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Self-Construal as a Moderator in the Relationship between Self-Enhancement/Protection and Psychological Well-Being

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and Psychological Well-Being

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Abstract

The purpose of the proposed study was to investigate the relationship between self-enhancement/protection and psychological well-being and to test if these relationships differ depending on whether one has a more independent or more interdependent self-construal. Two hundred and fifty-two participants who were residents of the United States were recruited from Amazon Turk. They responded to scales that measured their self-enhancement/self-protection strategies, independent/interdependent self-construals, positive-negative affect, level of life satisfaction, and psychological distress. The study sample was predominantly White, and participants were significantly more independent than interdependent in their self-construal. Results indicate that self-enhancement was positively associated while self-protection was negatively associated with psychological well-being. Independent/interdependent self-construal did not moderate these relationships. Clinical implications of self-enhancement indicate that even though it is helpful in the short term (increased psychological and social resources), it can be detrimental in the long term. The clinical implications of self-protection suggest that people benefit from self-improvement but can have the psychological cost of not being able to form close relationships when they engage in self- protection strategies. The limitations of the study and directions for future research were discussed.

Keywords: Self-enhancement, Self-protection, Self-construal, Well-being

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Self-Construal as a Moderator of the Relationship between Self-

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Self-concept is defined as "the totality of inferences a person has made about himself/herself" (Baumeister, 1997, p. 681). As human beings, each one of us strives to maintain a positive self-concept, wanting to achieve positive self-inferences about ourselves. This can be accomplished in either of two ways: self-enhancement or self-protection. Individuals seek to bolster positive views of themselves through self-enhancement strategies and minimize negative perceptions of the self through self-protection. Studies have shown that both self-enhancement and self-protection are generally positively related to psychological well-being, but that cultural differences in independent vs. interdependent self-concept could moderate this relationship. The goal of this thesis was to examine if self-construal (independent vs. interdependent) would moderate the relationship between self-enhancement/protection and psychological well-being. What is the relationship between self-enhancement/protection in well-being? Does this relationship vary depending on whether the person has a more independent or more interdependent self-construal?

The Motivations Behind Self-Enhancement and Self-Protection

During the time of radical behaviorism, Skinner (1953) viewed self-enhancement and self-protection as Freudian constructs, which meant that he thought that these motivations are present in our unconscious mind. He faced scrutiny as his notion of these constructs lacked an empirical basis, something which cannot be scientifically proven or observed. There are things which people do that could be taken at their face value, like swinging an ax, whereas a person who is thought of as "acting defensively" is doing

something that requires us to interpret the situation further. In short, whether it is feeling insulted, exaggerating one's strengths, or taking undeserved credits for an exam, the motives behind these events should be relevant to an accurate portrayal of the person's actions.

As motivational constructs, Alice and Sedikides (2009) defined self-enhancement as the "tendency to claim greater standing on a characteristic, or more credit than is objectively warranted," (p.2), while they conceptualized self-protection as "tactics that are adopted to avoid falling below a desired standard" (p.2). An example of self - enhancement could be when a student spends most of her time only with people who think highly of her, say good things to her and hence make her feel good about herself. An example of self -protection could be when a student spends minimal time preparing for an exam and goes out the night before the exam so that if she performs poorly, it does not mean that she is incompetent. Self-enhancement and self-protection are rooted in the assumption that people want to feel good, or in some way, avoid feeling bad about themselves. Within this framework, one can then view self-enhancement and self-protection as particular types of motives with functions of either bolstering self-regard towards a more desired level or avoiding the reduction of self-regard.

The motive of self-protection has been dominant in the history of psychology with origins in the defense mechanisms brought up by Freud. Sedikides and Strube (1997) point that self-protection motives arise when one's self-concept is threatened, which in turn creates anxiety by providing feedback about failure, or leads to social rejection (MacDonald & Leary, 2005). Some specific defensive strategies of self-protection illustrate ways in which people engage in protecting one's self-concept, such

as self-handicapping (Berglas & Jones, 1978), defensive pessimism (Norem & Cantor, 1986), and repression (Baumeister & Cairns, 1992). Self-handicapping is defined as "any action or choice of performance setting that enhances the opportunity to externalize failure and internalize success" (Berglas & Jones, 1978, p. 408). It involves putting a barrier in the way of one's success. If one fails, then the failure can be blamed on the handicap rather than on the lack of one's innate ability. One example of self-handicapping is staying out and partying the night before a big exam. If the person does poorly on the exam, he or she could blame it on the partying. Defensive pessimism is defined as "the strategy of setting low expectations and then thinking through, in concrete and vivid detail, all the things that might go wrong as one prepares for an upcoming situation or task" (Norem & Cantor, 1986, p.123). It is mostly used by people to manage their anxiety so that they can produce effective results. An example of defensive pessimism can be seen when a person wants to ask someone on a date, but they are too worried that they will get rejected. They allow themselves to think of the rejection in specific terms, and by the time they are ready to ask, their nervousness has subsided. Repression is defined by Baumeister and Cairns (1992) as "an avoidance of threatening information" which involves keeping certain thoughts, feelings, or urges out of our conscious awareness (p.853). An example of repression could be seen when an individual who suffered childhood abuse has no recollection of it as an adult but has difficulty forming healthy relationships.

The motive of self-enhancement is a newer addition. It has its roots in the humanistic school of psychology, in Roger's theory of positive self-regard (1959). There are different strategies of self-enhancement, such as self-affirming attributions, the better-

than-average effect, optimism bias, and illusion of control. Self-affirming attributions, as proposed by Steele (1988), refer to the attributes that demonstrate one's adequacy by maintaining their self -integrity. Self -integrity is a sense of global efficacy, an image of oneself as able to control important adaptive and moral outcomes in one's life when one feels threatened. Hence, affirmations help people to maintain a narrative of personal adequacy in threatening circumstances. They thus buffer individuals against threat and reduce defensive responses to it. For example, an African American student who is stereotyped by his teacher as unintelligent can reaffirm the self by thinking about how great he is at negotiating interpersonal conflict. The better-than-average effect refers to the tendency of a person to hold overly favorable views of one's own intellectual and social abilities relative to others (Alicke & Govorun, 2005). For example, students' predictions of their final exam scores in a college class often are based on their highest score received to that point. Still, their predictions of someone else's final exam score typically are based on that student's mean score. Illusion of control is defined as "an expectancy of a personal success probability inappropriately higher than the objective probability would warrant" (Langer, 1975, p. 313). This is often seen in gambling, where people believe they can control chance events. For example, if an individual thinks that they have more control over the outcome of a dice game if they throw the dice themselves, than if someone else throws the dice for them, they have illusion of control.

Specific individual characteristics predispose us to engage in self-enhancement or self-protection. Sedikides and Gregg (2008) mention that people who are high on narcissism and self-concept engage more in self-enhancement than their counterparts. In

contrast, those who show more repression, depression, or are shy engage more in self-protection.

Self-enhancement and self-protection are often misconstrued as ends of a single dimension. However, research suggests that they need to be treated separately (Elliot & Mapes, 2005; Sedikides & Gregg, 2008). Self-enhancement is activated when individuals want their interests and ambitions to coincide. It can be seen when a student interested in gaining popularity engages in college activities, which give him/her fame and attention. Self-protection, on the other hand, is activated when an event threatens an individual's desire to advance. The Self-serving bias (Campbell & Sedikides, 1999; Mezulias et al., 2004) is a phenomenon where people claim personal credit for success but blame outside forces for their failure. For example, when athletes win a game, they attribute their win to hard work and practice. However, when they lose a game, they would attribute their failure to the referees and blame the loss on them for making bad calls during the game. It entails both self-enhancement and self-protection. Individuals who engage in self-serving biases take more credit than they deserve for positive outcomes (self-enhancement) as well as avoid taking responsibility for negative outcomes (self-protection). In the proposed study, self-enhancement and self-protection will be treated and measured separately.

Self-Enhancement and Self-Protection Strategies

In conceptualizing and developing a measure of self-enhancement and self-protection, Hepper, Sedikides, and Cai (2013) identified four strategies to denote these motives. Strategies for self-enhancement include positivity embracement, favorable

construals, and self-affirming reflections, whereas the strategy of defensiveness is used for engaging in self-protection.

Positivity embracement. These are behavioral and cognitive strategies used when seeking out positive feedback and capitalizing on it, especially when people anticipate success. Some of the ways people engage in positivity embracement include self-serving presentations and interactions, remembering positive interactions, and self-serving attributions for success. An example would be when an individual only talks about his positive qualities when meeting new people and not engaging in talk about his negative traits/ weaknesses. The individual wants others to think highly of him and make him feel good about himself.

Favorable construals. These are the cognitive strategies that serve to construe the world and self-relevant events in self-flattering ways. These strategies include positive illusions, comparative optimism, or any chronic tendency which promotes self-enhancement. With the same example mentioned in the previous paragraph, if any person said something ambiguous about the individual, the individual would construe the vague statement and interpret it in a positive light. The person thinks of himself as possessing positive traits or abilities greater than what most people do. Positive illusions refer to the perceptions people have which is different from the reality (Stein, 1982). An illusion is a false mental image or conception, which may be a misinterpretation of a real appearance or may be something imagined. It may be pleasing, harmless, or even useful. Taylor and Brown (1994) assert that people usually exhibit positive illusions in three important domains: a) they view themselves in unrealistically positive terms; b) they believe that they have greater control over environmental events than is the case, and c) they hold

views of the future that are rosier than base rate data can justify. Comparative optimism, also known as the optimism bias, is a cognitive bias that causes someone to believe that they are less likely to experience a negative event. The four factors which cause one to be optimistically biased are their desired end state, their cognitive mechanisms, the information they have about themselves versus others, and overall mood.

Self-affirming reflections. These are cognitive strategies that involve self-affirmation after threat and temporal comparisons. Temporal comparisons occur when you compare yourself to how you used to be at some point in the past. They can be either upward or downward in nature. An example of upward temporal comparison would be when an athlete thinks that he was a better athlete twenty years ago than he is now. An example of downward temporal comparison would be when an individual feels that they are doing significantly better than how they were earlier. A person with a good job might think, "I was a loser in high school, I'm okay now, and I would be great in the future." Consequently, temporal comparisons can make us feel better or worse about ourselves. Self-affirming reflections include focusing on values, relationships, and strengths. An individual who broke up recently would try to refocus his attention to other relationships (e.g., family) that he considers stronger. The individual might also think of other domains and remind himself of his other strengths and abilities.

Defensiveness. These are cognitive and behavioral strategies that aim to avoid, minimize, and reduce the self-relevance of negative feedback and threat. These include self-handicapping, defensive pessimism, moral hypocrisy, or derogating out-groups. An example where an individual uses defensiveness as a self-protection strategy is when an

individual performs poorly on an exam and thinks hard to come up with something wrong with the exam to discount his poor performance.

Cultural Differences in Self-Enhancement and Self-Protection

Cultural differences play a major role in the formation and maintenance of our self-systems (Markus & Kitiyama, 1991). At the group level, theorists have distinguished between cultures motivated by individualistic value systems and the ones motivated by collectivistic value systems (Hofstede, 1980; Triandis, Bontempo, Villareal, Asai, & Lucca, 1988; Triandis et al., 1986).

People in an individualistic society tend to perceive individualistic values to be more popular and widespread compared to collectivistic values, and vice versa (Shteynberg et al., 2009; Wan, Chiu, Tam, et al., 2007; Zou et al., 2009). There has been consistent evidence demonstrating the higher prevalence of self-enhancing behavior in individualistic cultures in comparison to collectivistic cultures, especially when it comes to enhancing qualities of the agentic self, which is the self that is guided by future aspirations and goals. There is empirical support that Japanese and Chinese do not display the self-serving bias, which means that they do not attribute negative events to causal factors in their situation or positive events to personal qualities/dispositions (Gelfland et al., 2002; Kitiyama, Takagi & Matsumoto, 1995). Also, East-Asians have been known to display a self-critical bias, behaving humbly or modestly when talking about their achievements (Akimoto & Sanbonmatsu, 1999; Bond & Cheung, 1983; Heine & Renshaw, 2002; Kanagawa, Cross, & Markus, 2001). Likewise, Easterners would readily refer themselves in a more negative connotation than Westerners (Kanagawa,

Cross, & Markus, 2001), make negative social comparisons (Takata, 1987), and show a reduced self-serving attributional bias (Hamamura & Heine, 2007).

Moreover, it has been seen that people from individualistic cultures tend to distort how they respond to certain situations to come off as more skillful and competent, endorsing items like, "Many people think I am exceptional." However, in contrast, people from collectivistic cultures tend to distort respond in ways that are normatively appropriate, thereby endorsing items such as, "I have never dropped litter on the street" (Lalwani, Shavitt, & Johnson, 2006; Lalwani, Shrum, & Chiu, 2009).

