Conditional Goal-Setting as a Mediator in the Relationship between Mindfulness and Well-Being

Adam De Fina

Eastern Illinois University

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Conditional Goal-Setting as a Mediator in the Relationship between Mindfulness and Well-Being

BY

Adam De Fina

THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

Master of Arts in Clinical Psychology

IN THE GRADUATE SCHOOL, EASTERN ILLINOIS UNIVERSITY
CHARLESTON, ILLINOIS

2014 YEAR

I HEREBY RECOMMEND THIS THESIS BE ACCEPTED AS FULFILLING THIS PART OF THE GRADUATE DEGREE CITED ABOVE
Conditional Goal-Setting as a Mediator in the Relationship between Mindfulness and Well-Being

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Abstract

Mindfulness is defined as the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment (Kabat-Zinn, 2003). Current research on mindfulness has begun to focus on how mindfulness works by identifying the various mechanisms through which it facilitates well-being (e.g., Carmody, Baer, Lykins, & Olendzki, 2009; Coffey & Hartman, 2008; Hölzel et al., 2011). The present study examined if engaging less in conditional goal-getting (CGS) is one of the mechanisms of action of mindfulness.

Conditional goal-setting (GCS) occurs when individuals have become highly committed to accomplishing certain concrete (lower-order) goals because of a belief or conception that happiness or their self-worth (a more abstract and higher-order goal) is dependent or contingent upon the attainment of those concrete goals (McIntosh & Martin, 1992). The present study tested whether conditional goal-setting would mediate the relationship between mindfulness and the four well-being outcomes of depression, rumination, positive affect, and negative affect. One hundred and seventy-seven Eastern Illinois University students participated in the study through an online survey. The results of the study demonstrated that the relationship between mindfulness and each of the four well-being outcomes was partially mediated by conditional goal-setting. Clinical implications of the research, limitations, and suggestions for future studies were discussed.
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Conditional Goal-Setting as a Potential Mediator between Mindfulness and Well-Being

Mindfulness can be defined as the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment (Kabat-Zinn, 2003). Mindfulness-based interventions have been shown to be beneficial in alleviating many psychological issues, including depression (Kabat-Zinn et al., 1992), negative affect (Brown & Ryan, 2003), and rumination (Jain et al., 2007), as well as many other ailments. Current research on mindfulness has begun to focus on how mindfulness works by identifying the various mechanisms through which it facilitates well-being (e.g., Carmody, Baer, Lykins, & Olendzki, 2009; Coffey & Hartman, 2008; Hölzel et al., 2011). The present study examined if engaging less in conditional goal-getting (CGS) is one of the mechanisms of action of mindfulness.

Conditional goal-setting (GCS) occurs when individuals have become highly committed to accomplishing certain concrete (lower-order) goals because of a belief or conception that happiness or their self-worth (a more abstract and higher-order goal) is dependent or contingent upon the attainment of those concrete goals (e.g., receiving straight A’s in school, earning an annual salary of $150,000, etc.) (McIntosh & Martin, 1992). “Linking” occurs when these higher order goals are inextricably connected to achieving the lower-order goals (for the present study, CGS and linking/non-linking will be used interchangeably). However, unlike mindfulness, conditional goal-setting has deleterious effects on well-being. When comparing “linkers” and “non-linkers” (those who don’t link their happiness or self-worth to lower-order goals), non-linkers experience
many positive psychological outcomes, including less depression and rumination than linkers (McIntosh, Harlow, & Martin, 1995; McIntosh, Gillanders, & Rodgers, 2009; Street, 2003; Schofield, Dickson, & Mummery, 2002; Street, O'Connor, & Robinson, 2007), greater happiness than linkers (McIntosh, Martin, & Jones III, 1997), more positive affect than linkers (McIntosh, Martin, & Jones III, 2001), and less feelings of hopelessness than linkers (Hadley & MacLeod, 2010).

Conceptually, mindfulness and conditional goal-setting can be compared along certain dimensions. As will be discussed later, those who are more mindful and who engage less in conditional goal-setting share the qualities of present-focused orientation, non-attachment and non-judgment, and remember, but do not ruminate, about life events. To date, however, there have been very few studies examining the relationship between mindfulness and conditional goal-setting (e.g., McIntosh & Martin, 1992; Crane, Barnhofer, Hargus, Amarasinghe, & Winder, 2010; Crane, Jandric, Barnhofer, & Williams, 2010). However, some researchers (McIntosh, 1992; McIntosh, Martin, & Jones III, 2001) have noted the similarities between the two concepts, and have discussed the possible role that mindfulness training might play in lessening conditional goal-setting. The present study examined reduced conditional goal-setting as a possible mechanism of action by testing if it mediates the relationship between mindfulness and well-being. Does mindfulness lessen engagement in conditional goal-setting? In turn, does this reduction in conditional goal-setting lead to lower levels of rumination, depression, and negative affect (as well as higher levels of positive affect)?
Defining Mindfulness

Mindfulness has its origins in Buddhist spiritual traditions, and was part of a system developed as a path leading to the end of personal suffering (Thera, 1962; Silananda, 1990). In contemporary psychology, Bishop et al. (2004) have described mindfulness as, “An approach for increasing awareness and responding skillfully to mental processes that contribute to emotional distress and maladaptive behavior.” (p. 231). Although mindfulness is central to a Buddhist model of well-being, it can be practiced in a secular context (as it typically is in the United States), and only requires the universal human capacity to pay attention (Brown & Ryan, 2003; Kabat-Zinn, 2003). It is a skill that can be used by any individual.

There are several key components to mindfulness. Germer (2005) points to awareness, acceptance, and present-centeredness as the central aspects of mindfulness. Awareness can best be understood if contrasted with our brain on “autopilot,” when we are not paying attention to the environment, and our personal feelings about a situation. On “autopilot” we may not even remember doing daily activities, like walking to and from a store, or packing a lunch for work. Awareness involves paying greater attention to what is going on within and around us. Acceptance refers to our ability to be open and receptive to aspects of our life/environment. Germer (2005) describes this as, “Accepting pleasurable and painful experiences as they arise.” (p. 7). In other words, acceptance is about letting things be as they are in the moment, and not trying to change them in any way. Present-centeredness involves being in the moment, and not worrying or thinking about the past or future. Mindfulness does involve remembering, but does not entail
dwelling on memories. One can only be mindful if he/she is fully invested in the present moment.

