jobs (e.g., Connolly & Viswesvaran, 2000; Tait, Padgett, & Baldwin, 1989; Weiss, Nicholas, & Daus, 1999).

Happy people are also more likely to succeed once they have obtained a job. For example, Staw et al., (1995) found that the managers of high positive affect employees gave them higher evaluations for work quality, productivity, dependability and creativity. Interestingly, work performance may be more strongly predicted by well-being than by job satisfaction. Wright and Cropanzano (2000) found in two studies that job performance, as rated by supervisors, was significantly correlated with well-being, but uncorrelated with measures of job satisfaction.

Other evidence of happy people's relative success on the job includes Deluga and Masons' (2000) finding that dormitory resident advisors were rated by residents as more effective if they were high on trait positive affect. As well, Totterdell (2000) found that happier cricket players had higher batting averages. Another study found that service departments with happy leaders were more likely to receive high ratings from customers and that the positive affective tone of the sales force was an independent predictor of customer satisfaction (George, 1995). Furthermore, recent research has found that the CEOs of manufacturing companies with high positive affect were relatively more likely

to have employees who rated themselves as happy and healthy, and who reported a positive, warm climate for performance and this positive organizational climate was correlated with productivity and profitability (Foster, Hebl, West, & Dawson, 2004).

Happy workers are also less likely to show job withdrawal behaviours such as absenteeism, turnover and job burnout, and have also been found to be better organizational “citizens,” that is, people who commit acts that go beyond the requirements of the job (Donovan, 2000; Locke, 1975; Porter & Steers, 1973; Thoresen, Kaplan, Barsky, Warren, & de Chermont, 2003).

Notably, both positive affect on the job and chronic happiness have been found to predict job satisfaction (Weiss et al., 1999). For example, Murphy, Athanasou & King (2002) found that positive affect predicts organizational citizenship behaviour and participation behaviours. In addition, studies have found that habitual positive affect at work is key to understanding “organizational spontaneity”, including helping behaviours, protecting the organization, making constructive suggestions and developing one’s own abilities within the organization (Donovan, 2000; George & Brief, 1992).

Happiness or well-being is also a strong predictor of job performance, and recent literature suggests general happiness (happiness with regard to all aspects of one’s life both on and off the job) is an even stronger predictor of job performance than job satisfaction (Cropanzano, James, & Konovsky, 1993; Judge, Thoresen, Bono, & Patton, 2001; Wright, 2005). The relationship between affect and performance is also thought to be bidirectional, and this relationship has been called the happy/productive worker hypothesis, which is the belief that, all things being equal, workers who are happy with their work should have higher job performance (Wright, Cropanzano, & Bonnet, 2007).

Wright et al. (2007) found that well-being moderated the relationship between job satisfaction and job performance. In order to explain this relationship, the authors used Fredrickson's (2001) broaden-and-build theory of positive emotions. The broaden-and-build theory asserts that positive emotions are evolved psychological adaptations that increased our ancestors' ability to survive (Fredrickson & Losada, 2005). Positive emotions had this specific effect because unlike negative emotions, which narrow people's thoughts and behavioural urges toward specific actions that were life-preserving (e.g. fight or flight), positive emotions widen the array of thoughts and action repertoires (e.g. explore and play), therefore increasing enduring personal resources such as social connections, coping strategies, and environmental knowledge (Fredrickson, 2001; Fredrickson & Losada, 2005).

The benefits of broadened thought-action repertoires emerge over time, and importantly are durable, as they outlast the transient emotional states that led to their acquisition. The critical adaptive purpose of positive emotions was to help prepare our ancestors for future challenges, giving them greater chances of survival (Fredrickson, 2001; Lyubomirsky, King et al., 2005). Therefore positive emotions are more than just signals for well-being, they are evolved psychological adaptations (Fredrickson & Branigan, 2005) that help people flourish, and live within an optimal range of human functioning (Fredrickson & Losada, 2005). Fredrickson and her colleagues (Fredrickson & Branigan, 2005; Fredrickson & Losada, 2005) demonstrated that relative to neutral states, positive feeling states broaden and expand upon individuals' momentary thought-action repertoires, while negative feeling states narrow these same mechanisms. Fredrickson's model suggests that well-being may not only have a main effect on job

performance but it also provides a theoretical framework for the moderating affect of well-being (Wright et al., 2007).

Historical Sources of Pessimism

From the above review, happy individuals appear more likely to be flourishing people, both inwardly and outwardly. Thus, enhancing people's happiness indeed seems like a worthy scientific goal (Lyubomirsky, Sheldon et al., 2005). Unfortunately, relatively little scientific support exists for the idea that people's happiness level can be changed long-term and there is considerable scientific pessimism over whether it is even possible to affect sustainable increases in happiness (Lyubomirsky, Sheldon, et al., 2005). There are three beliefs that illustrate this pessimism: a genetically determined set point, literature on personality traits and the concept of the hedonic treadmill (Lyubomirsky, Sheldon et al., 2005).

Lykken and Tellegen (1996) provided evidence, based on twin studies, that the heritability of happiness may be as high as 80%, although it is more widely accepted to be 50%. This suggests that for each person there is indeed a chronic or characteristic level of happiness, and therefore, although there may be substantial variation around this baseline level in the short term, in the long term people perhaps cannot help but return to their genetic set point (Lyubomirsky, Sheldon et al., 2005).

The second and closely related source of pessimism comes from the literature on personality traits. Traits are cognitive, affective and behavioural complexes that are consistent across situations and across the life span, and may account for part of the stability of the genetic set point. In support of this belief, McCrae and Costa (1990) have shown impressive stability for the "Big Five" traits, including the two traits most closely

related to happiness: neuroticism and extraversion. Because of the close relationship between these traits and happiness, people also tend to maintain the same relative level of happiness over time.

The third source of pessimism comes from the concept of the hedonic treadmill (Brickman & Campbell, 1971), which suggests that any gains in happiness are only temporary, because humans so quickly adapt to change. Thus, although new circumstances may temporarily cause people to become happier or sadder, they rapidly adjust and the effect of these new circumstances on happiness then diminishes quickly or disappears entirely. For example, Brickman, Coates, and Janoff-Bulman (1978) showed that, after one year, lottery winners were no happier than controls. Further evidence of hedonic adaptation comes from findings of remarkably small correlations between happiness and wealth (Diener & Lucas, 1999). These ideas suggest that trying to become happier may be a futile struggle and, indeed, it has been argued that pursuing happiness may backfire altogether; if the pursuit becomes a conscious effort or goal it may distract people from enjoying the moment (Lyubomirsky, Sheldon et al., 2005).

Sustainable Happiness Model

Despite the compelling reasons for why happiness cannot be increased, Lyubomirsky, Sheldon, and Schkade (2005) challenge these reservations with their sustainable happiness model. According to this model, chronic happiness, or the happiness one shows during a specific period in life, is influenced by three factors: set point, life circumstances and intentional activities (Boehm & Lyubomirsky, 2009). Chronic happiness is more enduring than momentary or daily happiness, but is somewhat malleable over time and thus is amenable to meaningful pursuit. According to this

definition, although it is possible to alter a person's chronic happiness levels, it is much more difficult to do so than to alter their happiness levels at a particular moment or on a particular day (Lyubomirsky, Sheldon et al., 2005). Operationally defined, "chronic happiness level is a person's retrospective summary judgements regarding mood and satisfaction during some recent period or as the average of momentary judgements of mood and satisfaction made at several times during a selected period" (Lyubomirsky, Sheldon et al., 2005, p. 116).

As previously stated, the happiness set point is genetically determined, and is assumed fixed and stable over time, and immune to influence or control. Consistent with this assumption, twin studies (Headey & Wearing, 1989) and studies of the effects of life events on well-being (Brickman et al., 1978) indicate the long-term stability of happiness (Lyubomirsky, Sheldon et al., 2005). Since set point is fixed and most likely reflects personality traits (e.g., extraversion and negative affectivity) that are rooted in neurobiology and highly heritable, set point is unlikely to be a fruitful avenue to pursue increases in happiness (Boehm & Lyubomirsky, 2009; Lyubomirsky, Sheldon et al., 2005).