Agentic traits are the traits that make people "stand out." Characteristics like intellect, power, beauty, social status, and sexuality could be labeled as agentic attributes. Communal traits, on the other hand, refer to the traits that promote fitting in and connecting with others. Characteristics, like being kind, empathetic, compassionate, and being a good listener, could be identified as communal attributes. (Bakan, 1966) Agentic traits are mostly seen to facilitate "getting ahead," whereas communal traits are seen to facilitate "getting along" (Hogan, Jones, & Cheeks, 1985). When studies were conducted with the communal self, which refers to the self-guided by a connection with others, more refined conclusions emerged. In a study where Israelis and Singaporeans were compared on self-enhancement, it was found that Singaporeans (who value collectivistic attributes more than individualistic ones) self-enhance less than Israelis (who value both collectivistic and individualistic attributes) on agentic traits but not on communal traits (Kurman, 2001). When European Americans were compared with Japanese, it was seen that the Japanese and Americans would self-enhance equally but adopt different strategies to do so. Americans would self-enhance on individualistic attributes or the

agentic traits, while the Japanese were found to self-enhance collectivistic attributes or communal traits (Sedikides et al., 2003).

Overall, however, various studies suggest that Easterners (e.g., Chinese, Japanese) self-enhance less overall than Westerners (e.g., Americans, Europeans) and, in many ways, do not self-enhance at all (Heine & Hamamura, 2007; Heine, Lehman, Markus & Kitayama, 1999). This divergent cultural tradition that characterizes the East and West makes for the different mindsets regarding self-enhancement (Heine et al., 1999; Markus & Kitayama, 1991).

Independent and Interdependent Self-Construals

The concepts of individualism and collectivism are commonly used to characterize cultures or cultural groups. Hofstede (1980) established these as viable constructs to differentiate cultures. Most of the industrialized, wealthy, and urbanized societies were reported to be individualistic while the traditional, poor, and rural societies were found to be collectivistic in orientation (Sinha, 2014). Individualism was also found to be associated with European, North American, and Australian cultures, while Asian, African, South American, and Pacific cultures were considered as collectivistic. Triandis (1989) posited that people in a collectivistic culture think of themselves with respect to their relationships with those of their group, aspire to achieve their group goals, conform to social norms, and react emotionally. Whereas people in individualistic cultures have their own personal goals, follow their likes and dislikes, and carefully evaluate their gains and losses before acting (Sinha, 2014). In other words, "whereas individualism focuses on the personal, collectivism focuses on groups and relations that bind and mutually

obligate individuals" (Oyeserman, 2007, p. 435). Thus, individualism and collectivism are primarily cultural variables.

There can be within-culture differences (i.e., individual differences within the same culture), however, in the degree to which people "see themselves as separate from others or as connected with others" (Markus & Kitayama, 1991, p. 226). American researcher Hazel Markus and Japanese researcher Kitayama (1991) first introduced the idea that cultural styles of selfhood differ along the dimension of independence and interdependence. They used the term self-construal, which refers to how one thinks about oneself (Baumeister & Bushman, 2013). It refers to the thoughts, feelings, and actions regarding how one views one's relationship with others, and the extent to which one sees the self as distinct from others (Singelis, 1994). People with highly developed independent self-construals view themselves as unique and apart from others. Their personal goals, internal thoughts, and feelings are central to their sense of self. On the other hand, individuals with highly developed interdependent self-construals view the self and others as highly connected. They depend on others, and their relations with others, and these are what is central to their sense of self (Baumeister & Bushman, 2013).

Although independent self-construals are more common in individualistic societies, and interdependent ones in collectivistic cultures, Singelis (1994) asserted that individuals in any culture could have both independent and interdependent self-construals. In a study on stress and coping behavior of American and East Asian exchange students, Cross and Markus (1991) found support for bicultural self-systems. The East Asian and American students had similar levels of independent self-construals, but the East Asian exchange students had more developed interdependent self-construals.

Among the East Asian students, those who had more developed independent selves (and who placed less importance in their interdependent selves) experienced less stress.

Singelis (1994) developed a self-construal scale which obtains sub-scale scores for independence and interdependence. The suggested scoring procedure is to subtract the interdependence score from the independence score. The more positive the resulting score, the more developed the independent self-construal. The more negative, the more developed the interdependent self-construal. Rather than comparing two different cultures and investigating the role of individualism-collectivism in the relationship between self-enhancement/protection in well-being, the current study will examine the individual differences in independence-interdependence self-construal within the same society.

The Benefits and Costs of Self-Enhancement and Self-Protection

Self-protection and self-enhancement entail both physical health benefits as well as psychological health benefits (Creswell et al., 2005; Taylor, Lerner, Sherman, Sage, McDowell, 2003). In terms of physical health costs, self-enhancement has been found to be adaptive for some cases and not for some. Several studies show that when people who hold unrealistically optimistic beliefs receive health-relevant information do not process the information objectively. A study conducted by Wiebe and Black (1997) found that participants who were unrealistically optimistic about concern for their health found pamphlets related to contraception as less relevant. Studies have shown that self-enhancers usually distort health-related information to make it seem less threatening (Croyle, Sun, & Louie, 1993).

Self-enhancement linearly predicts psychological health (Sedikides et al., 2004; Taylor et al., 2003; Gramzow, Sedikides, Panter, & Insko, 2000). It is positively related

to psychological resources like extraversion, optimism, mastery, active coping, social resources like positive relations, family support, and psychological adjustments like meaning in life, purpose, and subjective well-being. In a study with 9/11 high-exposure survivors (Bonanno, Rennicke, & Dekel, 2005), self-enhancement was positively related to psychological health parameters like positive affect and resilience. In the study conducted by Creswell (2005), it was found that self-enhancement served as a stress-buffering reaction.

Likewise, self-enhancement is negatively associated with psychological distress like anxiety, depression, hostility, and neuroticism. This finding holds not only in individualistic cultures but also collectivistic cultures ones such as China (Anderson, 1999), Hong Kong (Stewart et al., 2003), Japan (Kobayashi & Brown, 2003), Korea (Chang, Sanna, & Yang, 2003), Taiwan (Gaertner et al., 2008), and Singapore (Kurman & Sriram, 1997).

A comparative study done in individualistic and collectivistic society shows that people who engage in self-enhancement tend to report higher self-esteem as well as subjective well-being (Kobayashi & Brown, 2003; Kurman, 2003). Another study points to the fact that, among Taiwan Chinese, the tendency to self-enhance is related to having less psychological problems, with low stress and depressive symptoms and high levels of life satisfaction and subjective well-being (Gaertner, Sedikides, & Chang, 2008). In a study by Kim, Peng, & Chiu (2008), there were positive correlations between self-enhancement and having higher persistence towards achieving their goals among both European Americans and Chinese participants.

It is quite true that self-enhancement comes with its own set of negative social consequences. Others often dislike people who engage in presenting themselves in a grandiose fashion (Robins & Beer, 2001; Sedikides, Gregg, & Hart, 2007; Sedikides, Campbell, Reeder, Elliot, & Gregg, 2002). People, however, engage in slight levels of positive self-presentation all the time to safeguard themselves against dislike and disapproval.

In a study conducted by Paulhus(1998), where he investigated the costs and benefits of self-enhancement during a seven-week group interaction task using the Neuroticism, Extraversion, and Openness Personality Inventory (NEO-PI), he found that fellow group members viewed the self-enhancers as performing well in the group, exhibiting high levels of agreeableness and openness to experience. However, by the end of the seventh week, they rated the self-enhancers as exhibiting arrogance, poor group performance, and having poor adjustment skills. The results thus showed that self-enhancement could have good first impressions, but they are unable to maintain those impressions over time.

The notions of being promotion-focused vs. prevention-focused in Higgins' (1997) regulatory focus theory somewhat parallel the concepts of self-enhancement and self-protection. Being promotion-focused refers to the tendency to achieve one's aspirations while being prevention-focused refers to the tendency to avoid feared outcomes and future failures. Hence, promotion-focused individuals tend to focus on potential gains and approach positive-end states, while prevention-focused individuals tend to focus on losses and avoid negative-end states. Results from research conducted in Western and East-Asian cultures establish that promotion-focused and prevention-

focused individuals are positively correlated to self-enhancement and self-protection, respectively (Hepper et al., 2010; Higgins, 2008).

In a study conducted by Lafrenière, Sedikides & Lei (2016), promotion-focused individuals experienced greater life satisfaction when they engaged in self-enhancement. However, prevention-focused individuals experienced similar levels of life satisfaction irrespective of whether they engaged in self-enhancement or self-protection. The same study was expanded to include a cultural perspective. The results showed that Western participants experienced greater life satisfaction when they engaged in self-enhancement strategies and lowered life satisfaction levels when they engaged in self-protection strategies. Chinese participants, on the other hand, experienced equivalent levels of life satisfaction when engaging in self-enhancement and self-protection strivings.

In sum, several studies mentioned above have shown that self-enhancement is positively correlated with psychological health and negatively correlated with psychological distress in both individualistic and collectivistic cultures. These studies, however, did not compare the effects of self-protection on well-being in individualistic vs. collectivistic societies. When self-protection is included, as in the Lafrenière et al. (2016) study, both self-enhancement and self-protection were positively correlated with life satisfaction in a collectivistic culture (i.e. China). In contrast, in an individualistic culture, self-enhancement was positively correlated with life satisfaction, while self-protection was negatively correlated. Thus, culture (individualism vs. collectivism) moderated the relationship between self-enhancement/protection and well-being. Given that the concepts are individualism-collectivism and independence-interdependence self-construals parallel each other, the present study will test if an individual's self-construal

(independent/interdependent) will also moderate the relationship between self-enhancement/protection and psychological well-being.

Psychological Well-Being

One of the goals of the proposed study is to examine the relationship between self-enhancement/protection and psychological well-being. Several researchers have attempted to understand and define well-being over the years. Ryan and Deci (2001) stated that the concept of well-being refers to optimal psychological functioning and experience and that well-being is more complex and controversial than the simple question of "How are you?". More recently, the concepts of well-being and the positive aspects of mental health have gained popularity and have experienced a dramatic expansion (Gallagher, Lopez, & Preacher, 2009).

One of the most prominent models of psychological well-being is rooted in the hedonic theory of well-being (Josjanloo & Ghaedi, 2009; Ryan & Deci, 2001). Hedonism refers to the pursuit of pleasure and the doctrine that pleasure or happiness is the highest value (Little Oxford English Dictionary, 2002). Hedonism is not a new age modern concept but dates back to the ancient Greeks. Ryan and Deci (2001) gave an account of the historical development of the theory of hedonic well-being. In the fourth century B.C., a Greek philosopher Aristippus taught that the goal of life is to experience the maximum amount of pleasure and that people's happiness is the totality of one's hedonic moments. Modern-day psychologists, who adopted the hedonic view, widened the conception of hedonism by including pleasures of the mind as well as the body.

According to Diener and Lucas (1999), psychological research on hedonic well-being falls within the umbrella of studies on "subjective well-being." The latter is

concerned with how and why people experience their lives in positive ways (Diener, 1984). The subjective well-being literature covers studies that use diverse terms such as happiness, satisfaction, morale, and positive affect. Subjective well-being consists of three principles: life satisfaction, the presence of positive affect, and the absence of negative affect (Christopher, 1999; Diener, 1984; Ryan & Deci, 2001).

Life satisfaction. The concept of life satisfaction is based on a subjective, judgmental evaluation of one's life (Christopher, 1999; Diener, 1984). Life satisfaction may be directly influenced by emotions but is not itself a direct measure of emotions (Diener, 1984). The focus of this principle is on global life satisfaction rather than domain-specific satisfaction (e.g., income). The measure of life satisfaction, the Satisfaction with Life Scale (SWLS) widely used today, assesses a broader evaluation of one's life.

Presence of positive affect and the absence of negative affect. The concept of positive affect is based on the presence of subjective feelings of positive emotions. This concept can be traced back to several millennia. For example, Marcus Aurelius wrote that "no man is happy who does not think himself so" (Diener, 1984). Happiness from the perspective of subjective well-being is led by a preponderance of positive affect over negative affect (Diener, 1984). In other words, we are happy when we experience more positive than negative feelings in our life (Christopher, 1999).

Depression, anxiety, and stress. Life satisfaction and the presence of positive affect/absence of negative affect reflect more positive forms of psychological outcomes. The current study will also examine the relationship between self-enhancement/protection and more negative forms of psychological outcomes such as

depression, anxiety, and stress. The tendency for one to enhance or protect one's self-image influences one's perceptions, social cognition, as well as daily behavior (Alicke & Sedikides, 2009). One way by which most people engage in self-enhancement and self-protection is by holding optimistic cognitive illusions about themselves, which in turn increases their personal control over different circumstances and the way people view them. There has been research which shows that depressed individuals show minimal optimism and illusion regarding personal control, performance, as well as self-evaluation. The absence of these optimistic biases in the individuals predisposes them to develop depression or anxiety shortly. They experience a breakdown in their mechanisms for enhancing or protecting their self-image. This has maladaptive physical and psychological consequences. Some of the consequences might be low self-esteem, sad affect, decreased persistence, poor coping with stress, and suicidal thoughts/ideations (Taylor & Brown, 1988). In a study by Alloy and Clements (1992), the absence of illusion of personal control was found to be a vulnerability factor for depression. The participants who did not show illusion of control experienced greater levels of stress and hopelessness following stressful events in their lives.