In contrast, Germer (2005) describes mindlessness as being, “caught up in distracting thoughts or opinions about what is happening in the moment.” (p. 5). The examples given by Germer (2005) are akin to what was described earlier as being on “autopilot,” Examples of mindlessness include snacking without being aware of eating, being preoccupied with the future or the past, forgetting a person’s name as soon as we have heard it, or failing to notice subtle feelings of physical tension or discomfort, to name a few (p. 5). Oftentimes, we are rarely mindful, but it is a skill that can be cultivated by anyone.

How Mindfulness Works

There are several different theoretical models explaining how mindfulness fosters greater well-being. Coffey & Hartman (2008) hypothesized that the three main mechanisms of action in mindfulness are emotion regulation, reduced ruminative thought, and less attachment to thoughts and feelings.

Some researchers have suggested that mindfulness improves emotion regulation by helping one to recognize that distressing thoughts are not always accurate representations of reality (Linehan, 1993; Teasdale, 1999; Teasdale, Segal, & Williams, 1995). This supports what is found in Buddhist texts, which assert that deliberately attending to one’s experiences facilitates insight into one’s emotional life, which then enables one to liberate oneself from negative and destructive mental states (Ekman, Davidson, Ricard, & Wallace, 2005).
Mindfulness is also believed to positively affect psychological adjustment by reducing ruminative thought. In a study by Jain et al. (2007), the authors found that although mindfulness meditation and somatic relaxation were associated with self-reported decreased psychological distress, only those in the mindfulness meditation group reported reduced rumination. The findings from this study supports the rationale for mindfulness-based cognitive therapy (a mindfulness-based intervention), which claims that mindfulness decreases risk for depression because it assists individuals in viewing their thoughts and feelings as impermanent mental events (Coffey & Hartman, 2008).

The third mechanism of action that could explain how mindfulness promotes psychological well-being is the relationship it has with nonattachment. Attachments, which will be discussed in greater detail later, are objects or outcomes that individuals believe they must have to be happy (McIntosh, 1997). This could include positive experiences (getting a new car, being promoted at work, etc.) or avoidance of negative experiences (losing a romantic partner, being fired, etc.). Research has shown that individuals who report greater nonattachment are happier than those who report less nonattachment (McIntosh & Martin, 1992).

Apart from the Germer model, Hölzel et al. (2011) proposed one in which mindfulness works through the mechanisms of attention regulation, emotion regulation, body awareness, and change in perspective of the self. Other researchers have hypothesized that mindfulness may work through changes in self-regulation, values clarification, cognitive and behavioral flexibility, and exposure (willingness to be exposed to negative feelings) (Carmody, Baer, Lykins, & Olendzki, 2009).
Features of Mindfulness

Although there are a few models in the literature enumerating the different features or aspects of mindfulness (e.g., Bishop et al., 2004), the present study will adopt the model created by Baer et al. (2006). After factor analyzing a combined pool of items from several mindfulness questionnaires, the researchers arrived at the following five elements of mindfulness:

*observing* (attending to or noticing internal and external stimuli, such as sensations, emotions, cognitions, sights, sounds and smells), *describing* (noting or mentally labeling these stimuli with words), *acting with awareness* (attending to one’s current actions, as opposed to behaving automatically or absent-mindedly), *non-judging of inner experience* (refraining from evaluation of one’s sensations, cognitions, and emotions), and *non-reactivity to inner experience* (avoiding responding impulsively) (p. 330).

Cultivating Mindfulness

Germer (2005) characterizes the practice of mindfulness as coming in two general modes: formal and informal. Formal meditation training refers to mindfulness meditation and is a way to allow the practitioner to learn how the mind works and to systematically observe its contents. Meditation can be practiced sitting, standing, lying down, or moving. Mindfulness meditation typically begins with concentration on one’s breath. Kabat-Zinn (1990) describes in detail the steps that one should take during mindfulness meditation and instructs meditators to:

- keep the focus on the breath for its full duration
- notice when the mind wanders off the breath and what it was that took your mind away
- gently bring your attention back to your breath
- repeat this breathing and returning back to your breath for 15 minutes daily, and be aware of how it feels to spend time each day just being with your breath, without doing anything

Mindfulness is not about getting anywhere else or fixing anything; rather the idea is to be where one already is and to know the direct experience in each moment (Kabat-Zinn, 2003). Marlatt and Kristeller (1999) further instruct that phenomena that enter the individual's awareness during mindfulness practice are to observed but not evaluated as "good or bad, true or false, healthy or sick, or important or trivial." (p. 68).

Germer (2005) refers to informal mindfulness training as the application of mindfulness skills in everyday life. This can be any exercise that alerts us to the present moment, with acceptance, which cultivates mindfulness. Informal mindfulness training can be an extension of formal mindfulness training, in that a person can still focus on his/her breath at any point in the day. However, informal mindfulness training can also include listening to sounds in the environment, labeling feelings, or paying attention to posture, to name a few. In sum, mindfulness training should focus on paying attention, in the present moment, and in a nonjudgmental way towards experiences.

**Mindfulness Interventions and its Benefits**

Kabat-Zinn (2000) has suggested that although mindfulness has been relatively unfamiliar in our society until recently (perhaps due to its origins in Buddhism), mindfulness practice may be beneficial to many individuals in Western society who
might be unwilling to adopt Buddhist traditions or vocabulary. Many researchers and clinicians have started to introduce mindfulness practice into treatment programs and usually teach these skills independently of the religious and cultural traditions of Buddhism (Kabat-Zinn, 1982; Linehan, 1993). Currently, there are four main mindfulness-based interventions that most researchers and clinicians use: Mindfulness-Based Stress Reduction (MBSR), Mindfulness-Based Cognitive Therapy (MBCT), Dialectical Behavior Therapy (DBT), and Acceptance and Commitment Therapy (ACT).