The next influence on chronic happiness level is a person's life circumstances, which are happiness relevant circumstantial factors, or stable factors of an individual's life, such as age, gender and ethnicity (Lyubomirsky, Sheldon et al., 2005). This also includes personal history, the life events that affect happiness, and life status variables, such as marital status, job security, income and health (Lyubomirsky, Sheldon et al., 2005). Previous cross-sectional research has linked all of these circumstantial factors to subjective well-being. For example, empirical evidence shows that middle-class

individuals are somewhat happier than working class individuals (e.g., Warr & Payne, 1982). Married people are happier than those who are single, divorced or widowed, and healthy people are happier than those who are sick (e.g., Mastekaasa, 1994; Okun et al, 1984). Counter to many people's beliefs about well-being, a person's circumstances generally account for only 10% of individual differences in chronic happiness (Diener & Lucas, 1999). These relatively small effects can be largely accounted for by hedonic adaptation (Lyubomirsky, Sheldon et al., 2005). Given that circumstances are relatively constant, they are more susceptible to adaptation and, hence, have comparatively little impact on happiness. Therefore, circumstantial factors also do not appear to be a promising route through which sustainable happiness can be achieved (Boehm & Lyubomirsky, 2009).

The third and arguably the most promising means of altering one's happiness level is intentional activity (Lyubomirsky, Sheldon et al., 2005). Interestingly, although the average person easily adapts to positive changes in their lives, there are individual differences that have been found in degrees of adaptation. This suggests that people vary in how they intentionally behave in response to changing circumstances (Boehm & Lyubomirsky, 2009). Intentional activity includes a wide variety of things that people do and think in their daily lives. These are discrete actions or practices in which people can choose to engage, and that require some degree of effort to enact (Lyubomirsky, Sheldon et al., 2005). Intentional activity can be behavioural (practicing acts of kindness), cognitive (expressing gratitude) or motivational (pursuing intrinsic significant life goals). The benefits of intentional activities are that they are naturally variable and tend to be episodic (Boehm & Lyubomirsky, 2009). These two characteristics alone have the

potential to work against adaptation, as it is more difficult to adapt to something that is continuously changing (Boehm & Lyubomirsky, 2009).

There is good reason to believe that intentional activity can influence well-being. For example, when people are asked to rate various aspects of recent positive changes in their activities (starting a new fitness program) versus positive changes in their circumstances (moving to a nicer apartment), they described their activity-based changes as more “variable” and less prone to adaptation (Sheldon & Lyubomirsky, 2006). As well, activity-based changes predicted well-being for a longer period, as compared to circumstance-based change. Therefore, the sustainable happiness model provides a theoretical framework for experimental intervention research on how to increase and maintain happiness (Lyubomirsky, Sheldon et al., 2005).

Intentional Activities to Increase Happiness

Preliminary evidence suggests that happiness interventions involving intentional activities can be effective in increasing and sustaining happiness. One of the first researchers to teach volitional strategies to increase happiness was Fordyce (1977; 1983). Fordyce taught “14 Fundamentals” of happiness (e.g., socializing, practising optimism, being present-orientated and reducing negativity) to students. Results showed that students who were taught the happiness increasing strategies demonstrated an increase in happiness compared with students who received no training. These pioneering studies provide preliminary evidence that people have the potential to increase their short-term happiness through “training programs” (Boehm & Lyubomirsky, 2009).

Boehm, Lyubomirsky, and Sheldon (2008) have examined several intentional happiness-enhancing activities in the laboratory. For example in a randomized controlled

intervention, participants were invited to regularly practise random acts of kindness. Such activities were thought to impact happiness as they bolstered self-regard, increased positive social interaction and increased charitable feelings towards others. The researchers found that the frequency of the acts of kindness had no bearing on well-being, but that the variety of acts influenced the extent to which participants became happier, and that happiness was increased and maintained for one month (Boehm et al., 2008).

Lyubomirsky, Sheldon et al. (2005) completed another laboratory study examining the effect of expressing gratitude on well-being. Gratitude was predicted to bolster happiness because it promotes the savouring of positive events, and may counteract hedonic adaptation by allowing people to see the good in their life rather than taking it for granted (Lyubomirsky, Sheldon et al., 2005). Participants were asked to keep a gratitude journal once a week, three times a week or not at all. Results showed that only participants who counted their blessings once a week, rather than three times, showed an increase in well-being (Lyubomirsky, Sheldon et al., 2005).

Sheldon and Lyubomirsky (2006) investigated another intentional activity that was predicted to increase happiness, the practise of visualizing and writing about one's best possible self, or BPS (Markus & Nurius, 1986). The four week intervention had three conditions: a control, a gratitude condition and the best possible self condition where participants were encouraged to consider desired future images of themselves (a process that presumably enhances optimism and helps integrate one's priorities and life goals). Results indicated that participants in both experimental conditions reported increased positive feeling; however, these increases were only statistically significant among those who visualized their BPS. Although this research shows that happiness can

be increased using intentional activity, whether it can be increased for the long-term is unknown.

Happiness Interventions in Other Settings

A few therapies have integrated happiness interventions into the treatment of clinical issues. For example, Fava and colleagues (Fava, 1999; Fava & Ruini, 2003) developed a well-being therapy, which is based on Ryff's (1989) multidimensional model of psychological well-being encompassing six dimensions: autonomy, personal growth, environmental mastery, purpose in life, positive relations and self-acceptance. The goal of this therapy is to improve the patients' levels of psychological well-being according to these dimensions, using cognitive-behavioural techniques. It has been applied as a relapse-prevention strategy in the residual phase of affective (mood and anxiety) disorders, as an additional ingredient of cognitive behavioural packages (Fava & Ruini, 2003). Similarly, Frisch (2006) proposed quality of life therapy, which integrates a life satisfaction approach with cognitive therapy. Both Fava's and Frisch's approach explicitly target faulty cognitions, troubling emotions, or maladjusted relationships, offering a well-being component as a supplement (Seligman et al., 2006).

Seligman et al. (2006) created a therapy that contrasts these standard interventions because its major goal is to increase positive emotion, engagement and meaning, rather than directly targeting depressive symptoms. This therapy is known as positive psychotherapy (PPT). Positive psychotherapy rests on the hypothesis that disorders can be treated effectively not only by reducing negative symptoms, but also by directly and primarily building positive emotions, character strengths and meaning. Directly building these positive resources may successfully counteract negative symptoms and buffer

against the future reoccurrence of these symptoms (Seligman et al., 2006). Positive psychotherapy works “under the assumption that happiness is a scientifically unwieldy term and that its serious study involves dissolving the term into at least three distinct and better defined routes to happiness” (Seligman et al., 2005, p. 413). The three routes as mentioned previously are positive emotion and pleasure, engagement and meaning.

Seligman et al. (2005) tested the effects of positive psychotherapy interventions in a variety of settings, including informal student settings and clinical settings. Specifically, they conducted two face-to face studies on young adults with severe depression. One study included individuals with mild to moderate depression, while the other included individuals with severe depression. Delivered on the Web, positive psychology exercises relieved depressive symptoms for at least six months compared with placebo interventions where the effects lasted less than a week (Seligman et al., 2006). In the first study, positive psychotherapy significantly decreased levels of mild-to-moderate depression through a one year follow-up. In the second study, positive psychotherapy delivered to individuals produced higher remission rates than did treatment as usual, and treatment as usual plus medication among outpatients with major depressive disorder (Seligman et al., 2006). It also enhanced happiness and increased life satisfaction, and the effect size was moderate to large in both studies (Seligman et al., 2006).

Another setting in which positive psychotherapy was tested was with a general sample of the population via the internet. The study was a six-group, random-assignment placebo-controlled study that tested five happiness interventions, based on positive psychotherapy and one control exercise (Seligman et al., 2005). The authors found that three of the interventions lastingly increased happiness, and decreased depressive

symptoms. Together, these studies support that positive interventions can supplement traditional interventions to relieve suffering, and increase positive emotion, engagement and meaning (Seligman, et al. 2005; 2006).

The three interventions that increased happiness and decreased depressive symptoms were *using signature strengths in a new way*, *three good things* and a *gratitude visit* (Seligman et al., 2005). In the *signature strengths* intervention, participants were asked to take an inventory of character strengths online at www.authentic happiness.org, and received individualized feedback about their top five signature strengths (Peterson et al., 2005). They were then asked to use one of these strengths in a new and different way every day for one week. The second exercise, *three good things*, had participants write down three good things and their causes every night for one week. In addition, they were asked to provide a causal explanation for each good thing (Seligman et al., 2005). Both of these exercises increased happiness and decreased depressive symptoms for six months. The third exercise, that caused a large positive change for one month, was the *gratitude visit*, where participants were given one week to write and then deliver a letter of gratitude in person to someone who had been especially kind to them, but had never been properly thanked (Seligman et al., 2005).