The Present Study

The purpose of the proposed study was to investigate the relationship between self-enhancement/protection and psychological well-being and to test if these relationships vary depending on one's independent/interdependent self-construals. The following were the research questions:

1. What is the relationship between self-enhancement and psychological well-being? Does this vary depending on one's self-construal?

2. What is the relationship between self-protection and psychological well-being, and does this depend on self-construal?

Psychological well-being was measured by levels of life satisfaction, experienced positive/negative affect ratio, and levels of psychological distress (depression, anxiety, and stress). The following were the research hypotheses:

1. Self-construal will not moderate the relationship between self-enhancement and well-being. A positive relationship between self-enhancement and well-being is anticipated in those whose self-construal is more independent, and those who are more interdependent. More specifically:

    a. For the well-being outcome of life satisfaction, only a positive relationship between self-enhancement and life satisfaction is anticipated.

    b. Likewise, only a positive relationship between self-enhancement and positive/negative affect is expected.

    c. For psychological distress, only an inverse relationship between self-enhancement and psychological distress is predicted.

2. Self-construal will moderate the relationship between self-protection and well-being. Among participants whose self-construal is more interdependent, a positive relationship between self-protection and well-being is predicted. However, among those whose self-construal is more independent, a negative relationship between self-protection and well-being is expected. More specifically:

    a. For the well-being outcome of life satisfaction, a positive relationship between self-protection and life satisfaction is predicted among those who

are more interdependent, but an inverse relationship is expected among
those who are more independent.

b. The same pattern of results for life satisfaction (described above) is
expected for the well-being outcome of positive/negative affect.

c. For psychological distress, an inverse relationship between self-protection
and psychological distress is predicted among those who are more
interdependent, but a positive relationship is expected among those who
are more independent.

d. Self-protection would have a positive relationship with psychological distress
among the interdependent self-construal group.

Method

Participants

Three hundred participants were recruited from Amazon's Mechanical Turk
(MTurk) service, an online crowdsourcing service that allows individuals to complete
tasks for payment. The criteria was that only adult residents of the United States could
participate in the study. A compensation of 75 cents was given to each participant who
began the study irrespective of the fact if their responses were included as a part of the
study. This criterion was also mentioned in the IRB materials. Of the 300 participants,
285 answered all the relevant scale items included in the survey. From this sample, 12%
($n = 33$) were excluded due to unusually short or long duration taken to complete the
survey (less than eight minutes, or more than one hour). None of the participants
answered with problematic responses (i.e., answering all items with "number 1"). The
final sample of 252 participants exceeded the minimum required of 135 participants

needed to achieve a desired power of 90% with an anticipated medium effect size to perform each multiple regression at an alpha level of .05.

The final sample consisted of 127 males (50.4%) and 125 females (49.6%), ranging in age from 22 to 79 (Mean = 40.69, Md = 37). Half of the sample had a bachelor's degree (50.8%), 23.8% had some college/associate degree, and about 9% had a graduate degree. An examination of the ethnicity of the sample yielded 76.6% White (*n* = 193), 8.7% Asian (*n* = 22), 7.5% Black or African American (*n* = 19), 4.8% Hispanic or Latino (*n* = 12), and 1.6% American Indian or Alaskan Native (*n* = 4). When the location was considered, 38.1% of the participants were from the South (*n* = 96), 22.6 % (*n* = 57) were from Midwest and Northeast, and 16.7 % were from the West (*n* = 42).

Materials

Self-Enhancement/Protection Strategies Scale. The component of self-enhancement/protection was measured using a 20-item short-form of the Self-enhancement/protection Strategies Scale (Hepper et al., 2010), which consists of four sub-scales representing the three self-enhancement strategies of favorable construals, positivity embracement, self-affirming reflections, and self-protection strategy of defensiveness. A few items for the sub-scales are: "When you achieve success or really good grades, thinking it was due to your ability", and " Asking for feedback when you expect a positive answer" (positivity embracement); "Believing that you are changing, growing, and improving as a person more than other people are", and " When someone says something ambiguous about you, interpreting it as a positive comment or compliment" (favorable construals); "Remembering hardships that you had overcome in order to be really successful", and " Thinking about how things could have been worse"

(self-affirming reflections); " When you do poorly at something or get bad grades,

thinking that the situation or test was uninformative or inaccurate", "Revising very little

for a test, or going out the night before an exam or appraisal at work, so that if you do

well, it would mean you must have very high ability." (defensiveness). The reliability

coefficients for each are: defensiveness ($\alpha = .67$), favorable construals ($\alpha = .67$),

positivity embracement ($\alpha =.69$), and self-affirming reflections ($\alpha =.61$). An overall score

for self-enhancement was obtained by adding the items across favorable construals,

positivity embracement, and self-affirming reflections. The overall score for self-

protection was obtained through the score on defensiveness.

Self-Construal Scale (SCS). Singelis developed this scale in 1994. It is an

instrument that measures the strength of independent and interdependent self-construals

in an individual. There is a total of 30 items, with 15 measuring independent self-

construal, and another 15 measuring interdependent self-construal. Both reliability and

validity of the two subscales were satisfactory, as reported by Singelis (1994). Cronbach

alpha reliabilities were .69 for the independent subscale and .73 for interdependent

subscale. The face validity of the two subscales is quite high, with items focusing directly

on the characteristics that define the constructs. The item " My happiness depends on the

happiness of those around me" clearly assesses the respondent's connectedness with

others, hence showing the interdependent self. Similarly, the item "I enjoy being unique

and different from others in many respects" shows that the individual perceives one to be

separate from others and emphasizes the uniqueness of one's self, representing the

independent self.

In terms of scoring SCS, each participant received two scores: one for independent self-construal and the other for the interdependent self-construal. Participant responses on the two sub-scales were added separately, and the interdependent sub-scale score was subtracted from the independent sub-scale score. The more positive the resulting score, the more developed the independent self-construal. The more negative score obtained, the more developed the interdependent self-construal.

Satisfaction with Life Scale (SWLS). Life satisfaction was assessed using the five-item Satisfaction with Life Scale developed by Diener, Emmons, Larsen, & Griffin in 1985. This scale measures how satisfied the individual is with his/her life at the current moment on a scale that ranges from (strongly disagree) to 7 (strongly agree). An example item is: "In most ways, my life is closer to my ideal."

The overall score for life satisfaction was obtained by adding all the items. Thus, the possible score range was 5- 35 and the higher the score, the more satisfied is the individual with his/her life. Diener and his colleagues (1985) reported a test-retest correlation of .82 and a coefficient alpha of .87 for this scale. This study also showed that all five items loaded at .61 or above, with total correlation ranging from .57 to .75, and a single factor accounting for 66% of the variance. Diener and his colleagues (1985) showed significant correlations between the SWLS and other scales of subjective well-being, including self-esteem, neuroticism, emotionality, activity, sociability, impulsivity, and a symptom checklist.

Positive and Negative Affect Schedule (PANAS). Positive and negative affect was measured using the Positive and Negative Affect Schedule developed by Watson, Clark, & Tellegen in 1988. Participants rated the extent to which they generally felt the

ten positive emotions (confident, content, calm, proud, bold, satisfied, pleased, energetic, happy, and interested) and ten negative emotions (sad, tired, bored, upset, disappointed, nervous, insecure, ashamed, angry, and embarrassed). The PANAS uses the following scale: 1: Very slightly or not at all, 2: A little, 3: Moderately, 4: Quite a bit, and 5: Extremely. The scores were added up separately for positive and negative emotions, with the possible range of scores for each subscale (i.e., positive, and negative emotions) being 10- 50. Higher the score, the more positive/negative the individual's emotions are. A positive-to-negative affect ratio was calculated by dividing the positive affect score by the negative affect score. The higher the positive/negative affect ratio, the more positive affect than negative affect is generally experienced. Watson et al. (1988) showed that internal consistency reliabilities were more than acceptable (Cronbach's α = .86 to .90 for Positive Affect, and Cronbach's α = .84 to .87 for Negative Affect).

Depression, Anxiety, and Stress Scale (DASS-21). This is a self-report tool containing 21 items (7 per scale) that measure three constructs: Depression, Anxiety, and Stress (Lovibond & Lovibind, 1995). Respondents read statements about the constructs and responded using a 4-point Likert type scale ranging from 0 (did not apply to me at all) to 3 (Applied to me very much). The internal consistency estimates were: α = .88 for the Depression sub-scale, α = .82 for the Anxiety scale, α = .90 for the Stress scale, and α = .93 for the total scale. The construct validity of the scale was also found to be adequate, with results stating that the three subscales of index a substantial common factor (i.e., general psychological distress). The scores across the construct of depression, anxiety, and stress (range being 0-42 each) were added up to obtain the psychological distress experienced, with the overall range being 0- 126.

Procedure

      Data collection was conducted after receiving research ethics approval from the IRB (Institutional Review Board). Participants were Amazon Mechanical Turk (MTurk) workers who selected the study from a listing of available tasks on the MTurk site. To complete the study, they followed a link from the MTurk site that took them to Qualtrics to respond to the scales. Upon completion of the study in Qualtrics, participants received a randomly assigned number. In order to receive payment via MTurk, participants copied this number and entered it on the MTurk site. The researcher approved the submitted numbers in order to trigger payment to the participants via MTurk. This is a typical process for MTurk social science or market research tasks that use Qualtrics.

      As MTurk offers quick access to a large sample of potential participants, it has become a frequently-used service by researchers in the social sciences. Paolacci & Chandler (2014) reviewed research on the characteristics of the MTurk participant pool. Although the MTurk pool cannot be seen as a demographically representative sample, MTurk is comparable to other convenience samples, such as university undergraduates, in terms of the quality of data collected (DeSoto, 2016; Paolacci and Chandler, 2014).

      Participants responded to the above scales and data were collected through Qualtrics, which interfaces with the Mechanical Turk service. Prior to beginning the study, participants were given a statement of informed consent and completed a demographic questionnaire. The presentation of the different scales was counterbalanced to control for order effects. After completion of the scales, participants received a debriefing statement, which included contact information for nationally available trauma

and mental health hotlines. The median time to complete the study was around 18 minutes.

Results

Internal Consistency of the Scales

Cronbach's alpha coefficients were computed to assess the internal consistency of each scale and subscale for the sample. The values demonstrated good to excellent internal consistency (.8 to .9; George & Mallery, 2003) in most of the variables, and acceptable levels of internal consistency (> .7) in the three self-enhancement strategies of favorable construals, positivity embracement, and self-affirming reflections. These are presented in Table 1.

Characteristics of the Study Sample

Mean scores and standard deviations for the study variables are found in Table 1. The participants' scores on all the different strategies of self-enhancement (as well as on overall self-enhancement) indicated that they tended to use more of these strategies. In contrast, the participants' score on defensiveness showed that they used less of self-protection. In other words, the participants tended to self-enhance rather than self-protect.

The participants had a significantly more independent ($M = 75.38$, $SD = 12.51$) than interdependent ($M = 69.51$, $SD = 13.63$) self-construal, $t(251)= 6.08$, $p < .001$ (one-tailed). When the interdependent self-construal scores were subtracted from the independent self-construal scores, the average score indicated a leaning towards having a more independent self-construal.

With regards to psychological well-being, the participants were quite satisfied with their lives. They experienced significantly more positive ($M = 32.26$, $SD = 8.56$) than negative affect ($M = 18.44$), $t(251)= 16.57$, $p < .001$ (one-tailed). Using the DASS-21 scoring system (Lovibond & Lovibond, 1995), the participants had normal levels of depression ($M = 4.02$, $SD = 4.90$; scores of $0 – 9$ are normal), anxiety ($M = 3.22$, $SD = 4.48$; scores of $0 - 6$ are normal), and stress ($M = 4.48$, $SD = 4.63$; scores of $0 – 10$ are normal). These scores in parentheses represent the cut-off scores as provided by the standardized scoring system of the particular scale (DASS-21).

Table 1

Means, Standard Deviations, and Cronbach's Alphas (N =252)

Variable	*M*	*SD*	Scale Range	*Cronbach's alpha*
Self-Enhancement	58.19	12.71	15 - 90	.89
Favorable Construals	18.13	4.89	5 - 30	.75
Positivity Embracement	19.68	4.66	5 - 30	.78
Self-Affirming Reflections	20.38	5.01	5 - 30	.79
Self-Protection				
Defensiveness	13.64	5.72	5 - 30	.84
Self-Construals				
Independent Self-Construal	75.38	12.51	15 - 105	.85

Interdependent Self-Construal	69.51	13.63	15 - 105	.87
Life Satisfaction	23.07	7.63	5 - 35	.92
Positive and Negative Affect				
Positive Affect	32.26	8.56	10 - 50	.91
Negative Affect	18.44	8.94	10 - 50	.94
Depression, Anxiety and Stress	11.71	13.15	0 - 126	.96
Depression	4.02	4.90	0 - 42	.90
Anxiety	3.22	4.48	0 - 42	.91
Stress	4.48	4.63	0-42	.88

Bivariate Correlations Amongst the Variables

The study investigated if the relationships between self-enhancement/self-protection and well-being were moderated by self-construal. Before conducting the tests of moderation, the correlations among the variables were examined and are presented in Table 2 below.