The Mindfulness-Based Stress Reduction program was created by Kabat-Zinn (1982, 1990) and was developed for use for populations with a wide range of chronic pain and stress-related disorders. The program consists of an 8-10 week course for groups who will meet for 2-2.5 hours for instruction and practice in mindfulness meditation, a discussion of stress and coping, and homework assignments that participants will later discuss. Participants are instructed to practice mindfulness meditation, as well as the skills they learned during the program, for at least 45 minutes per day, and for 6 days a week. Improvements in a variety of medical and psychological conditions, including cancer, chronic pain, generalized anxiety and panic disorder, binge eating disorder, and co-occurring medical and psychological conditions were observed as a function of participating in the MBSR program (Baer, 2003; Grossman, Niemann, Schmidt, & Walach, 2004; Ledesma & Kumano, 2009; Fjorback, Arendt, Ørnbøl, Fink, & Walach, 2011).

Mindfulness-Based Cognitive Therapy is a manualized 8-week group intervention based largely on the MBSR program (Segal, Williams, & Teasdale, 2002). This program was designed to prevent depressive relapse by teaching formerly depressed individuals to
observe their thoughts and feelings nonjudgmentally and to view them simply as mental events that come and go. As the name suggests, it incorporates elements of cognitive therapy that cultivate a detached/decentered view of one’s thoughts and feelings, including statements like “thoughts are not facts” and “I am not my thoughts.” MBCT has been associated with improvements in a wide range of conditions, including depression, anxiety, and bipolar disorder (Chiesa & Serretti, 2011; Piet & Hougaard, 2011; Fjorback, Arendt, Ørnbøl, Fink, & Walach, 2011).

Dialectical Behavior Therapy is a multifaceted approach in the treatment of borderline personality disorder (BPD) (Linehan, 1993). DBT includes a wide range of cognitive and behavioral treatment procedures, and most of these are designed to change thoughts, emotions, or behaviors. DBT does not prescribe a specific frequency or duration of mindfulness practice outside of the clinician’s office, but DBT clients learn mindfulness skills in a year-long weekly skills group, which also typically covers interpersonal effectiveness, emotion regulation, and distress tolerance skills. DBT has been found to be effective in the treatment of BPD (Kliem, Kröger, & Kosfelder, 2010), BPD with co-occurring substance abuse (Linehan, et al., 1999; van den Bosch, Verheul, Schippers, & Brink, 2002), binge eating disorder (Telch, Agras, & Linehan, 2001), bulimia nervosa (Safer, Telch, & Agras, 2001), and suicidal behavior (Linehan, 1987; Rathus & Miller, 2002; Katz, Cox, Gunasekara, & Miller, 2004).

Acceptance and Commitment Therapy is theoretically based on contemporary behavior analysis. In actuality, ACT does not describe its treatment methods in terms of mindfulness or meditation (ACT; Hayes, Strosahl, & Wilson, 1999). However, several of the strategies in ACT are consistent with the other mindfulness interventions. Participants
in ACT are taught to recognize an observing self who is capable of watching his/her emotions, thoughts, and sensations. As with other mindfulness interventions, participants in ACT are encouraged to see these bodily phenomena as separate from the person experiencing them. These individuals are taught to observe their thoughts and feelings non judgmentally, and to accept them as they are, rather than trying to change or avoid them. Reviews of ACT suggest that it is effective in the treatment of a wide range of conditions including pain, trichotillomania, obsessive-compulsive disorder, schizophrenia, stress, anxiety, depression, bipolar disorder, smoking cessation, drug abuse, and the management of epilepsy and diabetes (Powers, Zum Vörde Sive Vörding, & Emmelkamp, 2009; Pull, 2009)

**Defining Conditional Goal-Setting**

Humans are goal-oriented beings. Most of our actions are performed with the attainment of some goal in mind (Carver & Scheier, 1981; Miller, Galanter, & Pribram, 1960). Cochran and Tesser (1996) offer a comprehensive definition of a goal as a:

- a cognitive image of an ideal stored in memory for comparison to an actual state;
- a representation of the future that influences the present;
- a desire (pleasure and satisfaction are expected from goal success);
- a source of motivation, an incentive to action” (p. 100).

It is important to first note how people typically organize their goals. Most commonly, people have “concrete” and “abstract” goals (Bandura & Simon, 1977; Carver & Scheier, 1990; Carver, LaVoie, Kuhl, & Ganellen, 1988; Emmons, 1992; Little, 1983; Powers, 1973). An abstract goal is a non-specific, loosely defined goal that is not achievable within a specified time. An example of this would be, “I want to be in better
CONDITIONAL GOAL-SETTING AND MINDFULNESS

physical shape,” or “I want to be closer to God.” On the other hand, a concrete goal is a specific, well-defined goal that is generally achievable within a specified period of time. For example, a concrete goal may be, “I will go to the gym three times this week,” or “I will attend church four times this month.” Typically, individuals find the pursuit of abstract goals much more difficult than the pursuit of concrete goals, due to the non-specific nature of abstract goals. It is much harder to define and measure personal progress towards abstract goals.

Conditional goal-setting was defined by Street (2002) as an individual’s belief that attainment of a specific lower-order goal (concrete goal) is crucial to achievement of an abstract higher-order goal (which is often the attainment of happiness), to the extent that the latter is believed to be impossible without the former. Furthermore, conditional goal-setters view states of well-being such as happiness as outcome goals that need to be attained, rather than as experiences associated with living. They believe strongly that they will only be happy, fulfilled, and have a sense of self-worth if particular personal goals are achieved. For example, “I can only be happy if I get an ‘A’ on this next math test,” or “I will only be fulfilled if I win the championship.” McIntosh and Martin (1992) initially referred to those who are conditional goal-setters as “linkers,” and those who are not as “non-linkers” (p. 229). As stated earlier, “linkers” and “conditional goal-setters” will be used interchangeably in this study.