These positive psychotherapy interventions are thought to be effective because human beings are naturally biased toward remembering the negative, attending to the negative and expecting the worst (Seligman et al., 2006). This makes evolutionary sense as anticipating disaster increased our ancestor's chance of survival. Several of the exercises in positive psychotherapy aim to re-educate attention, memory and expectations away from the negative toward the positive and the hopeful (e.g. three good things)

(Seligman et al., 2006). The mechanisms of other positive psychotherapy exercises are likely more external and behavioural, such as increasing clients' awareness of their signature strengths, so they can better use their abilities, leading to an upward spiral of engagement and positive emotion (Seligman et al., 2006). The long-term benefits of these interventions were found to be mediated by the continued practise of the intervention (Seligman et al., 2006).

The Study

The purpose of this study was to address the question of whether or not workplace happiness can be increased and sustained. Specifically, drawing on a range of studies showing the effectiveness of positive psychotherapy interventions (e.g., Seligman et al, 2005; 2006), this research evaluated the effectiveness of similar interventions in a sample of working individuals. Therefore, the goal of this study is to use a number of specific interventions from Seligman's positive psychotherapy (Seligman et al., 2005) with a working population to attempt to increase chronic happiness levels at work.

Specifically the two interventions that were used in this study were the *three good things* intervention and a modified version of the *gratitude visit* intervention. These two interventions were chosen as they are general enough to transition from a clinical and general population to a working population. It was proposed that the positive psychotherapy interventions would increase and sustain happiness at work over an extended period of time (1 month). The effectiveness of these two interventions was evaluated against a neutral control condition using a pre-post design. Therefore, it was hypothesized that relative to the control condition, participants in each of the two

experimental conditions will report increases in job related and general positive affect, and that these increases would remain elevated through the 1-month follow-up.

This research project is important to the field industrial/organizational psychology and psychology in general because it addresses a gap in the literature. While many studies have shown that happy workers are more productive and gain better work outcomes, no study to the knowledge of this researcher has ever tried to actually increase chronic happiness levels of people at work (e.g., Connolly & Viswesvaran, 2000; Lyubomirsky, et al., 2005; Tait, et al., 1989; Weiss, et al., 1999). Knowing the benefits of being happy at work, this research is an important step in trying to create these positive outcomes for working individuals and, in turn, for the organizations they work in. The benefits of increased happiness to both workers and employers are vast, and therefore the ability to increase worker happiness could greatly impact organizational practices and create a new stream of industrial/organizational psychology research.

Method

Participants and Recruitment

Ninety one workers representing a wide variety of industries participated in this study. Partial data for 10 participants was excluded from analyses because these participants did not complete the whole study. There was also missing data for two participants and therefore the final sample in which the analyses was completed was 79. Eight widely varying job titles were given, with the majority of participants ($n = 37$) choosing “other” and listing their job title. The job titles included blue collar and white collar, and managerial and non managerial positions. The most widely chosen occupation after “other” was consultant ($n = 8$). Job titles included director, labourer, service

representative and supervisor. A total of 79 participants were remaining after checking the assumptions for multivariate analysis of variance. Of these remaining 79 participants, the majority were from Canada ($n = 65$), with other countries of residence including the United States ($n = 13$) and England ($n = 1$). The mean age of the participants was 34, $SD = 12.423$, with the mean of years employed ($M = 4.81$, $SD = 5.60$), with most participants having been employed for 2 years or less ($n = 24$). A total of 63 females and 16 males completed the study, with gender fairly evenly distributed amongst the groups (Control = 22 females, six males; Experimental 1 = 21 females, seven males; Experimental 2 = 20 females, three males).

The pre- and post-measures were administered electronically to respondents over the internet. The initial phase of data collection began by soliciting friends and family to partake in the study via an e-mail that outlined the purpose of the study. Initially family and friends were asked to forward the original e-mail to other friends that fit the sampling criteria (i.e. working full-time). The email (see Appendix A) described the purpose of the research and included assurances of confidentiality and anonymity, and recommended that participants create a proxy email address with an anonymous name that they could use to complete the study. The participants were then emailed the survey link to their proxy email address if it was created or the email address of their choice. The link navigated participants to the “SurveyMonkey” site (www.surveymonkey.com). Once the participants inputted the password, the survey opened to an informed consent form (see Appendix B), which once read and agreed to, then opened into the rest of the survey.

The demographic information that was collected included age, sex, occupation, number of hours worked, length of time employed in current position, size of present

company, and type of organization (See Appendix C). The questionnaire consisted of three measures, job affective well-being (JAWS; Van Katwyk, Fox, Spector, & Kelloway, 2000) (See Appendix D), job satisfaction (Warr, Cook, & Wall, 1979) (See Appendix E), and general subjective happiness (SHS; Lyumbomirsky & Lepper, 1999) (See Appendix F). The process of recruitment using the snowball technique continued for a period of two months when the appropriate sampling size was reached.

The desired sample size for this experiment is 78 participants (26 participants per three conditions) and the participants were put into conditions controlling for gender. The decision of a sample size of 78 participants was reached by completing a power analysis, using G*Power (Erdfelder, Faul, & Buchner, 1996). The power analysis was completed using a medium effect size of .5 and .7 power.

Procedure

This study was a quasi-experimental control group design with a pre-test and two post-tests. There were three different groups, two experimental conditions and a control condition. The participants were randomly put into each group so that there was an equal number of participants per group. The first stage of the study had participants complete a questionnaire with the demographic information presented in the first section of the survey following informed consent.

After completing the initial measures on SurveyMonkey, the participants were emailed instructions for the completion of their assigned intervention. All conditions required the participants to email the researcher six times with their completed interventions within a 10 day time frame. In the first experimental condition, participants were asked to describe three good things that happened to them during their work day

and what caused them, and email this information to the researcher (See Appendix G). In the second experimental group, the participants were asked to think of someone they work with, toward whom they feel grateful, and to then thank them in person (See Appendix H). They were asked to show this gratitude six times over a 10 day period and it was recommended that they thank someone new each time. They were then to email the researcher a description of their display of gratitude. This included a description of who they thanked, the reason they thanked them, the events leading up to the display of gratitude, and how they felt before and after. The last group in the study was the control group, whose members were required to email the researcher (six times) a factual description of three activities they engaged during that workday (See Appendix I). All participants received an email reminder from the researcher on the day they were supposed to complete their intervention.

When the six tasks were completed, all participants received an email link to SurveyMonkey to complete the questionnaire again. Finally, at the last stage of the study, one month after the completion of their intervention, participants received an email link to “SurveyMonkey” to complete the questionnaire for a final follow-up.

Various security issues were addressed to ensure confidentiality of the results. “SurveyMonkey”, the website the survey was administered through, was password protected, and only respondents that had received an email invitation were provided the link and corresponding password. In order to assure confidentiality and anonymity of respondents, safeguards such as the encryption of data and other security features specific to “SurveyMonkey” were applied. The reporting of results is in aggregate form to maintain the anonymity of respondents. In addition, participant names were not collected and,

therefore, will never be associated with any data files. Some participants email address did have their names, however only the principle investigator saw the email address and therefore the names were kept confidential.

Measures

The Job-related Affective Well-being Scale (JAWS; Van Katwyk, Fox, Spector, & Kelloway, 2000). The JAWS is a 20-item (short version) measure designed to assess people's emotional reactions to their job. Each item is an emotion, and respondents are asked how often they have experienced each emotion at work over the prior 30 days. Responses are made with a five-point scale with anchors *Never, Rarely, Sometimes, Quite often, Extremely often or Always*. The JAWS includes a wide variety of emotional experiences, both negative and positive. The scale was scored by creating four subscales, with each scale including five items. The four subscales are titled High Pleasurable- High Arousal, High Pleasurable- Low Arousal, Low Pleasurable- High Arousal and Low Pleasurable- Low Arousal. The reliability of the overall scale has been found to be .95 (Van Katwyk et al., 2000).

Job satisfaction. The 16-item Warr-Cook-Wall job satisfaction scale was used to measure job satisfaction (Warr, et al., 1979). This scale covers principal job features including, physical working conditions, opportunity to use your ability and so on. The scale presents seven response options ranging from extremely dissatisfied to extremely satisfied; a mean score is computed (Patterson, Warr & West, 2004). The alpha coefficient of internal reliability was .92 (Warr et al., 1979).