Table 2

Zero-Order Correlations Amongst the Variables (N = 252)

	Variable	1	2	3	4	5	6
1	SE	--	.31**	.08	.41**	.45**	-.14*
2	SP	--	--	-.18**	.03	-.18**	.42**
3	SC	--	--	--	-.03	.22**	-.09
4	LS	--	--	--	--	.44**	-.36**
5	P/N Ratio	--	--	--	--	--	-.62**
6	PD	--	--	--	--	--	--

$*p < .05, **p < .01$

Note: SE = Self-enhancement, SP = Self-protection, SC = Self-construal, LS = Life Satisfaction, P/N Ratio = Positive/ Negative Affect, PD = Psychological Distress

Were self-enhancement and self-protection correlated with each other? There was a significant positive correlation between the two ($r = .31, p < .01$) indicating that as participants self-enhanced they also tended to self-protect. This relationship was weak, however, accounting for only 9% of the variance, suggesting that these two variables are distinct and separate constructs.

Was self-construal predictive of self-enhancement and self-protection? The correlation between self-construal and self-enhancement was not statistically significant. With regard to self-protection, however, there was a negative correlation ($r = -.18, p < .01$). As the participants became more independent than interdependent, they engaged less in self-protection.

How was self-construal correlated with the well-being measures used in the study? The correlation between self-construal and the measures of life satisfaction and

psychological distress was not statistically significant. However, there was a statistically significant positive correlation between self-construal and positive/negative ratio ($r = .22$, $p < .01$). Even though the correlation is weak (sharing only 5% of their variances), it indicates that person with more independent self-construal would experience more positive affect as compared to negative affect.

How was self-enhancement correlated with the measures of well-being? There was a statistically significant correlation seen among all the well-being measures i.e. life satisfaction, positive/negative ratio, and psychological distress. A positive correlation was seen between life satisfaction and self-enhancement, indicating that as self-enhancement increased, the participants were more satisfied with their life ($r = .41$, $p < .01$). For the aspect of positive/negative ratio, there was a significant positive correlation between self-enhancement and positive/negative ratio, which indicates that as self-enhancement increased, participants more likely experienced positive affect as compared to negative affect ($r = .45$, $p < .01$). With regard to psychological distress, however, there was a negative correlation ($r = -.14$, $p < .05$). As self-enhancement increased, the levels of psychological distress experienced by the participants decreased.

How was self-protection correlated with the measures of well-being? The correlation between self-protection and life satisfaction was not statistically significant. There was a significant negative correlation between self-protection and positive/negative ratio ($r = -.18$, $p < .01$). As the participant's level of self-protection increased, they experienced more negative affect as compared to positive affect. With regards to the aspect of psychological distress, there was a positive correlation ($r = .42$, $p < .01$). As

self- protection increased, the levels of psychological distress experienced by the participants increased as well.

Research Question 1: Self-Enhancement and Well-Being

What is the relationship between self-enhancement and psychological well-being? Does this vary depending on one's self-construal? In this study, psychological well-being was studied using three different well-being outcomes (life satisfaction, positive/negative affect, and levels of psychological distress). Hence, three separate tests of moderation were conducted.

Life satisfaction. A hierarchical multiple regression analysis was conducted to predict life satisfaction. In the first step, the main effect of self-enhancement and self-construal were introduced as the predictors. At an alpha level of .05, the relationship between the set of main effects and life satisfaction was found to be statistically significant, $R^2 = .17$, $F(2, 249) = 25.88$, $p < .001$. While the main effect of self-construal was not significant, there was a significant main effect of self-enhancement. As the participants engaged in self-enhancement, their life satisfaction increased. This accounted for 16% of the variance in life satisfaction.

In the second step, the interaction between self-enhancement and self-construal was introduced into the regression model. The results indicate that the interaction added no predictive value, R^2 change = .01, $F(1, 248) = 1.83$, $p = .18$. Results of the hierarchical multiple regression are summarized in Table 3 below.

In sum, self-construal did not moderate the relationship between self-enhancement and life satisfaction. Only the main effect of self-enhancement was

significant. Engaging in self-enhancement was associated with increased levels of life satisfaction.

Table 3

Hierarchical Multiple Regression Analysis for Predicting Life Satisfaction (N = 252)

Variable	*B*	*SE B*	*β*	*t*	*p*
Step 1					
Self-enhancement	.25	.03	.41	7.17	< .001
Self-construal	-.03	.03	-.06	-1.11	.27
Step 2					
Self-enhancement	.25	.03	.42	7.28	< .001
Self-construal	-.03	.03	-.06	-.96	.34
Interaction	.00	.00	.08	1.35	.18

Note. R^2 = .17 for Step 1 ($p < .001$); ΔR^2 = .01 for Step 2 ($p = .18$).

Positive/negative affect ratio. In the first step of a hierarchical multiple regression predicting positive/negative affect ratio, the main effect of self-enhancement and self-construal were introduced as the predictors. At an alpha level of .05, the relationship between the set of main effects and positive/negative affect was statistically significant, $R^2 = .24$, $F(2, 249) = 38.87$, $p < .001$. The main effect of self-construal was not significant, but the main effect of self-enhancement was. As participants self-enhanced, they tended to experience more positive than negative affect.

In the second step, the interaction between self-enhancement and self-construal was introduced into the regression model. The results indicate that the interaction added predictive value, R^2 change = .02, $F(1, 248) = 7.95$, $p = .005$. This means that the

relationship between self-enhancement and experiencing positive/negative affect depends on one's self-construal, $p = .01$. This interaction accounted for 2% of the variance in positive/negative affect.

To explore the significant interaction further, the sample of participants were divided into three groups representing different levels of self-construal. The three groups were created keeping in mind that the number of participants in each group should be close to 60 in order to achieve good statistical power. Participants whose self-construal scores (where the interdependent score was subtracted from the independent score) were below -3 were classified as 'more interdependent' ($n = 62$, 24.6%), while those whose scores were above +3 were categorized as 'more independent' ($n = 131$, 52%). Participants with self-construal scores between -3 to +3 were in the category of 'more balanced' ($n = 59$, 23.4%).

Although the relationship between self-enhancement and positive/negative affect ratio appears to be significant in all the groups, the magnitude of that relationship was different across groups. Among participants with a more independent self-construal, the relationship is stronger ($r = .47$), accounting for about 22% of the variance in positive/negative affect. Similarly, the relationship was stronger for the more interdependent group ($r = .49$), accounting for 24% of the positive/negative affect variance. However, it was weaker for the balanced group ($r = .33$), accounting for 11% of the positive/negative affect variance. Results of the test of moderation are presented in Table 4, Figures 1, 2, and 3 below.

To summarize, self-construal moderated the relationship between self-enhancement and positive/negative affect ratio. As participants self-enhanced, they

tended to experience more positive than negative affect in their lives. This relationship, however, was stronger in participants who were either more interdependent or more independent, but weaker among those whose self-construals were more balanced.

Table 4

Hierarchical Multiple Regression Analysis for Predicting Positive/Negative Affect (N = 252)

Variable	B	$SE\ B$	β	t	p
Step 1					
Self-enhancement	.04	.00	.44	7.87	< .001
Self-construal	.01	.00	.18	3.34	.00
Step 2					
Self-enhancement	.04	.01	.45	8.19	< .001
Self-construal	.02	.00	.20	3.66	< .001
Interaction	.00	.00	.15	2.82	.01

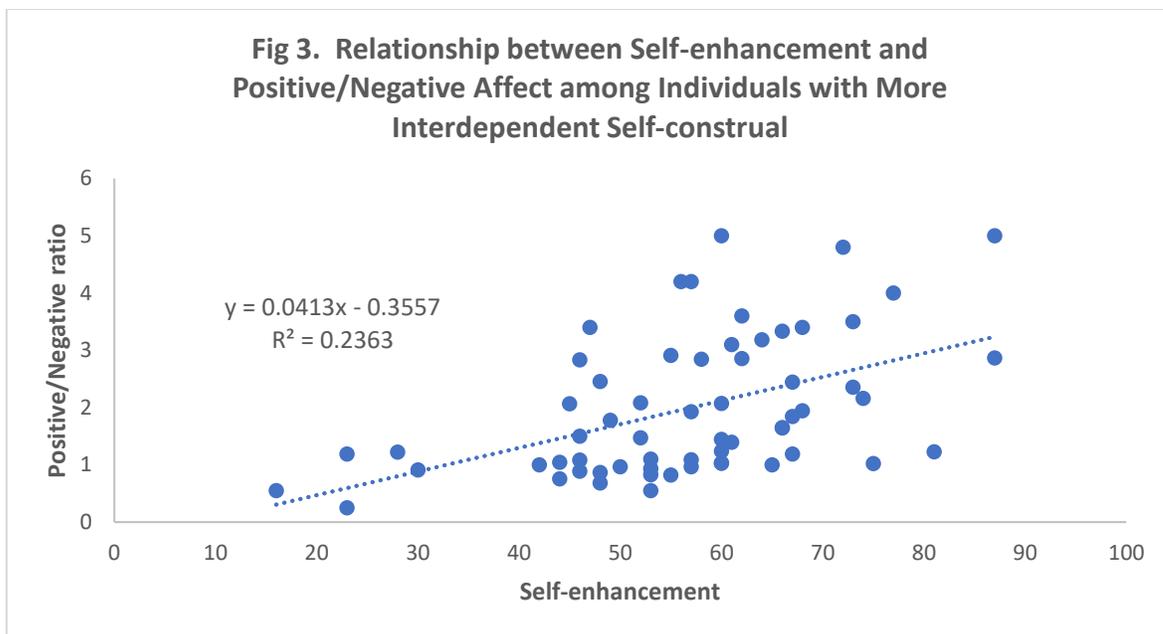Note. R^2 = .24 for Step 1 ($p < .001$); ΔR^2 = .02 for Step 2 ($p = .005$).

Fig 1. Relationship between Self-enhancement and Positive/Negative Affect among Individuals with More Independent Self-construal

$y = 0.0447x - 0.2119$
$R^2 = 0.2216$
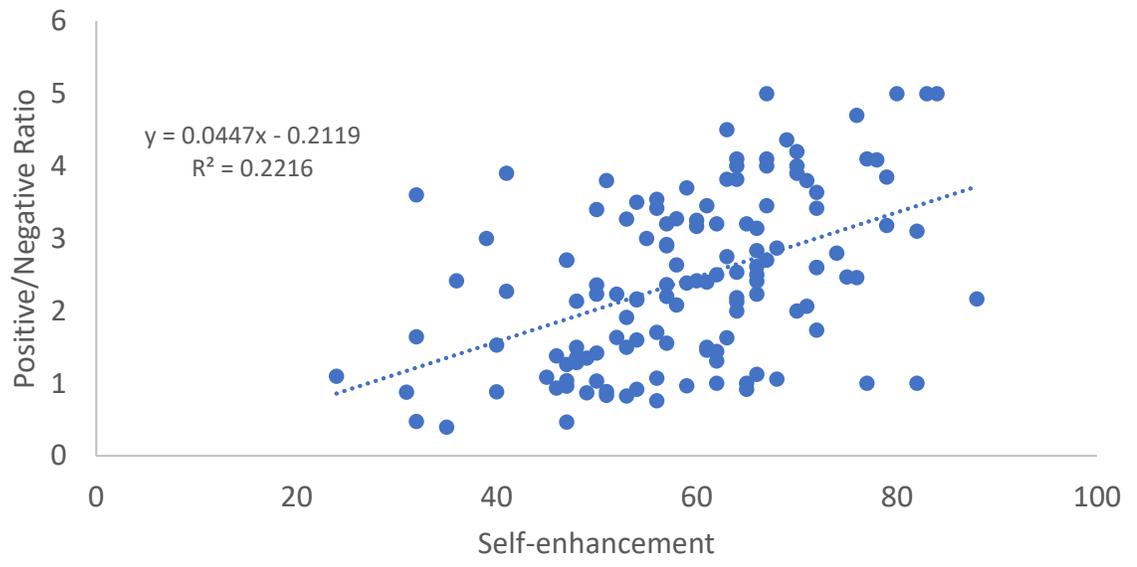
Fig 2. Relationship between Self-enhancement and Positive/Negative Affect among Individuals with More Balanced Self-construal
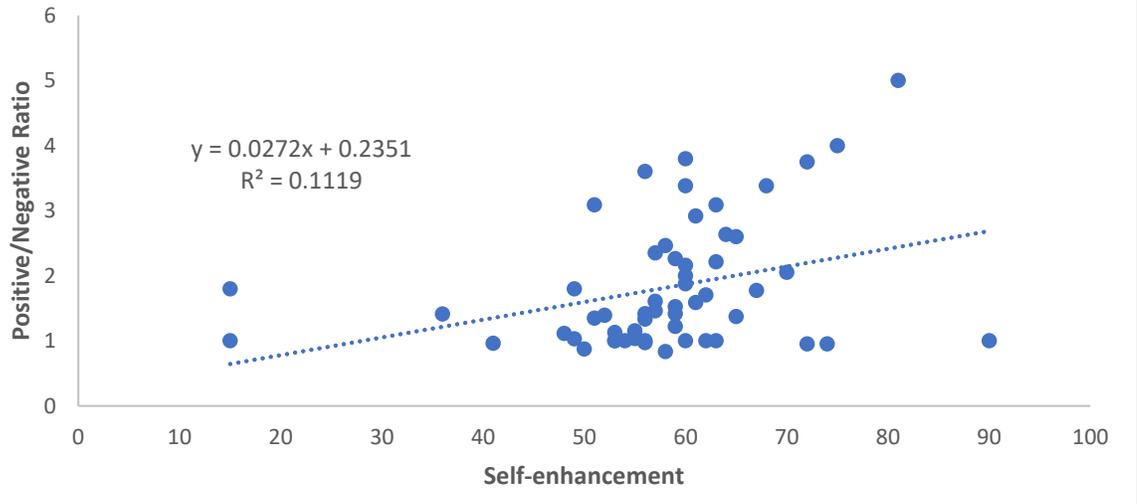
$y = 0.0272x + 0.2351$
$R^2 = 0.1119$