To further explain conditional goal-setting, the hierarchical nature of goals (Carver & Scheier, 1990) must be understood. In conditional goal-setting, lower-order goals are believed to be necessary to achieve higher order goals. As happiness is often set by most as the highest-order goal, it will be used to help illustrate the hierarchical model
of goals. Highest-order goals are at the top, and often incorporate a sense of an idealized self. Consider the following example: “I can only be happy if I am a great cook” will be the goal we use. Happiness has then become dependent on being a “great cook.” Goals at the intermediate level are used as reference points for goals on the higher level, and provide the individual with behaviors that he/she can enact in order to achieve the more abstract, higher-order goal. “Winning a local cooking contest” could be an intermediate goal in this case. The lowest level in the hierarchy consists of concrete goals that are specific and attainable. In our example, “Experimenting on three new dishes each week” could be a concrete goal for the highest-order goal of happiness. It is important to note however, that most researchers studying conditional goal-setting focus only on the lowest-order goals and their relationship to the highest-order goal(s), for ease of conducting research.

Problems Associated with Conditional Goal-Setting

According to conditional goal-setting theory, however, problems occur stemming from how the highest order goal, happiness, is conceived. Firstly, happiness is treated as a goal to obtain, rather than as something that one experiences while living. Secondly, happiness becomes dependent on the achievement of lower-order goals. Both of these make individuals believe that happiness must be earned, rather than something that can be experienced at any point in time. These individuals place undue importance and stress on their goals, and spend a great deal of time working towards happiness, as opposed to just experiencing it regardless of goal attainment. Conditional goal-setting theory then explains why people may remain painfully attached to certain goals, because they believe that their goals are essential for happiness (Hadley & MacLeod, 2010).
It is important to note that it is healthy to actively seek goals. McIntosh and Martin (1992) make the distinction between linking the attainment of goals to happiness, and holding goal attainment as important. They note that people can believe that a goal is important and worth pursuing without believing that attainment of that goal will make them happy. However, conditional goal-setting puts undue importance and pressure on goal pursuit and achievement.

**Linkers vs. Non-Linkers: Differences in Responses to Unattained vs. Attained Goals**

Previous studies on linking (e.g. McIntosh, Martin, & Jones III, 2001) have examined differences between linkers and non-linkers by using a median split to categorize participants into those two groups. However, McIntosh and Martin (1992) contend that linking is best conceptualized as a continuum. An individual’s beliefs about the relationship between goal attainment and subsequent happiness may fall anywhere from being completely linked to completely non-linked. The authors also point out that people can be more or less linked to any given goal, and different people may link varying amounts of goals to their happiness. Thus, the current study preserved the continuous nature of the variable. Nonetheless, the following discussion on differences between linkers and non-linkers is based on results from these past studies that have treated the variable as dichotomous.

When engaged in linking or conditional goal-setting, an individual believes that goals are necessary for happiness, and that there are situational contingencies to one’s happiness. While non-linking does not preclude viewing one’s goals as important, the individual does not view these goals as the sole determinant of his/her happiness (McIntosh & Martin, 1992).
How do linkers and non-linkers respond when their lower-order goals have not been attained? Due to their belief that an abstract goal can only be accomplished by completing one or multiple concrete goals, linkers place a great deal of importance on the specific concrete goal(s) (Street, 2002). As such, when a concrete goal is not achieved, a linker will experience a level of distress that is very disproportionate to the loss that he/she experienced. The reason for this is the fact that individuals view the abstract goal as of the utmost importance, and since this abstract goal can only be obtained via the achievement of a lower-order goal or goals, these lower-order goals take on an excessive amount of importance. By contrast, non-linkers do not believe that their happiness is contingent upon the achievement of goals. McIntosh and Martin (1992) contend that non-linkers experience positive affect when goals are achieved, but do not have the burden of negative affect and unhappiness when a goal is not reached. Altogether, linking leads people to believe they have much to gain upon attainment of lower-order goals, and thus frustration of the goal leads to great disappointment, whereas non-linkers do not have the same attachment to these goals, and do not suffer the same mental burden (Diener, Colvin, Pavot, & Allman, 1991). For non-linkers, nonattainment of a lower-order goal is simply non-attainment of a lower-order goal, and nothing else.

The preceding differences between linkers and non-linkers mainly focused on nonattainment of goals, as opposed to what happens when these individuals actually achieve what they set out to do. How do linkers and non-linkers respond when a goal is achieved?

McIntosh (1996) first explains that the perceived discrepancy between what people want and what their current status is what is important. This can go one of two
ways: either the individual reduces this discrepancy by making progress towards the goal, which leads to positive affect, or the individual does not reduce this discrepancy by having a lack of progress towards the goal, which leads to negative affect.

In situations where the goal is reached, McIntosh (1996) explains that linkers still tend to dwell on what they want but do not have. Linkers will tend to focus on the unmet goals that are still present. The individual may experience a brief period of elation, but will quickly habituate to that success, and will then set a new goal to link to their happiness, their higher-order goal. For instance, if an individual believes, “I need an ‘A’ this semester in my math class to be happy,” and he/she achieves this, then happiness would follow, but so too would be the thoughts about the next unmet goal that the individual needs to experience happiness (ex. “I need an ‘A’ the following semester in my math class to be happy.”). The researcher argues that linkers focus very little on goals that have been attained, but rather go right to thinking about the next unmet goal. Non-linkers, on the other hand, do not view goal attainment as overly pressing, as their happiness is not reliant on the attainment of any specific goal.