Subjective Happiness Scale. (SHS; Lyumbomirsky & Lepper, 1999). The Subjective Happiness Scale is a four item scale with responses ranging from 1 to 7. The

first item on the scale asks people to characterize themselves using absolute ratings. The second item asks them to characterize themselves relative to their peers (Lyubomirsky & Tucker, 1998). The third and fourth items characterize happy people and unhappy people, and ask participants to what extent each characterization describes them (Lyubomirsky & Tucker, 1998). Responses to the four items, which showed good internal consistency (Cronbach's $A = .89$), are combined and averaged to provide a single composite score, ranging from 1.0 to 7.0. This measure of global subjective happiness has been found to have good to excellent validity and reliability in 14 studies ($N = 2,732$) (Lyubomirsky & Lepper, 1999).

Results

Data Cleaning

To analyze the data, the Multivariate Analysis of Variance (MANOVA) technique in SPSS Version 16.0 was used. Before running the MANOVA analysis, the nature of the data and its suitability for MANOVA was examined. The data were split by group (Control, Experimental 1, and Experimental 2) and then frequencies were computed to check for missing values, shape and variance. Missing data points were found and therefore respondents had to have a minimum number of items answered in order to be included in the analysis. For the JAWS, each participant was required to have an answer for four of five items on each of the four JAWS subscales; and for the Warr-Cook-Wall job satisfaction scale the participants were required to have answered 12 of the 16 items; for the SHS scale the participants were required to have three of four items answered. Before analysis the JAWS was coded into its four dimensions (high pleasure- high arousal; HPHA, high pleasure-low arousal; HPLA, low pleasure-high arousal; LPHA and

low pleasure- low arousal; LPLA). In addition, the negative items of the SHS scale were reverse coded. There were missing scale scores for JAWS subscales, SHS and Job satisfaction scales at the first follow up therefore two participants were removed leaving 79 participants to complete the analysis.

Sample sizes were different among the three groups: there were 28 Control group participants, 28 Experimental group 1 participants and 23 Experimental group 2 participants in the sample. These sample sizes are quite similar to one another and therefore the analysis was completed with these sample sizes. Histograms were checked for each scale (JAWS subscales, job satisfaction, SHS) and they all had a normal bell curve. Further, the largest skew from all three groups (Control, Experimental 1, and Experimental 2) was the SHS scale at Time 1 for the Control group, which only had a skew of -1.27. As well, the largest kurtosis from all three groups was the job satisfaction scale at Time 2 for Experimental group 2 and its kurtosis was only 2.25. The dependent variables in each group had reasonably balanced distributions, so there was no need to examine scatterplots for each pair of dependent variables within each group. Standardized scores for all the measures were saved and one univariate outlier was found using a criterion $z = 3.3$ ($\alpha = .001$). It was not removed as one univariate outlier would not distort the MANOVA analysis.

SPSS regression was used with the file split by group to check for multivariate outliers within each of the three groups. The RESIDUALS= OUTLIERS (MAHAL) instruction produced the 10 most outlying cases from each group. With 17 variables and a criterion $\alpha = .001$, critical $\chi^2 = 40.790$, no multivariate outliers were found. As a check for robustness, sample variances for each dependent variable were compared across the three

groups. For no dependent variables did the ratio of largest to smallest variances approach 10:1. The sample sizes were not equal between groups; however with very small differences in variances, the discrepancy in sample sizes does not invalidate the use of MANOVA. As long as group sizes are approximately equal, F is robust (Stevens, 1996). There were no problems with multivariate normality as an N of 20 on the smallest cell usually ensures robustness and the smallest cell of this data included 23 cases (Tabachnick & Fidell, 2007). As can be seen in Tables 1, 2 and 3, the three dependent variables (JAWS, Job satisfaction, SHS) have acceptable intercorrelations, as they are all moderately correlated (Tabachnick & Fidell, 2007).

Table 1

Correlation Matrix and Descriptive Statistics of Measures at Time 1

	JAWS HPHA	JAWS HPLA	JAWS LPHA	JAWS LPLA	Job Satisfaction	SHS	MEAN	SD
JAWS HPHA	1.00	.62**	-.23*	-.44**	.54**	.23*	3.14	0.87
JAWS HPLA		1.00	-.52**	-.63**	.59**	.41**	3.24	0.65
JAWS LPHA			1.00	.64**	-.53**	-.29**	2.03	0.65
JAWS LPLA				1.00	-.59**	-.42**	2.38	0.68
Job Satisfaction					1.00	.28**	3.79	0.63
SHS						1.00	5.18	1.16

Note. JAWS= Job Affective Well-Being Scale; HPHA= High Pleasure- High Arousal, HPLA= High- Pleasure- Low Arousal, LPHA= Low Pleasure- High Arousal, LPLA= Low Pleasure- Low Arousal, Job Satisfaction= Job Satisfaction Scale, SHS= Subjective Happiness Scale

** Correlation significant at the 0.01 level (2- tailed)

* Correlation significant at the 0.05 level (2- tailed)

Table 2

Correlation Matrix and Descriptive Statistics of Measures at Time 2

	JAWS HPHA	JAWS HPLA	JAWS LPHA	JAWS LPLA	Job Satisfaction	SHS	MEAN	SD
JAWS HPHA	1.00	.69**	-.39**	-.55**	.48**	.40**	3.15	0.78
JAWS HPLA		1.00	-.54**	-.57**	.53**	.44**	3.33	0.64
JAWS LPHA			1.00	.71**	-.54**	-.34**	1.96	0.61
JAWS LPLA				1.00	-.60**	-.42**	2.30	0.65
Job Satisfaction					1.00	.33**	3.77	0.68
SHS						1.00	5.27	1.07

Note. JAWS= Job Affective Well-Being Scale: HPHA= High Pleasure- High Arousal, HPLA= High- Pleasure- Low Arousal, LPHA= Low Pleasure- High Arousal, LPLA= Low Pleasure- Low Arousal, Job Satisfaction= Job Satisfaction Scale, SHS= Subjective Happiness Scale

** Correlation significant at the 0.01 level (2- tailed)

* Correlation significant at the 0.05 level (2- tailed)

Table 3

Correlation Matrix and Descriptive Statistics of Measures at Time 3

	JAWS HPHA	JAWS HPLA	JAWS LPHA	JAWS LPLA	Job Satisfaction	SHS	MEAN	SD
JAWS HPHA	1.00	.73**	-.40**	-.52**	.58**	.29**	3.06	0.77
JAWS HPLA		1.00	-.56**	-.68**	.57**	.53**	3.27	0.70
JAWS LPHA			1.00	.69**	-.53**	-.46**	1.96	0.61
JAWS LPLA				1.00	-.51**	-.46**	2.31	0.63
Job Satisfaction					1.00	.36**	3.70	0.69
SHS						1.00	5.27	1.05

Note. JAWS= Job Affective Well-Being Scale: HPHA= High Pleasure- High Arousal, HPLA= High- Pleasure- Low Arousal, LPHA= Low Pleasure- High Arousal, LPLA= Low Pleasure- Low Arousal, Job Satisfaction= Job Satisfaction Scale, SHS= Subjective Happiness Scale

** Correlation significant at the 0.01 level (2- tailed)

* Correlation significant at the 0.05 level (2- tailed)

The last step completed before running the repeated measures MANOVA was alpha reliability analysis of the scales (JAWS four subscale, Job satisfaction and SHS, at all three time levels). The table that follows shows these results. The reliability of all the scales is over .72, therefore, it can be concluded that all the scales used in this study are adequately reliable. To ensure the power of this analysis there are more cases than dependent variables in every cell (Tabachnick & Fidell, 2007). Finally, between each observation time, there was no evidence of a differential attrition rate between the three groups. Comparisons between participants who dropped out and those who remained in the experiment revealed no significant Time 1 differences on any of the dependent variables. This result was found by using t-tests.

Analysis

The results were examined using a 3 X 3 between within MANOVA, that is, 3 (within factors, TIME) X 3 (between factors, CONDITION), with seven dependent variables (four job affective well-being subscales, JAWS; job satisfaction, 16-item Warr-Cook-Wall job satisfaction scale; general subjective well-being, SHS). The effect being sought was the interaction between time and group at the multivariate level. Included in the analysis was a predetermined contrast. This was the merging of the two experimental conditions and then a comparison to the control condition. Specifically, this contrast looked at the difference of the two experimental conditions combined vs. the control at the pre-test (Time 1) and the initial post-test (Time 2) to determine if the interventions together differ from the control directly after the intervention was completed. That is, the analysis examined whether the interventions are increasing people's happiness compared to the control group.