Fig 3. Relationship between Self-enhancement and Positive/Negative Affect among Individuals with More Interdependent Self-construal

Psychological distress. A hierarchical multiple regression analysis was conducted to predict psychological distress. In the first step, the main effect of self-enhancement and self-construal were introduced as the predictors. At an alpha level of .05, the relationship between the set of main effects and psychological distress was statistically significant, $R^2 = .03$, $F(2, 249) = 3.35$, $p = .04$. The main effect of self-construal was not significant, but the main effect of self-enhancement was. As self-enhancement increased, the psychological distress experienced decreased, $p = .03$. This accounted for 2% of the variance in psychological distress.

In the second step, the interaction between self-enhancement and self-construal was introduced into the regression model. The results indicate that the interaction added no predictive value, R^2 change $= .00$, $F(1, 248) = 1.02$, $p = .31$. Results of the hierarchical multiple regression are summarized in Table 5 below.

Self-construal did not moderate the relationship between self-enhancement and psychological distress. Only the main effect of self-enhancement was significant.

Engaging in self-enhancement was associated with decreased levels of psychological distress.

Table 5

Hierarchical Multiple Regression Analysis for Predicting Psychological Distress (N =252)

Variable	B	SE B	β	t	p
Step 1					
Self-enhancement	-.28	.13	-.14	-2.16	.03
Self-construal	-1.34	.11	-.08	-1.25	.21
Step 2					
Self-enhancement	-.29	.13	-.14	-2.24	.03
Self-construal	-.15	.11	-.08	-1.35	.18
Interaction	-.01	.01	-.06	-1.01	.31

Note. $R^2 = .03$ for Step 1 ($p = .04$); $\Delta R^2 = .00$ for Step 2 ($p = .31$).

Research Question 2: Self-Protection and Well-Being

What is the relationship between self-protection and psychological well-being? Does this vary depending on one's self-construal?

Life satisfaction. A hierarchical multiple regression analysis was conducted to predict life satisfaction. In the first step, the main effect of self-protection and self-construal were introduced as the predictors. At an alpha level of .05, the relationship between the set of main effects and life satisfaction was not found to be statistically significant, $R^2 = .00$, $F(2, 249) = .20$, $p = .82$. The main effects of self-protection and self-construal were not significant.

In the second step, the interaction between self-protection and self-construal was introduced into the regression model. The results indicate that the interaction added no predictive value, R^2 change = .01, $F(1, 248) = 1.84$, $p = .18$. Results of the hierarchical multiple regression are summarized in Table 6 below.

In sum, self-construal did not moderate the relationship between self-protection and life satisfaction. Nor were there significant main effects of self-protection and self-construal.

Table 6

Hierarchical Multiple Regression Analysis for Predicting Life Satisfaction (N = 252)

Variable	B	SE B	β	t	p
Step 1					
Self-protection	.03	.09	.03	.38	.70
Self-construal	-.01	.03	-.03	-.42	.68
Step 2					
Self-protection	.06	.09	.04	.64	.53
Self-construal	.01	.04	.01	.18	.85
Interaction	.01	.01	.01	1.36	.18

Note. $R^2 = .00$ for Step 1 ($p = .82$); $\Delta R^2 = .01$ for Step 2 ($p = .18$).

Positive/negative affect ratio. A hierarchical multiple regression analysis was conducted to predict positive/negative affect. In the first step, the main effect of self-protection and self-construal were introduced as the predictors. At an alpha level of .05, the relationship between the set of main effects and positive/negative affect was found to be statistically significant, $R^2 = .07$, $F(2, 249) = 9.32$, $p < .001$. The main effects for self-

protection and self-construal were statistically significant. As self-protection increased, positive affect was experienced was less in comparison to the negative affect, $p = .03$. This accounted for about 6% of the variance in positive/negative affect ratio. Also, as self-construal became more independent than interdependent, more positive affect was experienced than negative affect, $p < .001$.

In the second step, the interaction between self-protection and self-construal was introduced into the regression model. The results indicate that the interaction added no predictive value, R^2 change $= .00$, $F(1, 248) = .75$, $p = .39$. Results of the hierarchical multiple regression are summarized in Table 7 below.

Self-construal did not moderate the relationship between self-protection and positive/negative affect ratio. However, the main effects of self-protection and self-construal were significant. Engaging in self-protection was associated with experiencing less positive than negative affect. Likewise, being more independent than interdependent was associated with experiencing more positive than negative affect.

Table 7

Hierarchical Multiple Regression Analysis for Predicting Positive and Negative Affect (N = 252)

Variable	B	$SE\ B$	β	t	p
Step 1					
Self-protection	-.03	.01	-.15	-2.39	.02
Self-construal	.02	.01	.19	3.12	.00
Step 2					
Self-protection	-.03	.01	-.14	-2.18	.03

| Self-construal | .02 | .01 | .22 | 3.20 | .00 |
| Interaction | .00 | .00 | .06 | .87 | .39 |

Note. $R^2 = .07$ for Step 1 ($p < .001$); $\Delta R^2 = .00$ for Step 2 ($p = .39$).

Psychological distress. A hierarchical multiple regression analysis was conducted to predict psychological distress. In the first step, the main effect of self-protection and self-construal were introduced as the predictors. At an alpha level of .05, the relationship between the set of main effects and psychological distress was statistically significant, $R^2 = .18$, $F(2, 249) = 26.51$, $p < .001$. While the main effect for self-construal was not significant , there was a significant main effect of self-protection. As self-protection increased, psychological distress increased as well, $p < .001$. This accounted for about 17% of the variance in psychological distress.

In the second step, the interaction between self-protection and self-construal was introduced into the regression model. The results indicate that the interaction added no predictive value, R^2 change $= .17$, $F(1, 248) = 1.15$, $p = .28$. Results of the hierarchical multiple regression are summarized in Table 8 below.

Hence, self-construal did not moderate the relationship between self-protection and psychological distress. Only the main effect of self-protection was significant, indicating that engaging in self-protection was associated with higher levels of psychological distress.

Table 8

Hierarchical Multiple Regression Analysis for Predicting Psychological Distress (N = 252)

Variable	B	SE B	β	t	p
Step 1					
Self-protection	1.91	.27	.42	7.12	p < .001
Self-construal	-.03	.10	-.02	-.26	.79
Step 2					
Self-protection	1.86	.27	.40	6.79	p < .001
Self-construal	-.08	.11	-.04	-.68	.50
Interaction	-.02	.02	-.07	-1.07	.29

Note. $R^2 = .18$ for Step 1 ($p < .001$); $\Delta R^2 = .17$ for Step 2 ($p = .28$).

Discussion

Human beings generally strive to maintain a positive self-concept and want to achieve positive self-inferences about themselves. Individuals seek to bolster positive views of themselves through self-enhancement strategies and minimize negative perceptions of the self through self-protection. The study aimed at contributing to the psychological research in this domain by examining the association between self-enhancement/self-protection and psychological well-being. More specifically, the study investigated how having different self-construals can moderate the relationship between self-enhancement/self-protection and psychological well-being. The study sought to answer these questions: What is the relationship between self-enhancement/ protection on

well-being? Does this relationship vary depending on the person's independent-interdependent self-construals?

Relationship between Self-Enhancement and Well-Being

The current study hypothesized that self-construal would not moderate the relationship between self-enhancement and well-being. Instead, a positive relationship between self-enhancement and well-being was anticipated in both participant groups whose self-construal is more independent, and those who are more interdependent.

Tests of moderation were conducted using hierarchical multiple regression to examine if self-construal moderated the relationship between self-enhancement and each of the three well-being outcomes of life satisfaction, positive/negative affect, and psychological distress. The results were consistent with the predictions. Concerning the well-being outcomes of life satisfaction and psychological distress, self-construal did not moderate the relationship between self-enhancement and well-being. Regardless of whether or not the individuals were more independent or more interdependent, engaging in self-enhancement was associated with more life satisfaction and less psychological distress.

Concerning the well-being outcome of positive/negative affect, however, there was a significant statistical interaction between self-enhancement and self-construal. While this appears as if the finding is inconsistent with no-moderation prediction, a closer look at the interaction shows that the three self-construal groups (more independent, more interdependent, and more balanced groups) exhibited similar relationships between self-enhancement and positive/negative affect. Across all the groups, as the individuals tended to self-enhance, they experienced more positive than negative affect. The relationship

only differed in strength but not in direction across the groups. Stronger associations were found in the more independent and more interdependent groups than in the balanced one. Direction-wise, as predicted in the current study, a positive relationship between self-enhancement and positive/negative affect occurred in both participants whose self-construal is more independent, and those who are more interdependent. Thus, while the interaction between self-enhancement and self-construal was statistically significant, the direction of the relationships between self-enhancement and positive/negative affect across groups did not differ enough to conclude that a moderation due to self-construal occurred.

Overall, the findings of the current study are consistent with many studies showing that self-enhancement is linked to advantages such as psychological well-being (e.g., satisfaction with life; Dufner et al., 2012; O'Mara et al, 2012; Taylor et al, 2003). Likewise, the findings are consonant with various studies that suggest that when people engage in self-enhancement, they experience less psychological distress. In a study conducted by Creswell (2005), it was found that self-enhancement served as a stress-buffering reaction. Likewise, it was found to be negatively associated with parameters like anxiety, depression, hostility, and neuroticism. This finding was found to be true not only in individualistic cultures but also in collectivistic cultures (Anderson, 1999; Stewart et al., 2003; Kobayashi & Brown, 2003; Chang et al., 2003; Gaertner et al., 2008; Kurman & Sriram, 1997).

Relationship between Self-Protection and Well-Being

It was hypothesized that self-construal would moderate the relationship between self-protection and well-being. Among participants whose self-construal is more

interdependent, a positive relationship between self-protection and well-being was predicted. However, among those whose self-construal is more independent, a negative relationship between self-protection and well-being was expected.

Tests of moderation were conducted using hierarchical multiple regression to examine if self-construal moderated the relationship between self-protection and each of the three well-being outcomes of life satisfaction, positive/negative affect, and psychological distress. The results were not consistent with the predictions. Independent vs. interdependent self-construals did not moderate the relationships. This could be because there was not enough variation in the self-construal of the participants in the sample. The participants in the study were residents of the United States, were predominantly White (77%) with a more developed independent self-construal (and less developed interdependent self-construal) and were also more inclined to self-enhance than self-protect.

Regardless of whether the individuals were more independent or more interdependent, self-protection was associated with experiencing less positive than negative affect and was associated with higher levels of psychological distress. In other words, in the current study, self-protection was associated with negative psychological well-being outcomes. Most studies pointing to the maladaptive effects of defensiveness investigated physiological and general health indices (e.g., Movius & Allen, 2005, Nyklicek et al., 1998; Rutledge et al., 2000), whereas most studies supporting its adaptive functions investigated personality traits (e.g., Kurtz et al., 2008) or studied individual differences in impression management rather than self-deceptive defensiveness (Uziel, 2010). Higher levels of defensiveness may increase emotional stability by preventing

undesired intrusions, such as a threat to the self, fear or anxiety, to impact one's well-being (Bedi & Brown, 2005; Kline, Knapp-Kline, Schwartz, & Russek, 2001; Lane et al., 1990; Taylor & Brown, 1988). However, defensiveness was also found to be harmful for the individual's physical health as part of a repressive coping style (Denollet, Martens, Nyklicek, Conraads, & deGelder, 2008; Jacobs, 2010).