**Linkers vs. Non-Linkers: Differences in Time Orientation**

Another key difference between linkers and non-linkers is the time orientation taken towards goals. Linkers are more outcome- and future-oriented, whereas non-linkers are very present-focused. Street (2002) asserts that linkers who are strongly attached to a goal have essentially “put their happiness on hold,” as it has become a state that is dependent upon goal achievement. These individuals are far more focused on the end product as compared to the present moment experience. In a study by McIntosh and Martin (1992) on rumination and linking/non-linking, the researchers wanted to see if
individuals who link goals to happiness ruminated more than non-linkers about these goals, and the goal being examined was romantic relationships. The researchers found that linkers who wanted a romantic relationship ruminated more than linkers who currently had a romantic relationship. However, non-linkers did not vary in how much they ruminated about romantic relationships regardless of whether they were in a relationship or not. As the researchers predicted, those individuals who linked their goals to their happiness ruminated more than individuals who did not link their goals to happiness. As rumination is a clear example of one’s mind not being in the present moment, this study provides empirical evidence of the difference in time orientation between linkers and non-linkers.

**Linkers vs. Non-Linkers: Differences in Disengagement from Goals**

A final concern for linkers that many researchers have noted is the issue of disengagement from goals. Klinger (1975) has suggested that if an individual believes that they are unable to attain an important goal due to problems in goal pursuit, they enter a period where they become completely absorbed by the pursuit of that goal. Various authors have suggested that where the achievement of a lower-order goal proves difficult, it can be advantageous for a person to disengage from the goal and direct their efforts elsewhere (Carver & Scheier, 1998; Schroeters, Kraaij, & Garnefski, 2008; Wrosch, Scheier, Carver, & Schulz, 2003; Wrosch, Scheier, Miller, Schulz, & Carver, 2003).

The process of disengagement and reengagement may be compromised by linking because linking leads to situations in which the person assumes or predicts that disengagement from an unattainable lower-order goal will necessitate abandonment of a high-order goal, which is central to the sense of self as well (Crane, Barnhofer, Hargus,
Amarasinghe, & Winder, 2010). Crane et al. (2010) also explain that conditional links between lower-order goals and higher-order goals may increase resistance to goal reorganization: when an individual faces a set-back or realizes that a valued goal is unlikely to be achieved, rather than being able to explore and engage with alternative paths to fulfilling high-level aspirations, they may continue to remain psychologically committed to, even if not behaviorally engaged with, the unrewarding goal.

On the other hand, non-linkers may go through a natural period of grief during the process of disengagement, but will then go on to pursue another goal (Street, 2002). They are not trapped in the belief that the goal they are pursuing is the means for their happiness. Non-linkers can adapt and disengage from unattainable goals.

**Effects of Conditional Goal-Setting on Well-Being**

The effects of linking to goals or conditional goal-setting have been examined in a number of different outcome variables. McIntosh (1996) has described those who link strongly to their goals as people who experience a lot of negative affect, who worry excessively, and who are prone to depression and stress-related illness. As such, the majority of the literature on the effects of conditional goal-setting examines how linking/non-linking to goals affects depression, rumination, and positive/negative affect.

McIntosh and Martin (1992) first found that the more people linked goals to happiness, the more they ruminated, and the more they ruminated, the more unhappiness and negative affect they reported. In addition, the researchers found that the more people believed that attaining goals that they did not have would make them happy, the more negative affect they experienced. McIntosh, Harlow, & Martin (1995) also found that people who tend to link the attainment of lower-order goals with the attainment of higher-
order goals showed more rumination, as well as depression and complaints of physical symptoms as compared to individuals who did not make this link. McIntosh, Gillanders, & Rodgers (2010) examined the differences between clinical and non-clinical populations in their tendency to link their goals to happiness. The researchers found that the clinical group of individuals with depression had significantly higher goal-linking scores as compared to the psychological distress with no depression group, and the control group (no history of psychological disorders). There was also no significant difference in linking between those experiencing psychological distress and never-depressed control groups. Street et al. (2003) also found that children’s tendency to view happiness as conditionally dependent on goal achievement is significantly related to their level of depression.

McIntosh, Martin, & Jones III (1997) found that thinking about a positive or negative life event, and either from the past or present, influenced linkers’ reported happiness, but it did not influence non-linkers’ reported happiness. The authors suggest that the accessibility of a particularly positive or negative life event had no influence of non-linkers judgments because non-linkers’ happiness is not contingent upon objective outcomes. McIntosh, Martin, & Jones III (2001) furthered the research on linking and affect by finding that positive and negative mood inductions, which was accomplished by having participants watch 20-minute clips from either happy or sad films prior to responding to a measure of affect, altered the negative but not the positive affect reported by linkers, whereas the same inductions altered the positive, but not the negative affect reported by non-linkers. The researchers argued that linkers are more attuned to negative
affect, and that non-linkers are more likely to focus on current enjoyment rather than goal attainment, so they are more attuned to positive, but not negative, affect.

Besides its effects on depression, rumination, and affect, linking has been found to exacerbate the symptoms of eating disorder psychopathology (Lethbridge, Watson, Egan, Street, & Nathan, 2011), increase the likelihood of depression in cancer patients (Street, 2002), increase anxiety and depressive symptoms among athletes (Schofield, Dickson, Mummery, & Street, 2002), and elicit hopelessness (Hadley & MacLeod, 2010).

The Relationship between Mindfulness and Conditional Goal-Setting

When comparing mindfulness and conditional goal-setting, there are clearly many similarities. Those who are more mindful and who engage less in conditional goal-setting share the qualities of present-focused orientation, non-attachment and non-judgment, and remember, but do not ruminate, about life events. Surprisingly, to date there have been few studies examining the relationship between mindfulness and conditional goal-setting. However, some authors have noted the similarities between the two concepts, and have detailed this in their research.

The first connection between mindfulness and conditional goal-setting was made by McIntosh (1996) when the author noted that one possibility for curbing rumination was to get people to be more present-focused. As it is not possible to ruminate and be present-focused at the same time, the more time that people spend being focused on the present, the less time they will have to ruminate. McIntosh goes on to explain that many long-time meditators report having very few intrusive thoughts, which is another connection to mindfulness as well.
McIntosh, Martin, and Jones III (2001) also noted the salutary effects of having a more immediate temporal focus that non-linkers exhibit as compared to linkers. The authors describe that this focus not only decreases the probability that non-linkers will ruminate, but it also makes non-linkers less likely to perform behaviors that are associated with negative affect. These two articles listed above hint at the fact that mindfulness training can help an individual avoid or overcome conditional goal-setting and the negative outcomes that accompany it.