Table 4

Reliabilities of Scales

	Time 1: Pre-test	Time 2: Post-test 1	Time 3: Post-test 2
JAWS- HPHA	.92	.91	.91
JAWS- HPLA	.78	.83	.89
JAWS- LPHA	.77	.83	.84
JAWS- LPLA	.72	.75	.74
Job Satisfaction	.89	.92	.92
SHS	.87	.91	.91

Note. JAWS = Job Affective Well-Being Scale: HPHA= High Pleasure- High Arousal, HPLA = High Pleasure- Low Arousal, LPHA = Low Pleasure- High Arousal, LPLA = Low Pleasure- Low Arousal, Job Satisfaction = Job Satisfaction Scale, SHS = Subjective Happiness Scale

The family-wise error rate for this analysis was set at .15 to examine the multivariate effects and the specified contrast, and the univariate effects were examined at the .05 level (Muller, Otto & Benignus, 1983). The family-wise error rate was set at .15 because choosing a nominal significance level enables a researcher to choose the desired type I error protection for a set of tests. For example, if three means were compared via three t-tests (as is the case in this study) each at the nominal level of .05, then the “family-wise” error rate is less than or equal to $3 \times (.05) = .15$ (Muller, et al., 1983).

To examine whether the positive psychotherapy interventions increased worker happiness, a repeated measures multivariate analysis of variance (MANOVA) was completed separately on all dependent variables (JAWS 4 subscales, Job satisfaction and

SHS). When interaction effects were found using Wilks' criterion, a simple interaction comparison was performed on the dependent variable. Significant results for Time at the multivariate level were not further interpreted because the effect of Time is confounded by Group.

The JAWS subscale High Pleasure- Low Arousal shows a significant multivariate effect for the Group x Time interaction, $F(4, 150) = 1.977, p = .101, \eta^2 = .050$. The other three JAWS subscales (High Pleasure- High Arousal, Low Pleasure- High Arousal & Low Pleasure- Low Arousal) had no significant effects. The job satisfaction scale shows a significant main effect for Time, $F(2, 75) = 2.422, p = .096, \eta^2 = .062$. There were no significant effects for the SHS scale.

Therefore, from these results, the only simple interaction effect to check is for the High Pleasure- Low Arousal subscale of the JAWS. These simple effects were tested using the SPSS MANOVA syntax procedure. First tested was the simple effect of Time at each level of Group; this tested whether there was a change over time in the means of each of the groups (Control group, Experimental group 1 and Experimental group 2). This analysis revealed no significant difference in the means of each of the groups over time. However, Experimental group 2 was approaching significance, indicating that the means were slightly changing over time, as shown in Table 5. The next simple effect tested was the effect of Group at each level of Time. Thus, this tested whether there are differences between the Groups for the JAWS HPLA subscale at the three Time intervals. Results indicated that there were no significant differences.

Along with the MANOVA, the predetermined contrast was also run on each of the dependent variables (JAWS subscales: HPHA, HPLA, LPHA & LPLA, Job

satisfaction & SHS) and was found to be non-significant for all dependent variables. The contrast was the merging of the two experimental conditions and then a comparison to the control condition, at Time 1 and Time 2.

Table 5

Means of JAWS subscale HPLA, Experimental Group 2 (Gratitude)

	Mean	SD
Time 1	3.163	0.622
Time 2	3.391	0.648
Time 3	3.272	0.640

With these results in mind, it was important to look at the means of each group, as depicted in Table 6, and determine if there were any patterns in the means that were not strong enough to be observed through hypothesis testing. The JAWS scale was the dependent variable most affected by the interventions. The JAWS High Pleasure- High Arousal subscale showed a mean increase for the Control group and Experimental group 2, from Time 1 (pre-test) to Time 2 (post-test), that lowered again at Time 3 (second post-test). The means at Time 3 were lower than Time 2, but were still higher than at Time 1, indicating that there was a trend of increasing happiness, as defined by pleasure and arousal, over time. This mean increase was not significant. For the JAWS High Pleasure- Low Arousal means, the Control group and Experimental group 1 did not show increases over time; however Experimental group 2 showed an increase in the mean at Time 2, that lowered again by Time 3. This indicates that there was an increase in happiness, as defined by pleasure, right after the intervention, but these effects did not last over the following month. The other 2 subscales of the JAWS, i.e. Low Pleasure- High Arousal and Low Pleasure- Low Arousal, showed no systematic differences in their means.

An inspection of the job satisfaction scale means show similar results to the JAWS positive subscales. Experimental group 2 showed a mean increase from Time 1 to Time 2 that declined again at Time 3, while the Control group and Experimental group 1 showed no increase and even a slight decrease over Time.

Finally, the SHS scale also showed similar mean results. The Control group and Experimental group 1 do not show mean increases over time, while Experimental group 2 had a mean increase from Time 1 to Time 2 that decreases at Time 3. This decrease at Time 3, however, did not return to Time 1 level.

Discussion

The goal of this study was to use two of the three positive psychotherapy interventions that were effective in the internet-based study from Seligman et al. (2005) with a working population. The two interventions used were the *three good things* intervention, where participants wrote out three good things that happened during their workday and a modified version of the *gratitude visit* intervention, where participants thanked co-workers. These two interventions were evaluated against a neutral control group.

It was hypothesized that the positive psychotherapy interventions would increase and sustain happiness at work over an extended period of time (one month), and that, relative to the control condition, participants in the two experimental conditions would report increases in job related and general positive affect. This hypothesis was partially supported as one measure (the JAWS subscale High Pleasure- Low Arousal) had a significant Time by Group interaction, indicating that there were group differences over time. The simple interaction effects were not significant, but the simple effect that tested

Table 6

Means and Standard Deviations for Outcome Variables as a Function of Group and Time

Measure	Control n= 28		Exp 1-Three good things n= 28		Exp 2- Gratitude n= 23	
	M	SD	M	SD	M	SD
JAWS HPHA						
T1	3.19	0.62	3.36	0.70	3.16	0.62
T2	3.36	0.58	3.25	0.70	3.39	0.65
T3	3.26	0.63	3.28	0.84	3.28	0.64
JAWS HPLA						
T1	3.11	0.99	3.14	0.68	3.18	0.96
T2	3.03	0.71	3.14	0.77	3.33	0.89
T3	3.00	0.77	3.03	0.83	3.16	0.73
JAWS LPHA						
T1	2.04	0.71	2.08	0.73	1.97	0.49
T2	1.98	0.64	2.01	0.62	1.87	0.58
T3	1.94	0.71	1.98	0.59	1.97	0.51
JAWS LPLA						
T1	2.41	0.68	2.34	0.75	2.40	0.59
T2	2.41	0.55	2.26	0.79	2.21	0.57
T3	2.35	0.61	2.28	0.72	2.30	0.57
Job Satisfaction						
T1	3.80	0.70	3.76	0.67	3.86	0.51
T2	3.75	0.69	3.64	0.74	3.95	0.55
T3	3.70	0.73	3.63	0.66	3.79	0.67
SHS						
T1	5.16	1.45	5.22	0.94	5.16	1.04
T2	5.26	1.20	5.21	1.07	5.35	0.93
T3	5.23	1.22	5.31	0.99	5.28	1.93

Note. JAWS = Job Affective Well-Being Scale: HPHA= High Pleasure- High Arousal, HPLA = High Pleasure- Low Arousal, LPHA = Low Pleasure- High Arousal, LPLA = Low Pleasure- Low Arousal, Job Satisfaction = Job Satisfaction Scale, SHS = Subjective Happiness Scale

whether there was a change over time in the means of each of the groups showed that Experimental group 2, the *gratitude* condition, was approaching significance.

After the analysis, the means of the groups over time were reviewed. The means showed that the *gratitude* condition (Experimental group 2) was the only group with the trend of increasing in happiness over time and this mean increase, although not significant, was shown across all dependent variables, except the JAWS HPLA and HPHA. This suggests that the *gratitude* intervention may have been effective in increasing happiness, however this effect was not statistically significant.