With regards to life satisfaction, self-protection was not predictive of this well-being outcome in the current study. Previous studies, however, have shown that people who engage in self-protection have lowered levels of life satisfaction. In a study conducted by Lafrenière, Sedikides & Lei (2016), results showed that Western participants experienced greater life satisfaction when they engaged in self-enhancement strategies and lowered life satisfaction levels when they engaged in self-protection strategies like defensiveness.

Clinical Implications

The self, defined as the mental construct of our own identity, is central to clinical psychology and psychotherapy. It is natural, and in many cases, adaptive for human beings to have a self and have some impulse to defend the construct of the self. However, finding a balanced role for the self is vital to psychological health. The study looked at the two ways humans generally seek to maintain a positive self-concept and thereby achieve positive inferences about themselves.

Self-enhancement and self-protection both affect one's psychological well-being in different ways. The current sample of participants was predominantly White with more developed independent self-construals. The findings indicate that in this kind of sample, self-enhancement is associated with positive well-being. In previous studies, self-

enhancement linearly predicted psychological health. It is positively related to psychological resources like extraversion, optimism, mastery, active coping, social resources like positive relations, family support, and psychological adjustments like meaning in life, purpose, and subjective well-being. In some cases, people with greater levels of self-enhancement show higher resilience as well (Sedikides et al., 2004; Taylor et al., 2003; Gramzow, Sedikides, Panter, & Insko, 2000).

Self-enhancement has been found to benefit individuals in the short-term but proves to be detrimental in the long-term. Self-enhancement also comes with its own set of negative social consequences. Others often dislike people who engage in presenting themselves in a grandiose fashion (Robins & Beer, 2001; Sedikides, Gregg, & Hart, 2007; Sedikides, Campbell, Reeder, Elliot, & Gregg, 2002).

In a study conducted by Paulhus (1998), where he investigated the costs and benefits of self-enhancement during a seven-week group interaction task using the NEO-PI, he found that fellow group members viewed the self-enhancers as performing well in the group, exhibiting high levels of agreeableness and openness to experience. However, by the end of the seventh week, they rated the self-enhancers as exhibiting arrogance, poor group performance, and having poor adjustment skills. The results thus showed that self-enhancement could have good first impressions, but they are unable to maintain those impressions over time. The current study, however, does not examine the social outcomes of self-enhancement. Future studies could measure these along with psychological well-being.

Self-protection affects one's psychological well-being in different ways. It is used as an adaptive strategy to ameliorate threats to self-integrity. Although these defensive

responses are adaptive to some degree, they can be maladaptive to the extent they forestall learning from important, though threatening, experiences and information. Moreover, people's efforts to protect self-integrity may threaten the integrity of their relationships with others (Murray, Holmes, MacDonald, & Ellsworth, 1998). Self-protection has also been found to be linked to self-improvement. For example, potentially threatening but useful upward social comparisons can lead to long term improvement as people learn from threatening feedback (Buunk, Cohen-Schotanus, & Henk van Nek,2007; Lockwood & Kunda, 2000). As with self-enhancement, long-term self-protection also has detrimental consequences. Entrenched self-protection can have psychological costs. One such cost is the failure to secure belongingness in a close relationship (Cohen et al., 2005).

Limitations and Future Directions

As mentioned in the rationale of the study, while many studies have investigated the relationship between self-enhancement and well-being, not many have looked at the relationship between self-protection and well-being. The current study addresses that lack. It also examines if the relationships between self-enhancement/self-protection and well-being are moderated by independent-interdependent self-construals. However, the study had some limitations. Firstly, because the study looked at within-culture individual differences (rather than between-culture group differences) in self-construal, not enough variation in self-construal was observed in the sample of residents in the United States. A majority of the participants had more developed independent than interdependent self-construals. Future studies should aim for a more heterogeneous sample by collecting data from different cultures (individualistic and collectivistic) to obtain an adequate

representation of independent vs. interdependent self-construals. Investigating between-culture group differences would also facilitate comparisons with previous studies that have utilized cross-cultural samples.

Secondly, another limitation of the study stems from the MTurk environment, in which workers are free to choose the tasks they complete. Most workers would choose the task that provides higher compensation, or the ones that might appeal to then, making this to some degree a self-selected sample. All participants who decided to complete the survey did know that they were going to be filling surveys on self-perceptions, how they relate to themselves and others, and their well-being in general. This process may have created some bias in the set of participants. Of the 300 people who began the study in Qualtrics, 15 (5%) did not complete the study tasks, suggesting that some people with an initial interest in the study chose not to complete it.

Given that the data were collected online, the environment for responding to the questionnaires was not controlled. Participation could take anywhere and at any time. There was also no time limitation on completing the survey. Hence, a considerable variation was found in the response times; while most of the participants took 13 to 25 minutes to complete the survey, some took about two hours.

The scales were all self-report, which entails the risk of biased responding by the participants (e.g., responding in a socially-desirable manner). The scales also relied on recollection and memories that may or may not have been accurate. Future studies should incorporate measures of such biased responding and assess their impact.

It would be quite interesting to do gender comparisons and see whether difference in self-construals has an impact on the relationship between self-enhancement/self-protection and well-being.

Future studies could also look into the relationship of different strategies of self-enhancement (positivity enhancement, favorable construals, and self-affirming reflections) and self-protection (defensiveness) separately with regards to well-being.

Short-term vs long-term benefits of engaging in self-enhancement and self-protection could also be seen on different outcomes of well-being to get a better understanding of their clinical implications.

Conclusion

Self can be defined as "a person's distinctive individuality, identity, essential nature, or collection of personal characteristics" (Colman, 2015). Self-concept is closely related to self and constitutes the knowledge component of self; thus, it involves everything a person knows or believes about himself or herself. Developing self-concept is a crucial task of a person. It can be done through introspection, observation of one's behavior, social experiences, social interactions, and comparisons, and so on. Culture also has a role to play in determining self-concept. Markus and Kitayama (1991) were first to distinguish types of self-based on culture. They categorized those belonging to an individualistic culture as having an independent self-construal and those belonging to a collectivistic culture as having an interdependent self-construal.

The purpose of the proposed study was to investigate the relationships between self-enhancement/protection and psychological well-being and to test if these relationships vary depending on one's independent/interdependent self-construal. In a

sample of residents of the United States that is predominantly White and significantly more independent, self-enhancement was positively associated with psychological well-being, while self-protection was negatively associated. Self-construal did not moderate these relationships.

References

Akimoto, S. A., & Sanbonmatsu, D. M. (1999). Differences in self-effacing behavior between Europeans and Japanese Americans: Effect on competence evaluation. *Journal of Cross-Cultural Psychology, 30*(2), 159-177.

Aldwin, C., & Greenberger, E. (1987). Cultural differences in the predictors of depression. *American Journal of Community Psychology*, *15*(6), 789-813.

Alicke, M.D., & Govorun, O. (2005). The better-than-average effect. In M.D. Alicke, D.A Dunning, & J.I Krueger (Eds.), *The Self in Social Judgment* (pp. 85-106). Philadelphia: Psychology Press.

Alicke, M.D., & Sedikides, C. (2009). Self-enhancement and self-protection: What they are and what they do. *European Review of Social Psychology, 20*(1), 1-48.

Alloy, L. B., & Clements, C. M. (1992). Illusion of control: Invulnerability to negative affect and depressive symptoms after laboratory and natural stressors. *Journal of Abnormal Psychology, 101*(2), 234-245.

Anderson, C. A (1999). Attributional style, depression, and loneliness: A cross-cultural comparison of American and Chinese students. *Personality and Social Psychology Bulletin, 25*(4)*,* 482-499.

Atkinson, J.W. (1960). Personality dynamics. *Annual Review of Psychology*, 11, 255-290.

Baumeister, R.F., & Bushman, B.J. (2013). *Social Psychology and Human Nature* (3rd ed.). Belmont, CA: Wadsworth, Cengage Learning.

Baumeister, R.F., & Cairns, K. J. (1992). Repression and self-presentation: When audiences interfere with self-deceptive strategies. *Journal of Personality and Social Psychology*, *62*(5), 851-862.

Baumeister, R.F., & Leary, M.R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, *117*(3), 497-529.

Bedi, G., & Brown, S. L. (2005). Optimism, coping style, and emotional well-being in cardiac patients. *British Journal of Health Psychology, 10*(1), 57–70.

Berglas, S., & Jones, E. E. (1978). Drug choice as a self-handicapping strategy in response to noncontingent success. *Journal of Personality and Social Psychology, 36*(4), 405-417.

Bond, M. H., Leung, K., & Wan, K. C. (1982). The social impact of self-effacing attributions: The Chinese case. *Journal of Social Psychology, 118*(2), 157-166.

Bonnano, G. A., Rennicke, C., & Dekel, S. (2005). Self-enhancement among high-exposure survivors of the September 11th terrorist attack: Resilience or social maladjustment? *Journal of Personality and Social Psychology, 88*(6), 984-998.

Bushman, B. J., & Baumeister, R. F. (1998). Threatened egotism, narcissism, self-esteem, and direct and displaced aggression: Does self-love or self-hate lead to violence? *Journal of Personality and Social Psychology, 75*(1)*,* 219-229.

Buunk, A. P., Cohen-Schotanus, J., & van Nek, R. H. (2007). Why and how people engage in social comparison while learning social skills in groups. *Group Dynamics: Theory, Research, and Practice*, *11*(3), 140–152.

Campbell, K. W., & Sedikides, C. (1999). Self-threat magnifies the self-serving bias: A meta-analytic integration. *Review of General Psychology, 3*(1)*,* 23-43.

Chang, E. C., Sanna, L. J., & Yang, K. (2003). Optimism, pessimism, affectivity, and

    psychological adjustment in US and Korea: A test of mediation model.

    Personality and Individual Differences, 34(7), 1195-1208.

Christopher, M.S., & Skillman, G.D. (2009). Exploring the Link Between Self-Construal

    and Distress Among African American and Asian American College Students.

    Journal of College Counseling, 12(1), 44-56.

Cohen, L.H., Gunthert, K.C., Butler, A.C., O'Neill, S.C., Tolpin, L.H., 2005.Daily

    affective reactivity as a prospective predictor of depressive symptoms. *Journal of*

    Personality 73(2), 1687–1713.

Colman, A.M. (2015). *A dictionary of Psychology (4th ed.*). New York, NY: Oxford

    University Press.

Creswell, J. D., Welch, W. T., Taylor, S. E., Sherman, D. K., Gruenewald, T. L., &

    Mann, T. (2005). Affirmation of personal values buffers neuroendocrine and

    psychological stress responses. *Psychological Science, 16*(11), 846-851.

Croyle, R. T., Sun, Y., & Louie, D. H. (1993). Psychological minimization of cholesterol

    test results: Moderators of appraisal in college students and community residents.

    Health psychology, 12(6), 503-507.

Dabul, A. J., Bernal, M. E., & Knight, G.P. (1995). Allocentric and idiocentric self-

    description and academic achievement among Mexican American and Anglo-

    American adolescents. *Journal of Social Psychology, 135(*5*)*, 621-630.

Denollet, J., Conraads, V. M., Martens, E. J., Nyklicek, I., & de Gelder, B. (2008).

    Clinical events in coronary patients who report low distress: Adverse effect of

    repressive coping. *Health Psychology, 27*(3), 302–308.

DeSoto, K. A. (2016). Under the hood of Mechanical Turk. *APS Observer, 29*(3).

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The *Satisfaction with Life Scale. Journal of Personality Assessment*, *49*(1), 71-75.

Doi, T. (1973). *The anatomy of dependence*. Tokyo: Kodansha.

Dollard, J., & Miller, N. (1950). *Personality and psychotherapy: An analysis in terms of learning, thinking and culture*. New York: McGraw-Hill.

Elliot, A. J., & Mapes, R. R. (2005). Approach-avoidance motivation and self-concept evaluation. In A. Tesser, J. V. Wood, & D. A. Stapel (Eds.), *On Building, Defending and Regulating the Self: A Psychological Perspective* (pp. 171-196). Washington, DC: Psychological Press.

Franks, E, & Faux, S.A. (1990). Depression, stress, mastery, and social resources in four ethnocultural women's groups. *Research in Nursing and Health, 13*(5), 283-292.

Gaertner, L., Sedikides, C., & Chang, K. (2008). On pancultural self-enhancement: Well-adjusted Taiwanese self-enhance on personally valued traits. *Journal of Cross-Cultural Psychology, 39*(4)*, 463-477.

Gelfland, M. J., Higgins, M., Nishii, L. H., Rava, J. L., Dominquez, A., Murakami, F., et al. (2002). Culture and egocentric perceptions of fairness in conflict and negotiation. *Journal of Applied Psychology, 87*(5), 833-845.