While laying out the possible mechanisms of action of mindfulness in their model, Coffey and Hartman (2008) cited the linking literature when describing one of the mechanisms: attachment. The authors also directly cite McIntosh (1997) in their definition of attachment as, “objects or outcomes that people believe they must have to be happy.” Furthermore, the authors used The Linking Inventory, created by McIntosh and Martin (1992), to assess an individual’s level of attachment. Using this inventory, the authors found that increased mindfulness was also directly associated with non-attachment. The authors asserted that this finding could mean one of two things, or possibly both. The first is that mindful attention requires a suspension of the tendency to categorize an experience as positive or negative, and the second is that direct engagement with one’s present experience may be intrinsically satisfying, which reduces the tendency to believe that other conditions must be met for one to feel happiness. Although not direct, this study provides support for the relationship between mindfulness and conditional goal-setting.

Presumably, the only set of studies that examined the relationship between mindfulness and conditional goal-setting were done by Crane, Barnhofer, Hargus,
Amarasinghe, and Winder (2010) and Crane, Jandric, Barnhofer, & Williams (2010). In the first study, the researchers looked at the association between conditional goal-setting and dispositional mindfulness in 31 individuals with depression. Participants were interviewed and completed several questionnaires for diagnostic criteria for major depression, and those that were eligible were invited to a second assessment session in which they completed further questionnaires, including a mindfulness questionnaire and a measure of conditional goal-setting. In line with their predictions, the authors found a strong and significant association between increased dispositional mindfulness and reduced conditional goal-setting. The authors suggest that the development of mindfulness results in a shift towards a sense of self that is more independent of specific goals or conditions. In the second study, the researchers examined the relationship between dispositional mindfulness and conditional goal-setting across two experimental studies. The first of the two studies examined the changes in dispositional mindfulness and changes in conditional goal-setting over a 3-4 month period with participants engaging in Mindfulness-Based Cognitive Therapy (MBCT). Results from this first study indicated that increases in dispositional mindfulness were significantly associated with decreases in conditional goal-setting, although this effect could not be attributed specifically to the group who had received training in meditation. In the second of the two studies, the researchers examined the impact of brief periods of either breathing or loving-kindness meditation on conditional goal-setting in 55 participants. Overall, the researchers found that brief periods of either breathing or loving-kindness meditation resulted in no significant change in levels of conditional goal-setting, and in some participants, conditional goal-setting actually increased.
Present Study

The current study tested reduced conditional goal-setting as a possible mechanism of action of mindfulness by examining if it mediates the relationship between mindfulness and four psychological outcome variables: rumination, depression, and positive and negative affect. As reviewed and reported earlier, research has consistently shown the inverse relationship between mindfulness and depression (Kabat-Zinn et al., 1992), mindfulness and rumination (Jain et al., 2007), and mindfulness and negative affect (and a positive relationship between mindfulness and positive affect) (Brown & Ryan, 2003). The same inverse relationship has been shown with reduced conditional goal-setting with depression and rumination (McIntosh, Harlow, & Martin, 1995; McIntosh, Gillanders, & Rodgers, 2009; Street, 2003; Schofield, Dickson, & Mummery, 2002; Street, O'Connor, & Robinson, 2007), and negative affect (and a positive relationship between conditional goal-setting and positive affect) (McIntosh, Martin, & Jones III, 2001). Although limited, research has also shown the inverse relationship between mindfulness and conditional goal-setting (Crane, Barnhofer, Hargus, Amarasinghe, & Winder, 2010; Crane, Jandric, Barnhofer, & Williams, 2010). However, there has yet to be research on the potential mediating effect of conditional goal-setting between mindfulness and well-being outcomes. Since many of the features of conditional goal-setting contrast with those in mindfulness along certain dimensions (e.g., present- vs. future-focus, disengaging from vs. being overly attached to a goal, being non-judgmental vs. being critical of the self, etc.) and given that a number of researchers have proposed the possible role of mindfulness in reducing conditional goal-setting (McIntosh, 1996; McIntosh, Martin, & Jones III, 2001; McIntosh, 1997), the present
study tested whether conditional goal-setting would mediate the relationship between mindfulness and the four well-being outcomes mentioned above. Does mindfulness lessen engagement in conditional goal-setting? In turn, does this reduction in conditional goal-setting lead to lower levels of rumination, depression, and negative affect (as well as higher levels of positive affect)? In other words, does mindfulness work through the mechanism of reduced conditional goal-setting to achieve certain psychological benefits? It was predicted that mindfulness would be positively correlated with well-being while being inversely correlated with conditional goal-setting. However, conditional goal-setting was anticipated to be positively correlated with the well-being outcomes. Lastly, it was expected that conditional goal-setting would mediate the relationship between mindfulness and each of the four well-being outcomes.

Method

Participants

Two-hundred and thirty-five students enrolled in undergraduate psychology courses at Eastern Illinois University during the Fall 2014 semester participated in the current study. Forty-two participants were excluded for completing the survey in less than 10 minutes or more than an hour. Another five participants were then removed for incomplete responses (failed to answer all items in the scales), and one participant was excluded for problematic responding (e.g. selecting the same response for items across an entire scale). Finally, 10 participants were identified and removed as outliers, using the box-plot approach. None were identified as outliers using standardized residuals, Mahalanobis distances, and Cook’s distances. The final sample of 177 participants exceeded the minimum sample size of 107 students needed to achieve a desired power of .95 with an anticipated medium effect size at an alpha level of .05.
This final sample consisted of 34 males (19%) and 142 females (80%), with 1 participant not specifying gender (less than 1%). The participants’ ages ranged from 18-46 ($M = 20.28$, $Mdn. = 20.00$). One hundred thirty-three participants were White/Caucasian (75%), 35 were Black/African American (20%), 4 were Asian American (2%), and the remaining 3% were Hispanic, multi-ethnic, and those who did not specify ethnicity. Forty-two participants were freshmen (24%), 36 were sophomores (20%), 61 were juniors (34%), 37 were seniors (21%), and 1 did not specify his/her year in school (less than 1%).