Specifically, the *gratitude* intervention was having its strongest effect on the JAWS positive subscales. The fact that the effects of this intervention seem to be happening for only the two positive subscales of the JAWS, the “high pleasure” scales, is logical in that, an intervention designed to increase happiness would increase “pleasure” at work. Another reason that the JAWS scale was the only scale for which there was a *Group by Time interaction* might be because it was only the dependent variable designed to capture well-being at work, and work related happiness was what the interventions were trying to increase. The other scales included in the analysis were examining general happiness (SHS) and job satisfaction, so the JAWS may have been the only scale specific enough to capture the effect being sought. Job satisfaction was included in the analysis because of its close relationship to well-being, while a general happiness scale was included in an effort to capture any overall increase in happiness, not just happiness at work.

Interventions re-examined

Control group. A review of the means provided further insight into reasons for the non-significance of the simple effects test. Specifically from reviewing the means, there was a noticeable problem with the Control group. Although the Control group's task (writing about daily activities) was not supposed to have an effect on the participants' happiness, it appeared that this task might have affected happiness. The means for the Control group increased from Time 1 to Time 2 for the SHS and the HPHA JAWS subscale. Another indicator of this effect was that some participants described their enjoyment in completing the Control group task in their emails to the researcher with statements such as; "I like writing down what I do on a daily basis, it keeps me focused" or "Writing down my daily activities makes me realize that I made the right decision by taking this job". Although the Control group means did not increase for all dependent variables the increase found may have been enough to have affected the results.

Three good things intervention. The second issue that is evident from the review of the means is that the *three good things intervention* (Experimental group 1) did not appear to have any affect on happiness, as the means of the dependent variables for Experimental group 1 either slightly decreased or stayed the same. These results differ from those of Seligman et al. (2005) because they found that their *three good things* intervention was successful at increasing happiness for 6 months. This begs the question, why was this intervention successful in their study but not in the current study. There could be a number of reasons for these results. Firstly, because the *three good things* intervention was completed by the participant privately, it would not have had any positive effects on the participant's workplace, whereas the *gratitude* intervention caused

individuals to engage with others at work. Seligman's participants also completed the *three good things* intervention alone (with positive results), however, where the difference may exist is that Seligman's participants were considering *three good things* in their entire life, while in this study the participants were only considering *three good things* at work. This may have affected the results, as work is only a part of a person's life, and therefore the intervention may have not been strong enough to increase happiness.

Another reason the *three good things* intervention may have been unsuccessful is that having the participants complete this task only six times over two weeks was not frequent enough to produce an effect. Seligman et al. (2005) had their participants complete the intervention every day for one week. So it is possible that with this intervention, a higher task frequency is better.

Gratitude intervention. The results of the *gratitude* intervention were quite promising and this may have been because this intervention caused changes in the environment. Generally speaking, while at work, individuals are required to engage with people they may otherwise not interact with and therefore the reason the gratitude condition had somewhat better results is because it caused people to engage at work positively. That is, because people were forced to interact in positive ways it may have positively affected the overall work environment. For example, the participants who thanked people felt happier and the people who were thanked by the participants may have also felt better themselves. Therefore, this intervention in the workplace may have helped to decrease negative workplace behaviours such as incivility and job withdrawal. As well this intervention may help increase positive work behaviours, through other

modeling the gratitude behaviours. Past research has shown that happy workers are less likely to show job withdrawal behaviours such as absenteeism, turnover and job burnout (Donovan, 2000; Locke, 1975; Porter & Steers, 1973; Thoresen, et al., 2003), however more research is needed to see if displaying gratitude at work can positively increase the overall work environment.

In hindsight, an overall problem that may have negatively affected the results was that the JAWS scale specifically asked participants to think about the last 30 days when completing the scale. It may have been more useful, especially at the first post-test (Time 2) to have the participants report on the last two weeks, as that was the intervention period.

The results of the gratitude condition were promising and specifically from reviewing the means, the *gratitude* condition showed increased happiness from Time 1 to Time 2 for all dependent variables, except for the JAWS subscales LPHA and LPLA. These mean increases in happiness were shown through to Time 3, except for the dependent variables, SHS and the JAWS subscale HPHA. However, these mean increases were not significant and therefore future research is needed. What is also interesting about the *gratitude* condition is that not only did happiness increase at Time 2, but the increase in the means is noticeably larger than for the other two groups. That is, the means for Experimental group 2, the *gratitude* condition, were larger than the means of the other two groups (Experimental group 1 and Control group) at Time 2.

This result is promising in that it appears that the *gratitude* condition did increase happiness (although this results was not significant), which was sustained for half the dependent variables. This is not unlike the results from Seligman et al. (2005), as they

also found that their gratitude condition showed increased happiness at the first follow-up. However, it did not last to the six month follow-up. One reason that the increase in happiness from Time 1 to Time 2 was not always continued through to Time 3 may be understood by reviewing the Seligman et al. (2005) study. They looked at why the increase in happiness they found in the *three good things* condition was continued until their six month follow-up and the major reason this increase was sustained was because some participants carried on completing their interventions, even though they were only asked to do it for a week. Therefore, the degree to which participants actively continued their assigned exercise on their own beyond the prescribed one-week period mediated the long-term benefits. Although the question of whether participants continued their assigned intervention was not included in this research, perhaps the participants in this study who continued to display gratitude over the one month follow-up were the ones who continued to have the elevated happiness levels.

Limitations

There are a number of design issues that may have also caused the lack of significant results in this study. The first issue may have been that the study was completed online. With an online study that is longitudinal, it was difficult to ensure people were completing their tasks on time and that they were completing the tasks correctly. Also, it may have been more challenging for participants to voice questions they had about how to complete their intervention. These factors were shown in the results, as some participants did not complete the tasks as described and, most noticeably, people were not completing their tasks within the desired time frame. Some participants took as long as 40 days to complete six tasks meant to be completed over two weeks.

Although filtering out the individuals that took longer than 2 weeks would be worthwhile analysis, this would have significantly diminished the sample. There were actually only 17 participants who completed the study within the requested time frame of two weeks, and only 31 who completed it within 20 days. These issues may have been easier to control in a personal setting, such as a researcher going into an organization.

Secondly, although Seligman et al. (2005) did complete their psychotherapy interventions online, their sample consisted of people who “wanted to be happier” (p. 419). These were people who went to Seligman’s website www.authenticchappiness.org motivated to try to feel better. This is unlike the sample in this study, which included individuals that did not know the intent of the research and were not necessarily as motivated as Seligman’s study participants.

Lastly, a major issue with the design of this study was not having enough power. This was a problem because power increases the capability of a test to detect a significant effect. So there is a case to be made that if this study had more power, there would be more significant effects for the interventions. There are a number of reasons that power was somewhat decreased in this study. For one, the sample size was smaller than desired. As well the sample sizes were unequal which also has the effect of reducing power. Another issue, as pointed out in Tabachnick and Fidell (2007), is that “power in MANOVA depends on the relationships among the dependent variables” (p. 251). Specifically, power for the multivariate test is highest when the pooled within cell correlation among dependent variables is “high and negative” (Tabachnick & Fidell, 2007, p. 251). That being said, having moderate correlations between the dependent variables (which was the case in this study) was also acceptable, but possibly not as

powerful (Tabachnick & Fidell, 2007). The most noticeable power issue for this experiment was the size of the intervention effect. The effect size was not as large as it was originally estimated to be. To somewhat combat the power issues within this experiment, a more lenient alpha level were used at the multivariate level of analysis.

Future Research

The study of increasing worker happiness is a new topic within the Industrial/Organizational Psychology field and, therefore, there are many avenues for future research. One avenue would be a scale development study in which a scale was designed to specifically look at increases in happiness at work. This type of scale was not used in this research project.

Future researchers may want to consider telling people that the interventions they are engaging in may increase their happiness, as done in Seligman et al. (2005). They reasoned that they did not want to generalize their finding to people who do not want to become happier (Seligman et al., 2005). Although this approach may also be problematic in that people may just report greater happiness at the follow-up without actually becoming happier. Also, because this research is new, the exact timing of the interventions could be altered in order to test whether or not the frequency of the interventions changes their overall effectiveness. It is this author's opinion that increasing the frequency of the *three good things* intervention could significantly affect individuals happiness in the workplace. The *gratitude* intervention showed potential to increase happiness in this study and its effectiveness may be further increased by ensuring that participants' displays of gratitude are face to face and that the participants are thanking someone new each time.