George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference. 11.0 update (4th ed.*). Boston: Allyn & Bacon.

Gramzow, R. H., Sedikides, C., Panter, A. T., & Insko, C. A. (2000). Aspects of self-regulation and self-structure as predictors of perceived emotional distress. *Personality and Social Psychology Bulletin, 26*(2), 188-206.

Green, J., Sedikides, C., Pinter, B., & Van Tongeren, D. (2009). Two Sides to Self-protection: Self-improvement Strivings and Feedback from Close Relationships Eliminate Mnemic Neglect. *Self & Identity*, *8*(2/3), 233–250.

Gregg, A. P., Hart, C. M., Sedikides, C., & Kumashiro, M. (2008). Everyday conceptions of Modesty: A prototype analysis. *Personality and Social Psychology Bulletin*, *34*(7), 978-992.

Heine, S. J., & Hamamura, T. (2007). In search of East Asian self-enhancement. *Personality and Social Psychology Review, 11*(1), 4-27.

Heine, S. J., & Renshaw, K. (2002). Interjudge Agreement, Self-Enhancement and Liking: Cross-Cultural Divergences. *Personality and Social Psychological Bulletin, 28*(5), 578-587.

Heine, S. J., Lehman, D. R., Markus, H. R., & Kitiyama, S. (1999). Is there a universal need for positive self-regard? *Psychological Review, 106*(4)*, 766-794.

Henry, J.D., & Crawford, J.R. (2005). The short form version of the Depression, Anxiety, and Stress Scales (DASS-21): Construct validity and normative data in a large non-clinical sample. *The British Journal of Clinical Psychology, 44*(2), 227-239.

Hepper, E. G., Gramzow, R. H., & Sedikides, C. (2010). Individual differences in self-enhancement and self-protection strategies: An integrative analysis. *Journal of Personality, 78*(2), 781-814.

Hepper, E. G., Sedikides, C., & Cai, H. (2013). Self-enhancement and self-protection strategies in China: Cultural expressions of a fundamental human motive. *Journal of Cross-Cultural Psychology, 44*(1), 5-23.

Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist, 52*, 1280–1300.

Higgins, E.T., & Sorrentino, R. M. (Eds.). (1996). *Handbook of motivation and cognition*: Vol. 2. *Foundations of social behavior*. New York: Guildford Press.

Higgins, R.L. (2005). Reality negotiation. In C.R Snyder & S.J. Lopez (Eds.), *Handbook of Positive Psychology* (pp. 351-365). Oxford, UK: Oxford University Press.

Hofstede, G. (1980). *Culture's consequences: International differences in work-related values.* Beverly Hills, CA: Sage.

Hull, C.L. (1943). *Principles of behavior*. New York: Appleton- Century-Crofts.

Joiner, Jr., T. E., & Barnett, J. (1994). A test of interpersonal theory of depression in children and adolescents using a projective technique. *Journal of Abnormal Child Psychology*, *22*(5), 595-609.

Kanagawa, C., Cross, S. E., & Markus, H. R. (2001). "Who am I?" The cultural psychology of the conceptual self. *Personality and Social Psychology Bulletin, 27*(1), 90-103.

Kenny, D. A., & DePaulo, B. M. (1993). Do people know how others view them? :An empirical and theoretical account. *Psychological Bulletin, 114*(1), 145-161.

Kim, W., & Rew, L. (1994). Ethnic identity, role integration, quality of life, and depression in Korean-American women. *Archives of Psychiatric Nursing, 8*(6), 348-356.

Kim, Y. –h., Peng, S. & Chiu, C.-y. (2008). Explaining self-esteem differences between Chinese and North Americans: Dialectical self (vs. self-consistency) or lack of positive self-regards. *Self and Identity*, *7*(2), 113-128.

Kitayama, S., Markus, H.R., Matsumoto, H.,& Norasakkunkit,V. (1997). Individual and collective processes in the construction of self: Self-enhancement in the United

States and self-criticism in Japan. *Journal of Personality and Social Psychology, 72*(6), 1245-1267.

Kitiyama, S., Takagi, H., & Matsumoto, H. (1995). Causal attribution of success and failure: Cultural psychology of the Japanese self. *Japanese Psychological Review, 38*, 247-280.

Kline, J. P., Knapp-K line , K ., Schwartz, G. E. R ., & Russek, L. G. S. (2001). Anterior asymmetry, defensiveness, and perceptions of parental caring. *Personality and Individual Differences ,31*(1), 1135– 1145.

Kobayashi, C., & Brown, J. D. (2003). Self-esteem and self-enhancement in Japan and America. *Journal of Cross-Cultural Psychology*, *34*(5)*,* 567-580.

Krueger, J., & Clement, R.W. (1994). The truly false consensus effect: An ineradicable and egocentric bias in social perception. *Journal of Personality and Social Psychology, 67*(4), 596-610.

Kunda, Z. (1987). Motivated inference: Self-serving generation and evaluation of causal theories. *Journal of Personality and Social Psychology, 53*(4), 636-647.

Kuo, W.H. (1984). Prevalence of depression among Asian-Americans. *Journal of Nervous and Mental Disease, 172*(8), 449-457.

Kurman, J. (2001). Self-enhancement: Is it restricted to individualistic cultures? *Personality and Social Psychology Bulletin, 27*(12), 1705-1716.

Kurman, J. (2003). Why is self-enhancement low in certain collectivistic cultures? An investigation of two competing explanations. *Journal of Cross-Cultural Psychology*, *34*(5)*,* 489-510.

Kurman, J., & Eshel, Y. (1998). Self-Enhancement, Generality Level of Self-Evaluation, and Emotional Adjustment. *Journal of Social Psychology*, *138*(5), 549–553.

Kurman, J., & Sriram, N. (1997). Self-enhancement, generality of self-evaluation, and affectivity in Israel and Singapore. *Journal of Cross-Cultural Psychology*, 28(4), 421-441.

Kurtz, J.E., Tarquini, S.J., & Iobst, E.A. (2008). Socially desirable responding in personality assessment: Still more substance than style. *Personality and Individual Differences,45*(1), 22–27.

Lafrenière, M.-A., Sedikides, C., & Lei, X. (2016). Regulatory fit in self-enhancement and self-protection: Implications for life satisfaction in the west and the east. *Journal of Happiness Studies*, *17*(3), 1111–1123.

Lalwani, A. K., Shavitt, S., & Johnson, T. (2006). What is the relation between cultural orientation and socially desirable responding? *Journal of Personality and Social Psychology, 90*(1)*,* 165-178.

Lalwani, A. K., Shrum, L. J., & Chiu, C. (2009). Motivated response style: The role of cultural values, regulatory focus, and self-consciousness in socially desirable responding. *Journal of Personality and Social Psychology, 96*(4)*,* 870-882.

MacDonald, G., & Leary M. R. (2005). Why does social exclusion hurt? The relationship between social and physical pain. *Psychological Bulletin*, *131*(2), 202-223.

Markus, H., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98(2), 224-253.

Mezulis, A. H., Abramson, L. Y., Hyde, J. S., & Hankin, B. L. (2004). Is there a
universal positive bias in attributions?: A Meta-Analytic review of individual,
developmental, and cultural differences self-serving attributional bias.
Psychological Bulletin, 130(5), 711-747.

Miler, J. G. (1984). Culture and the development of everyday social explanation. *Journal
of Personality and Social Psychology, 46*(5), 961-978.

Miller, D.T., & Ross, M. (1975). Self-serving biases in the attribution of causality: Fact
or fiction? *Psychological Bulletin, 82(*2), 213-225.

Movius, H.L., Allen, J.J., 2005. Cardiac vagal tone, defensiveness, and motivational
style. *Biological Psychology,68* (2), 147–162.

Murray, S. L., Holmes, J. G., MacDonald, G., & Ellsworth, P. C. (1998). Through the
looking glass darkly? When self-doubts turn into relationship insecurities. *Journal
of personality and social psychology*, *75*(6), 1459–1480.

Norasakkunkit, V., & Kalick, S.M. (2002). Culture, ethnicity, and emotional distress
measures: The role of self-construal and self-enhancement. *Journal of Cross
Cultural Psychology, 33*(1), 56-70.

Norem, J. K., & Cantor, N. (1986). Defensive pessimism: Harnessing anxiety as
motivation. *Journal of Personality and Social Psychology, 51*(6), 1208-1217.

Nyklicek, I., Vingerhoets, A.J., Van Heck, G.L., & Van Limpt, M.C.(1998). Defensive
coping in relation to casual blood pressure and self-reported daily hassles and life
events. *Journal of Behavioral Medicine, 21*(2), 145–161.

Okazaki, S. (1997). Sources of ethnic differences between Asian-American and White American college students on measures of depression and social anxiety. *Journal of Abnormal Psychology, 106(*1), 52-60.

Oyeserman, D. (2007). Social Identity and Self- Regulation. In A.W. Kruglanski, & E.T. Higgins (Eds.), *Social Psychology: Handbook of Basic Principles* (2nd ed.) (pp. 432-453). New York, NY: Guilford Press.

Paolacci, G. & Chandler, J. (2014). Inside the Turk: Understanding Mechanical Turk as a participant pool. *Current Directions in Psychological Science, 23*(3), 184-188.

Robins, R. W., & Beer, J. S. (2001). Positive illusions about the self: Short-term benefits and long-term costs. *Journal of Personality and Social Psychology, 80*(2)*,* 340-352.

Rogers, C. R. (1959). A theory of therapy, personality, and interpersonal relationships, as developed in the client-centered framework. In S. Koch (Ed.), *Psychology: A study of science: Volume 3. Formulations of the person and the social context*, pp. 729-788. New York: McGraw-Hill.

Schwartz, S.H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. In M.P Zanna (Ed.), *Advances in Experimental Social Psychology*, Vol. 25, p 1-65). New York: Academic Press.

Sedikides, C., & Gregg, A. P. (2003). Portraits of the self. In M.A Higg & J. Cooper (Eds.), *Sage Handbook of Social Psychology* (pp. 110-138). London: Sage.

Sedikides, C., & Gregg, A. P. (2008). Self-enhancement: Food for thought. *Perspectives on Psychological Science, 3*(2), 102-116.

Sedikides, C., & Strube, M. J. (1997). Self-evaluation: To thine own self be good, to thine own self be sure, to thine own self be true, and to thine own self be better. In M. P. Zanna (Ed.), *Advances in Experimental Social Psychology*, Vol. 29. San Diego, CA: Academic Press, pp. 201-269.

Sedikides, C., Campbell, W. K., Reeder, G., Elliot, A. J., & Gregg, A. P. (2002). Do others bring out the worst in narcissists? The "Others Exist for Me" illusion. In Y. Kashima, M. Foddy, & M. Platow (Eds.), *Self and Identity: Personal, Social, and Symbolic* (pp. 103-123). Mahwah, NJ: Lawrence Erlbaum Associates.

Sedikides, C., Gaertner, L. & Vevea, J. L. (2007). Inclusion of theory-relevant moderators yield the same conclusions as Sedikides, Gaertner, and Vevea (2005): A meta-analytic reply to Heine, Kitayama, and Hamamura (2007). *Asian Journal of Social Psychology*, *10*(2), 59-67.

Sedikides, C., Gaertner, L., & Toguchi, Y. (2003). Pancultural self-enhancement. *Journal of Personality and Social Psychology, 84*(1)*,* 60-79.

Sedikides, C., Gregg, A. P., & Hart, C. M. (2007). The importance of being modest. In C. Sedikides & S. Spencer (Eds.), *The Self: Frontiers in Social Psychology* (pp. 163-184). New York, NY: Psychology Press.

Sedikides, C., Rudich, E. A., Gregg, A. P., Kumashiro, M., & Rusbult, C. (2004). Are normal narcissists psychologically healthy?: Self-esteem matters. *Journal of Personality and Social Psychology, 87*(3), 400-416.

Shah, J. Y., Kruglanski, A.W., & Friedman, R. (2002). A goal systems approach to self-regulation. In M. P. Zanna, J. M. Olson, & C. Seligman (Eds.), *Ontario*

Symposium on Personality and Social Psychology (Vol.10, pp. 247-276).

Mahwah, NJ: Erlbaum.

Shteynberg, G., Gelfland, M. J., & Kim, K. (2009) Peering into the "magnum mysteries"

of culture: The explanatory power of descriptive norms. *Journal of Cross-*

Cultural Psychology, *40*(1)*,* 46-69.

Shweder, R. A., & Bourne, E. J. (1984). Does the concept of person vary cross-

culturally? In R. A. LeVine (Eds.), *Culture theory: Essays on mind, self, and*

emotion (pp. 158-199). Cambridge: Cambridge University Press.

Singelis, T. M. (1994). The Measurement of Independent and Interdependent Self-

Construals. *Personality and Social Psychology Bulletin, 20*(5), 580-591.