**Materials**

**Five Facet Mindfulness Questionnaire (FFMQ).** Mindfulness was assessed using the FFMQ (Baer et al., 2006). Baer et al. (2006) derived this instrument from a factor analysis of questionnaires measuring a trait-like general tendency to be mindful in everyday life. The instrument consists of 39 items, assessing five facets of mindfulness: *observing, describing, acting with awareness, non-judging of inner experience, and non-reactivity to inner experience.* The 39 items are rated on a Likert scale, ranging from 1 (never or very rarely true) to 5 (very often or always true). The FFMQ has good internal consistency, with alpha coefficients ranging from .75 to .91. For the purposes of this study, mindfulness was treated as a one-dimensional construct; therefore, an overall score was obtained for each participant. Scores can range from 39-195, with higher scores on the FFMQ indicating higher levels of mindfulness. See Appendix B for the full scale.

**The Linking Questionnaire.** Linking was measured using this 13-item, forced-choice questionnaire (McIntosh & Martin, 1992). This instrument obtains participants’ judgments about the way specific outcomes affect their happiness, and assesses global
linking tendencies. For example, “You just lost the job which you’ve had for 5 years and enjoyed very much.” The possible responses are: “A. I’ll only be happy again if I find another good job,” or “B. I can be happy whether I get another good job or not.” Also, “You’ve won $10,000 in a contest.” The possible choices are: “A. Now that I can afford many of the things I’ve always wanted, I will be much happier,” or “B. I’m glad that I won the money, although I don’t think it will influence how happy I am overall.” In both examples, response A. represents the linking choice, and response B. represents the non-linking choice. As there are 13 items, the scores range from 0-13, with higher scores indicating greater linking. The scale possesses good internal reliability (α = 0.73) and test-retest reliability (r = 0.78) (McIntosh et al., 1997). See Appendix C for the full scale.

**Center for Epidemiologic Studies Depression Scale (CES-D).** Depression was measured using the CES-D (Radloff, 1977), which assesses an individual’s current level of depressive symptomatology. This instrument was developed for use in the general population. The CES-D contains 20 items, and the participants are asked to indicate the frequency with which they experience each symptom during the preceding week. Sample items include, “I did not feel like eating; my appetite was poor,” and “I felt that I could not shake off the blues even with the help from my family and friends.” The response options are scored from 0-3, respectively: “rarely or none of the time (less than one day),” “some of the time (1-2 days),” “occasionally or a moderate amount of the time (3-4 days),” and “most or all of the time (5-7 days).” A total score is obtained for each individual by adding the responses across all items. It can range from 0-60, with higher scores indicating higher depressive symptoms. The CES-D is widely used in both research and clinical settings (Thase & Lang, 2004). The scale possess excellent internal
reliability, with alpha coefficients ranging from .88 to .91, as well as excellent test-retest reliability ($r = .87$) [Miller et al. 2008]. See Appendix D for the full scale.

**Ruminative Responses Scale (RRS).** The RRS [Nolen-Hoeksema & Morrow, 1991] includes 22 items describing responses to depressed mood that are self-focused, symptom-focused, and focused on the possible causes and consequences of one’s dysphoric mood. Items are answered by using a 1 (almost never) to 4 (almost always) Likert scale. Sample items include asking the participant to answer how often he/she may, “Think about how alone you feel,” and “Think about all your shortcomings, failings, faults, mistakes.” An individual’s total score can range from 22-88, with higher scores indicating higher levels of rumination. The RRS possesses excellent internal consistency ($\alpha = .90$). See Appendix E for the full scale.

**Positive and Negative Affect Scale (PANAS).** The PANAS [Watson, 1988] is a 20-item measure of an individual’s level of positive and negative affect. This scale uses a 5-point Likert scale, ranging from 1 (not at all) to 5 (extremely). There are 10 positive affect items, including “interested,” “alert,” and “attentive,” and there are 10 negative affect items, including “hostile,” “guilty,” and “upset.” Separate scores for positive and negative affect are generated for the individual, ranging from 10 to 50, with higher scores indicating the presence of positive or negative affect. Internal consistency is excellent for positive affect statements ($\alpha = .88$), as well as for the negative affect statements ($\alpha = .87$). See Appendix F for the full scale.

**Procedure**

Participants completed the aforementioned scales online, through Qualtrics. They were first given a statement of informed consent. The participants then were given a
demographic questionnaire, followed by the scales mentioned above. The scales were counterbalanced to control for order effects. After the scales were completed, the participants were debriefed and thanked for their participation in the current study. It took the participants roughly 30 minutes to complete the study. See Appendix A for the demographics questionnaire.

**Results**

**Internal Consistency Analyses of the Measures**

Negatively-worded items were reverse-scored prior to analyses. Cronbach’s alphas were then obtained for each scale. The FFMQ and PANAS scales displayed good internal consistency while the Cronbach’s alpha reliability coefficients for the CES-D and RRS were excellent. The Linking Questionnaire, however, had questionable internal consistency (George & Mallery, 2003).

**Table 1**

*Internal Consistency of the Measures (N = 177)*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>FFMQ</td>
<td>.85</td>
</tr>
<tr>
<td>The Linking Questionnaire</td>
<td>.59</td>
</tr>
<tr>
<td>CES-D</td>
<td>.90</td>
</tr>
<tr>
<td>RRS</td>
<td>.93</td>
</tr>
<tr>
<td>PANAS - Positive Affect</td>
<td>.85</td>
</tr>
<tr>
<td>PANAS – Negative Affect</td>
<td>.84</td>
</tr>
</tbody>
</table>
The Cronbach’s alpha for the FFMQ was .85, and in the Baer et al. (2006) research (which broke down the FFMQ into its subscales), the researchers reported the internal consistency as ranging from .75-.91. The internal consistency of the Linking Questionnaire was .59, lower than the .73 alpha level observed by previous researchers (McIntosh & Martin, 1997). The CES-D had an internal consistency of .90, which fell within the .88-.91 range found by Miller et al. (2008). The Cronbach’s alpha for the RRS was .93, which was slightly above the .90 reported by Nolen-Hoeksema and Morrow (1991). Finally, the PANAS, when broken down into its positive and negative affect sub-scales, were .84 and .85, respectively, which were just beneath .88 and .87 as observed by Watson (1988).