These interventions, and specifically the *gratitude* intervention, would be useful to research within a work group and to test the effects on stress levels, work environment, culture and the civility shown within the work group. The *gratitude* intervention may be useful in support of efforts to decrease workplace incivility and stress, and to create a healthier work environment and culture, by increasing courtesy and respect within a workplace. Gratitude could counter the effects of incivility, as incivility is a negative interactive event between two parties and gratitude is a positive interactive event between two parties (Andersson & Pearson, 1999). As well gratitude itself is workplace civility, defined as “a behaviour involving politeness and regard for others in the workplace” (Andersson & Pearson, 1999, p. 454).

It would also be beneficial to explore whether these interventions are more important to individuals when they are experiencing greater stress. These interventions may help to increase happiness, especially in those who were originally less happy based on the work conditions or environment. This appeared to have been the case, with a clinical population in the Seligman, et al. (2006) study that was made up of mildly to moderately depressed individuals. The results of that study were large significant effects. As well, it may be interesting to explore whether gender changes the effectiveness of the interventions. In this study, the sample was made up of mostly females and it is unknown if this may have affected the results. Overall, the effects of positive psychotherapy interventions in the workplace warrant further research. If these interventions are successful, there are opportunities for employers and employees to change their organizations and jobs for the better. This is a new and exciting topic with the potential to

create many positive changes within individuals' working lives and create positive organizational outcomes.

Conclusion

The hypotheses of this study were not supported as the test of simple effects revealed no significant difference in the means of each of the groups over time. However the gratitude condition had a systematic mean increase in happiness levels over time. This simple effect was approaching significance, indicating that the means were slightly increasing over time. More research is needed to further understand whether positive psychotherapy interventions within a working environment can increase happiness.

This study is the first to try to increase happiness in the workplace through positive psychotherapy interventions. It is important because work related happiness has many positive outcomes. These benefits include individual work outcomes such as, decreased stress, greater job satisfaction and higher income as well as positive organizational outcomes such as increased citizenship behaviour, higher quality of work and greater productivity (e.g., Connolly & Viswesvaran, 2000; Donovan, 2000; Estrada, et al., 1994; Locke, 1975; Porter & Steers, 1973; Staw, et al., 1995; Tait, et al., 1989; Weiss, et al., 1999). Further research is needed to find the types and frequency of interventions that are most effective in increasing happiness long-term. This study is the first step in a new and exciting research area.

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Appendix A

Email Invitation

This email is to invite you to participate in a study on work and emotions. I am completing this study as my Masters thesis. You are eligible to participate in this study if you are over the age of 18 and work 30 or more hours a week. **For your participation in this study will you be given a number of entries into a draw to win a \$500 Visa gift card.** If you choose to participate there are two parts to the study that you will be involved in, a survey and the completion of tasks at work. For each part you complete you will receive entries into the draw, with the completion of the entire study given you a total of 12 entries into the draw to win the \$500 dollar Visa gift card.

Here is what is involved in the study:

The first part of the study is completing a survey online, this survey will take you about 15 minutes to complete (for the completion of this survey you will receive 2 entries into the draw). Once you have completed the survey, the second part of the study involves actively engaging in a behaviour or completing a task at work, 6 times over 10 workdays (for example if you work Monday through Friday you will complete the assigned task on Monday, Wednesday and Friday for 2 work weeks). Once you complete the task you will email me the details of how and when the behaviour/task was completed. This should take about 20 minutes of your time daily to complete, and you will receive an entry in the draw each time you email me the completed task. At the end of the 10 days, you will be asked to complete a shorter version of the original survey (for completion you will be given 2 more entries into the draw) and then again 1 month later (2 more entries into the draw).

If you are interested in participating here are the instructions for the completion of the study:

If you choose to participate, I would ask that you email me back from a proxy email address, i.e. an email address that does not have any identifying information about you in the name (for example: bluesky15@hotmail.com) to keep your identity anonymous. You can do this with any of the major email websites, such as msn.com, hotmail.com, gmail.com or yahoo.com. However, this is your choice and if you choose to use your regular email address anonymity cannot be guaranteed. I will send any future emails about the study to the address you email me from.

Step 1: Please email me back (erica.carleton@yahoo.com) informing me you are interested in participating. In the subject line of this email I would like you to generate an identifying code: To do so please write the answers to the following three questions.

What are the **first two letters** of your **mother's first name**?

What **day** of the month is **your birthday** on (i.e. 01 – 31)?

What are the **last two letters** of your last name?

For example, my mother's name is **Susan**, I was born on the **2nd** day of the month and my last name is **Carleton**, so I would put **SU02ON** in the subject line of my email. This is your code for the rest of the study.

Step 2: Once I receive this email, I will send you a link to surveymonkey.com to fill out a survey about different characteristics of your well-being and work environment (the completion of this will give you 2 entries in the draw). This email will include the password you will need to access the survey. When you click on the survey link in the email, you will be directed to a consent form, and then on to the survey. The first question in the survey will ask you your code, this is the code described in step 1. This survey will take you about 15 minutes to complete.

Step 3: Once you have completed the survey, I will email you a description of the activity or behaviour you will be asked to complete at work 6 times over 10 workdays. Each time you complete your task you will be given one entry into the draw, for a total of 6 entries. The activity should take about 20 minutes per time to complete.

Step 4: When you complete your described activity for the 6 times in the 10 workdays, you will be asked to complete a shorter version of the original survey (for completion you will be given 2 more entries into the draw) and again 1 month later you will be asked to complete the survey (for completion you will receive 2 more entries into the draw).

The draw for the \$500 Visa gift card will be done when all participants have completed the study, good luck!

Your participation in this study is voluntary, and you may choose to withdraw at any time. I would greatly appreciate your participation. Any information you provide will be kept completely confidential and will be reported in aggregate form to protect your anonymity.

I would also appreciate your help in recruiting future participants by forwarding this email to friends, family, and colleagues over the age of 18 who work. Thank you in advance for your participation!

Sincerely,

Erica

Appendix B

Informed Consent Form

Erica Carleton
Department of Psychology
Saint Mary's University
Halifax, NS B3H 3C3
902 420-5846; 902 496-8287; psychology@smu.ca

I am a graduate student in the Department of Psychology at Saint Mary's University. As part of my Masters thesis, I am conducting research under the supervision of Dr. Kevin Kelloway and I am inviting you to participate in my study. The purpose of the study is to examine the relationship of work and emotions by having participants engage in different behaviours and tasks at work. You are eligible to participate in this study if you are 18 or over and work 30 or more hours a week.

This study involves filling out this survey online regarding different characteristics of your well-being and work environment. This survey will take you about 15 minutes to complete. Once you have completed the survey, the second part of the study involves actively engaging in specified behaviour or task at work 6 times over 10 workdays and emailing the researcher daily descriptions of the behaviour or task. This should take 20 minutes per time to complete. At the end of the 10 days you will complete a shorter version of the original survey and then again 1 month later.

For your participation in the study you will be entered into a draw to win a \$500 Visa gift card. For every stage of the study you complete you will be given more chances to win. Participating in this study involves minimal risk. Your participation is voluntary. You may withdraw from this study at any time without penalty (i.e. stop completing the survey, email the researcher that you do not wish to engage in the activity). For participants who wish to withdraw after they have provided their data, it will be impossible to remove the data from consideration.

All information obtained in this study will be kept strictly confidential. Various security issues have been addressed to ensure confidentiality of the results. "SurveyMonkey" the site the survey will be administered electronically through, will be password protected, and only respondents that have received the invitation e-mail will be provided the link and corresponding password. In order to assure confidentiality of respondents, safeguards such as the encryption of data and other security features specific to "SurveyMonkey" will be applied. The reporting of results will be in aggregate form to maintain the anonymity of respondents. To ensure anonymity all emails from participants

will be stripped of identifying information and will be matched with survey data using only the code described in the email. In addition, participant names will not be collected and, therefore, will never be associated with any data files. As mentioned in the email, if you choose to use your personal email address to complete the study, the anonymity of your results cannot be guaranteed.

If you have any questions, please contact Erica Carleton at 902 420-5846 and Erica.Carleton@smu.ca, or contact Kevin Kelloway at 902 491-6216 and kevin.kelloway@smu.ca.

This research has been reviewed and approved by the Saint Mary's University Research Ethics Board. If you have any questions or concerns about the study, you may contact Dr. Veronica Stinson, Chair of the Saint Mary's University Research Ethics Board at ethics@smu.ca or 902 420-5728.

Please read this information form carefully. By completing the survey online you are indicating that you understand the information provided in this form and agree to participate in this study.

Please keep one copy of this form for your own records.