Singelis, T. M. (2000). Some thoughts in the future of cross-cultural social psychology.

Journal of Cross-cultural Psychology, 31(1), 76-91.

Singelis, T. M., Triandis, H.C., Bhawuk, D. S., & Gelfland, M. (1995). Horizontal and

vertical dimensions of individualism and collectivism: A Theoretical and

Measurement Refinement. *Cross-Cultural Research*, *29*(3), 240–275.

Sinha, J.B.P. (2014). *Psycho-Social Analysis of the Indian Mindset*. New Delhi: Springer.

Skinner, B. F (1953). *Science and human behavior*. New York: Macmillan.

Stewart, S. M., Byrne, B. M., Lee, P. W. H., Ho, L. M., Kennard, B. D., Hughes, C., &

Emslie, G. (2003). Personal versus interpersonal contributors to depressive

symptoms among Hong Kong adolescents. *International Journal of Psychology,*

38(3), 160-169.

Sue, D., Ino, S., & Sue, D.M. (1983). Non-assertiveness of Asian Americans: An

inaccurate assumption? *Journal of Counseling Psychology,30*(4), 581-588.

Taylor, S. E., Lerner, J. S., Sherman, D. K., Sage, R. M., & McDowell, N. K. (2003b). Are self-enhancing cognitions associated with healthy or unhealthy biological profiles? *Journal of Personality and Social Psychology, 85(4),* 605-615.

Taylor, S.E. (2002). *The tending instinct: Women, men, and the biology of our relationships*. New York: Holt.

Tice, D. M. (1991). Esteem protection or enhancement? Self-handicapping motives and attributions differ by trait self-esteem. *Journal of Personality and Social Psychology*, *60*(5), 711–725.

Triandis, H. C. & Gelfland, M. J. (1998). Converging measurement of horizontal and vertical individualism and collectivism. *Journal of Personality and Social Psychology, 74*(1), 118-128.

Triandis, H. C., Bontempo, R., Villareal, M. J., Asai, M., & Lucca, N. (1988). Individualism and collectivism: Cross-cultural perspectives on self-ingroup relationships. *Journal of Personality and Social Psychology*, *54*(2), 323-338.

Triandis, H.C. (1989). The self and social behavior in differing cultural contexts. *Psychological Review*, 96(3), 506-520.

Triandis, H.C. (1995). *Individualism and collectivism*. Boulder, CO: West View Press.

Uziel, L. (2010). Rethinking social desirability scales: From impression management to interpersonally oriented self-control. *Perspectives on Psychological Science, 5*(3), 243–262.

Verkuyten, M. (1997). Intergroup evaluation and self-esteem motivations: Self-enhancement and self-protection. *European Journal of Social Psychology*, *27*(1), 115–119.

Wan, C., Chiu, C.-y., Tam, K., Lee, V.S., Lau, I. Y., & Peng, S. (2007). Perceived

cultural importance and actual self-importance of values in cultural identification.

Journal of Personality and Social Psychology, 92(2)*,* 337-354.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief

measures of positive and negative affect: The PANAS scales. *Journal of*

Personality and Social Psychology, 54(6), 1063–1070.

Wiebe, D. J., & Black, D. (1997). Illusional beliefs in the context of risky sexual

behaviors. *Journal of Applied Social Psychology*, *27*(19), 1727-1749.

Ying, Y. (1988). Depressive symptomatology among Chinese-Americans as measured by

the CES-D. *Journal of Clinical Psychology, 44*(5), 739-746.

Zou, X., Tam, K. P., Morris, M. W., Lee, S. –I., Lau, I. Y.-m., & Chiu, C. –y (2009).

Culture as common sense: Perceived consensus versus personal beliefs as

mechanisms of cultural influence. *Journal of Personality and Social Psychology,*

97(4), 579-597.

Zung, W. (1965). A Self-Rating Depression Scale. *Archives of General Psychiatry, 12*(1),

63-70.

Appendix A: Demographics Questionnaire

Instructions: Please provide a response to the following statements.

1. Age: _____

2. Gender: Male _____Female_____Other_____

3. Highest level of education attained

Some high school_____

High school diploma or equivalent_____

Vocational training_____

Some college/associate degree_____

Bachelor's degree _____

Some post undergraduate work_____

Graduate degree (e.g. MA, MBA, MSW, PhD, MD, JD)_____

Other, please specify:_____

How do you describe your race/ethnicity? (select all that apply):

      a. American Indian or Alaska Native

      b. Asian

      c. Black or African-American

      d. Hispanic or Latino

      e. Middle Eastern or North African

      f. Native Hawaiian or Other Pacific Islander

      g. White

      h. Other

      Where do you live?

a. Midwest—Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, Ohio, North Dakota, South Dakota, Wisconsin

b. Northeast—Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont

c. South—Arkansas, Alabama, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia

d. West—Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

e. Puerto Rico or other U.S. territories

f. Other, please specify: _____

Appendix B: Self-Enhancement/Protection Strategies Scale

Instructions: In this set of questions, we will list particular patterns of thought, feeling, and behavior that people engage in during the course of everyday life. For each pattern, we will ask you to consider whether it is something that you yourself engage in, and how much it is characteristic or typical of you.

Response scale: 1 (not at all characteristic of me) to 6 (very characteristic of me)

Not at all characteristic of me						**Very characteristic of me**
	1	2	3	4	5	6

1. Thinking of yourself as generally possessing positive personality traits or abilities to a greater extent than most people

2. Remembering hardships that you had to overcome in order to be really successful

3. Thinking about how you have grown and improved as a person over time; how much better/more honest/skilled you are now than you used to be

4. Believing that you are changing, growing, and improving as a person more than other people are

5. Believing you are more likely than most people to be happy and successful in the future

6. When you achieve success or really good grades, thinking it was due to your ability

7. When you achieve success or really good grades, thinking it says a lot about you as a person

8. When you achieve success or really good grades, playing up the importance of that ability or area of life

9. When you do poorly at something or get bad grades, thinking it was due to bad luck

10. When you do poorly at something or get bad grades, thinking that the situation or test was uninformative or inaccurate (e.g., thinking the exam was badly designed, or thinking "that can't be right")

11. When you do poorly at something or get bad grades, thinking hard about the situation and feedback until you find something wrong with it and can discount it

12. When someone says something ambiguous about you, interpreting it as a positive comment or compliment (e.g., if someone says "you certainly speak your mind, don't you?", you might think they were praising your honesty, not insulting your lack of tact)

13. Generally getting over the experience of negative feedback quickly, so a few hours/days/weeks after a negative event (e.g., doing poorly in an exam, being criticized by a friend) you no longer feel bad

14. In times of stress, reminding yourself of your values and what matters to you

15. In times of stress, thinking about your positive close relationships and loved ones

16. Revising very little for a test, or going out the night before an exam or appraisal at work, so that if you do well, it would mean you must have very high ability

17. Revising very little for a test, or going out the night before an exam or appraisal at work, so that if you do poorly, it would not mean you are incompetent

18. Thinking about how things could have been much worse than they are (e.g., "well, at least..."; "it could be worse")

19. Spending time with people who think highly of you, say good things about you, and make you feel good about yourself

20. Asking for feedback when you expect a positive answer (e.g., asking a friend "Do I look ok?" when you have made a lot of effort with your appearance; approaching a senior colleague or tutor for feedback on a piece of work if you think you did well)

Appendix C: Self-Construal Scale (SCS)

Instructions: This is a questionnaire that measures a variety of feelings and behaviors in various situations. Listed below are a number of statements. Read each one as if it is referred to you. Beside each statement, write the number that best matches your agreement or disagreement. Please respond to every statement.

1= strongly disagree

2= disagree

3= somewhat disagree

4= do not agree or disagree

5= agree somewhat

6= agree

7= strongly agree

_____1. I enjoy being unique and different from others in many respects. (Sing1)

_____2. I can talk openly with a person who I meet for the first time, even when this person is much older than I am. (Sing2)

_____3. Even when I strongly disagree with group members, I avoid an argument. (Sing3)

_____4. I have respect for the authority figures with whom I interact. (Sing4)

_____5. I do my own thing, regardless of what others think. (Sing5)

_____6. I respect people who are modest about themselves. (Sing6)

_____7. I feel it is important for me to act as an independent person. (Sing7)

_____8. I will sacrifice my self-interest for the benefit of the group I am in. (Sing8)

_____9. I would rather say "No" directly, than risk being misunderstood. (Sing9)

_____10. Having a lively imagination is important to me. (Sing10)

_____11. I should take into consideration my parents' advice when making education/career plans. (Sing11)

_____12. I feel my fate is intertwined with the fate of those around me. (Sing12)

_____13. I prefer to be direct and forthright when dealing with people I have just met. (Sing13)

_____14. I feel good when I cooperate with others. (Sing14)

_____15. I am comfortable with being singled out for praise or rewards. (Sing15)

_____16. If my brother or sister fails, I feel responsible. (Sing16)

_____17. I often have the feeling that my relationships with others are more important than my own accomplishments. (Sing17)

_____18. Speaking up during a class (or a meeting) is not a problem for me. (Sing18)

_____19. I would offer my seat in a bus to my professor (or my boss). (Sing19)

_____20. I act the same way no matter who I am with. (Sing20)

_____21. My happiness depends on the happiness of those around me. (Sing21)

_____22. I value being in good health above everything. (Sing22)

_____23. I will stay in a group if they need me, even when I am not happy with the group. (Sing23)

_____24. I try to do what is best for me, regardless of how that might affect others. (Sing24)

_____25. Being able to take care of myself is a primary concern for me. (Sing25)

_____26. It is important to me to respect decisions made by the group. (Sing26)

_____27. My personal identity, independent of others, is very important to me. (Sing27)

_____28. It is important for me to maintain harmony within my group. (Sing28)

_____29. I act the same way at home that I do at school (or work). (Sing29)

_____30. I usually go along with what others want to do, even when I would rather do something different. (Sing30)

Appendix D: Satisfaction with Life Scale (SWLS)

Instructions: Below are five statements with which you may agree or disagree. Using the 1-7 scale below, indicate your agreement with each item by placing the appropriate number in the line preceding that item. Please be open and honest in your responding.

1 = Strongly Disagree

2 = Disagree

3 = Slightly Disagree

4 = Neither Agree nor Disagree

5 = Slightly Agree

6 = Agree

7 = Strongly Agree

_____1. In most ways my life is close to my ideal.

_____2. The conditions of my life are excellent.

_____3. I am satisfied with life.

_____4. So far, I have gotten the important things I want in life.

_____5. If I could live my life over, I would change almost nothing.

Appendix E: Positive and Negative Affect Schedule (PANAS)

Instructions: Indicate the extent you have felt this way over the past week

		Very Slightly/ Not at all	Little	Moderately	Quite a bit	Extremely
1	Interested	☐	☐	☐	☐	☐
2	Distressed	☐	☐	☐	☐	☐
3	Excited	☐	☐	☐	☐	☐
4	Upset	☐	☐	☐	☐	☐
5	Strong	☐	☐	☐	☐	☐
6	Guilty	☐	☐	☐	☐	☐
7	Scared	☐	☐	☐	☐	☐
8	Hostile	☐	☐	☐	☐	☐
9	Enthusiastic	☐	☐	☐	☐	☐
10	Proud	☐	☐	☐	☐	☐
11	Irritable	☐	☐	☐	☐	☐
12	Alert	☐	☐	☐	☐	☐
13	Ashamed	☐	☐	☐	☐	☐
14	Inspired	☐	☐	☐	☐	☐
15	Nervous	☐	☐	☐	☐	☐
16	Determined	☐	☐	☐	☐	☐

17	Attentive	☐	☐	☐	☐	☐
18	Jittery	☐	☐	☐	☐	☐
19	Active	☐	☐	☐	☐	☐
20	Afraid	☐	☐	☐	☐	☐

Appendix F: Depression, Anxiety, and Stress Scale (DASS-21)

Instructions: Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you over the past week. There is no right or wrong answer. Do not spend too much time on any statement.

Rating Scale:

0	Did not apply to me at all
1	Applied to me to some degree, or some of the time
2	Applied to me to a considerable degree, or a good part of time
3	Applied to me very much, or most of the time

1. I found it hard to wind down

2. I was aware of dryness of my mouth

3. I could not seem to experience any positive feeling at all

4. I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion)

5. I found it difficult to work up the initiative to do things

6. I tended to over-react to situations

7. I experienced trembling (e.g., in the hands)

8. I felt that I was using a lot of nervous energy

9. I was worried about situations in which I might panic and make a fool of myself

10. I felt that I had nothing to look forward to

11. I found myself getting agitated

12. I found it difficult to relax

13. I felt downhearted and blue

14. I was intolerant of anything that kept me from getting on with what I was doing

15. I felt I was close to panic

16. I was unable to become enthusiastic about anything

17. I felt I was not worth much as a person

18. I felt that I was rather touchy

19. I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat)

20. I felt scared without any good reason

21. I felt that life was meaningless