Appendix C

Demographic Questions

Age (in years):

Sex:

How long have
you been
employed in your
current job? _____ Years _____ Months

How many hours
per week do you
work? _____

Do you have
more than one
job? Yes No

If you have more than one job, please fill out the survey while considering the job that you consider your primary job.

Which of the following best describes your organization's business?
 Manufacturing
 Service/Institution/Utility/Transportation
 Wholesaler/Distributor/Retailer
 Medical/Healthcare
 Finance/Banking/Insurance/Real Estate
 Social/Military/Government/Education
 Technology/Communications
 Other (please specify)

Which of the following best describes your job title?
 Entrepreneur / Chief Executive Officer / Executive Officer
 Director
 Senior Manager / Team Lead
 Manager
 Supervisor
 Coordinator/Administrative Assistant
 Consultant
 Meeting Planner/ Events Manager
 Service Representative
 Other (please specify)

Approximately 1-99
how many people 100-499
are employed by 500-999
your 1000-4999
organization? 5000 or more

Appendix D

Job-related Affective Well-being Scale, JAWS (Van Katwyk, Fox, Spector, & Kelloway, 2000)

Below are a number of statements that describe different emotions that a job can make a person feel. Please indicate the amount to which any part of your job (e.g., the work, coworkers, supervisor, clients, pay) has made you feel that emotion in the past 30 days.

Please check one response for each item that best indicates how often you have experienced each emotion at work over the past 30 days.	Never	Rarely	Sometimes	Quite often	Extremely often
1. My job made me feel angry.					
2. My job made me feel anxious.					
3. My job made me feel at ease.					
4. My job made me feel bored.					
5. My job made me feel calm.					
6. My job made me feel content.					
7. My job made me feel depressed.					
8. My job made me feel discouraged.					
9. My job made me feel disgusted.					
10. My job made me feel ecstatic.					
11. My job made me feel energetic.					
12. My job made me feel enthusiastic.					
13. My job made me feel excited.					
14. My job made me feel fatigued.					
15. My job made me feel frightened.					
16. My job made me feel furious.					
17. My job made me feel gloomy.					
18. My job made me feel inspired.					
19. My job made me feel relaxed.					
20. My job made me feel satisfied.					

Appendix E

Job Satisfaction (Warr, Cook, & Wall, 1979)

The next set of items deals with various aspects of your job. I would like you to tell me how satisfied or dissatisfied you feel with each of these features of your present job by using this scale.

Circle the "1" if you **Extremely Dissatisfied**

Circle the "2" if you **Somewhat Dissatisfied**

Circle the "3" if you are **Neutral**

Circle the "4" if you **Somewhat Satisfied**

Circle the "5" if you **Extremely Satisfied**

1.	The physical work conditions	1	2	3	4	5
2.	The freedom to choose your own method of working	1	2	3	4	5
3.	Your fellow workers	1	2	3	4	5
4.	The recognition you get for good work	1	2	3	4	5
5.	Your immediate boss	1	2	3	4	5
6.	The amount of responsibility you are given	1	2	3	4	5
7.	Your rate of pay	1	2	3	4	5
8.	Your opportunity to use your abilities	1	2	3	4	5
9.	Industrial relations between management and workers in your organization	1	2	3	4	5
10.	Your chance of promotion	1	2	3	4	5
11.	The way your workplace is managed	1	2	3	4	5
12.	The attention paid to suggestions you make	1	2	3	4	5
13.	Your hours of work	1	2	3	4	5
14.	The amount of variety in your job	1	2	3	4	5
15.	Your job security	1	2	3	4	5
16.	Now taking everything into consideration how do you feel about your job as a whole?	1	2	3	4	5

Appendix F

Subjective Happiness Scale (Lyumbomirsky & Lepper, 1999)

For each of the following statements and/or questions, please circle the point on the scale that you feel is most appropriate in describing you.

1. In general, I consider myself:

1	2	3	4	5	6	7
not a very happy person						a very happy person

2. Compared to most of my peers, I consider myself:

1	2	3	4	5	6	7
less happy						more happy

3. Some people are generally very happy. They enjoy life regardless of what is going on, getting the most out of everything. To what extent does this characterization describe you?

1	2	3	4	5	6	7
not at all						a great deal

4. Some people are generally not very happy. Although they are not depressed, they never seem as happy as they might be. To what extent does this characterization describe you?

1	2	3	4	5	6	7
not at all						a great deal

Appendix G

Experimental Group 1 Email

Your required task to be completed **6 times** over the **next 10 workdays** is to describe **three good things that happened to you during your workday** and what caused them and email them to me at erica.carleton@yahoo.com. Please complete this task every other day for the next 10 workdays (for example if you work Monday through Friday you will complete the assigned task on Monday, Wednesday and Friday for 2 work weeks).

An example of how I would like you to describe each of your three good things from your workday is: I completed a major project today that I had been working on for 2 months. It made me feel so relieved and so proud of my accomplishment. It was a great feeling.

Example 2: My boss brought in cookies today, I think she did this because we have all been doing such a good job, it really made me feel happy and like part of the team.

In the subject box of this email remember to put your code!

What are the **first two letters** of your **mother's first name**?

What **day** of the month is your **birthday** on (i.e. 01 – 31)?

What are the **last two letters** of your **last name**?

For example, my mother's name is **Susan**, I was born on the **2nd** day of the month and my last name is **Carleton**, so I would put **SU02ON** in the subject line of my email. This is your code for the rest of the study.

Thanks again for your participation.

Erica

Appendix H

Experimental Group 2 Email

Your required task to be completed **6 times** over the **next 10 workdays** is to think of someone you work with, to whom you feel grateful towards and then thank them face to face. If possible please try to thank someone new each time. Then email me (erica.carleton@yahoo.com) a description of who you thanked and why, as well as describe the events leading up to the display of gratitude and how you felt before and after. Please complete this task every other day for the next 10 workdays (for example if you work Monday through Friday you will complete the assigned task on Monday, Wednesday and Friday for 2 work weeks). **Remember to email me on the same day you thanked someone.**

Please describe this is one paragraph around 4 or 5 sentences. **An example** of how I would like you to describe your display of gratitude is: When I was trying to come up with someone to thank today, I realized my co-worker has really been helping me a lot on a project I have been working on. Therefore late this afternoon, I went to her office and said thank you so much for your help on the project, I really appreciate it. I was slightly nervous before I thanked her because I did not know what she was going to say but afterwards I felt so happy because it really brought a smile to her face and she seemed very pleased.

In the **subject box of this email remember to put your code!**

What are the **first two letters** of your **mother's first name**?

What **day** of the month is **your birthday** on (i.e. 01 – 31)?

What are the **last two letters** of your **last name**?

For example, my mother's name is **Susan**, I was born on the **2nd** day of the month and my last name is **Carleton**, so I would put **SU02ON** in the subject line of my email. This is your code for the rest of the study.

Thanks again for your participation.

Erica

Appendix I

Control Group Email

Your required task to be completed **6 times** over the **next 10 workdays** is to email me (erica.carleton@yahoo.com) a factual description of three activities you engaged in at work. Please complete this task every other day for the next 10 workdays (for example, if you work Monday through Friday you will complete the assigned task on Monday, Wednesday and Friday for 2 work weeks).

An example of what I would like you to describe is: I went to a meeting this morning from 9 to 10 with all the people from my work group. The meeting was regarding policies.

In the **subject box of this email remember to put your code!**

What are the **first two letters** of your **mother's first name**?

What **day** of the month is **your birthday** on (i.e. 01 – 31)?

What are the **last two letters** of **your last name**?

For example, my mother's name is **Susan**, I was born on the **2nd** day of the month and my last name is **Carleton**, so I would put **SU02ON** in the subject line of my email. This is your code for the rest of the study.

Thanks again for your participation; I will send an email to remind you to complete your task.

Erica

Appendix J

REB certificate of Approval (08-228)



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Department Office

T 902.420.5534

F 902.420.5561

Research Ethics Board Certificate Notice

The Saint Mary's University Research Ethics Board has issued an REB certificate related to this thesis. The certificate number is: 08-228 .

A copy of the certificate is on file at:

Saint Mary's University, Archives
Patrick Power Library
Halifax, NS
B3H 3C3

Email: archives@smu.ca
Phone: 902-420-5508
Fax: 902-420-5561

For more information on the issuing of REB certificates, you can contact the Research Ethics Board at 902-420-5728/ ethics@smu.ca .