Characteristics of the Study Sample

Mindfulness was scored as a one-dimensional construct while the PANAS was broken into positive and negative affect sub-scales. Mean scores and standard deviations of each measure are found in Table 2.

Table 2

*Means and Standardized Deviations (N = 177)*

<table>
<thead>
<tr>
<th>Measure</th>
<th>M</th>
<th>SD</th>
<th>Possible Range of Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>FFMQ</td>
<td>124.73</td>
<td>15.20</td>
<td>39 - 195</td>
</tr>
<tr>
<td>The Linking Questionnaire</td>
<td>6.34</td>
<td>2.57</td>
<td>0 - 13</td>
</tr>
<tr>
<td>CES-D</td>
<td>18.90</td>
<td>10.06</td>
<td>0 – 60</td>
</tr>
<tr>
<td>RRS</td>
<td>46.51</td>
<td>12.87</td>
<td>22 - 88</td>
</tr>
<tr>
<td>PANAS – Positive Affect</td>
<td>34.8</td>
<td>6.75</td>
<td>10 – 50</td>
</tr>
<tr>
<td>PANAS – Negative Affect</td>
<td>22.52</td>
<td>7.03</td>
<td>10 – 50</td>
</tr>
</tbody>
</table>
In a similar college sample from Eastern Illinois University, Lafferty (2013) found scores on the FFMQ ($M = 125.69$, $SD = 16.95$) that were comparable to those obtained in the current research ($M = 124.73$, $SD = 15.20$). Also using a college sample from Eastern Illinois University, Creamean (2012) observed similar scores on the FFMQ ($M = 123.17$, $SD = 16.53$). The participants scored slightly above the mid-point of the scale indicating an inclination towards more mindful thinking/behavior.

In their 1997 study on college students at a southern university using the same Linking Questionnaire, McIntosh, Martin, and Jones reported a mean of 6.52, an average that is around the mid-point of the scale. In the present research, the mean also was right at the mid-point ($M = 6.34$), indicating neither a strong pull towards linking or non-linking among the participants.

Participants’ scores on the CES-D ($M = 18.90$) are indicative of “significant or mild” depressive symptomatology (Radloff, 1977). Creamean (2012) also found similar scores when assessing depression in a similar college sample from Eastern Illinois University ($M = 16.20$, $SD = 9.56$).

The average scores for the RRS ($M = 46.51$) were below the mid-point for the scale, which is 55. The creators of the survey have not set cut-offs for this scale, and believe it is better to use it as a continuous measure (Nolen-Hoeksema & Morrow, 1991). Overall, the participants tended to not ruminate much.

The average scores on the PANAS for positive affect ($M = 34.8$) were slightly above the mid-point for the scale (30), and the scores for negative affect ($M = 22.52$) were below the midpoint (30). These means are similar to those that were observed by
Deku (2012) in another sample of college students at Eastern Illinois University \( (M = 36.50 \text{ for positive affect and } M = 21.90 \text{ for negative affect}) \). Watson (1988) indicated that the normal population will tend to have a mean positive affective score of 29.7, and a mean negative affective score of 14.8. For this study, the participants showed both slightly higher positive and negative affect than what the researcher has suggested.

**The Relationship between Mindfulness, Conditional Goal-Setting, and Well-Being**

Before examining if conditional goal-setting is a mediator in the relationship between mindfulness and well-being, the raw correlations between the variables were examined. All correlations were found to be highly significant. See Table 3 below.

**Table 3**

*Correlations between Variables \((N = 177)\)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mindfulness</th>
<th>CGS</th>
<th>Depression</th>
<th>Rumination</th>
<th>Positive Affect</th>
<th>Negative Affect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mindfulness</td>
<td>--</td>
<td>-0.32*</td>
<td>-0.60*</td>
<td>-0.45*</td>
<td>0.44*</td>
<td>-0.48*</td>
</tr>
<tr>
<td>CGS</td>
<td>--</td>
<td>0.41*</td>
<td>0.32*</td>
<td>-0.27*</td>
<td>0.33*</td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>--</td>
<td></td>
<td>0.75*</td>
<td>-0.53*</td>
<td>0.65*</td>
<td></td>
</tr>
<tr>
<td>Rumination</td>
<td>--</td>
<td></td>
<td></td>
<td>-0.34*</td>
<td>0.60*</td>
<td></td>
</tr>
<tr>
<td>Positive Affect</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.23**</td>
</tr>
<tr>
<td>Negative Affect</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\*\(p < .001\), **\(p < .01\)

As was predicted, mindfulness was negatively correlated with linking, depression, rumination, and negative affect (and positively correlated with positive affect). Also as predicted, conditional goal-setting was negatively correlated with positive affect as well.
as positively correlated with depression, rumination, and negative affect. In other words, higher levels of mindfulness were associated with reduced levels of conditional goal-setting while more involvement with conditional goal-setting was related with higher levels of depression, rumination, negative affect and lower levels of positive affect. These initial findings set the stage for the tests of mediation that were subsequently conducted.

It is to note that the well-being variables of depression, rumination, positive and negative affect were highly correlated with each other in the anticipated directions (see Table 7 above).

*Conditional Goal-Setting as a Mediator in the Relationship between Mindfulness and Depression*

Does conditional goal-setting mediate the relationship between mindfulness and depression? Step 1 of the Baron and Kenny (2014) procedure for testing for mediation requires that the proposed causal variable (mindfulness) be correlated with the outcome variable (depression). Results indicate that as mindfulness levels increased, depression decreased, $\beta = -.56, p < .001$. Step 2 tested if there was a relationship between the proposed causal variable and the potential mediator (conditional goal-setting). As mindfulness levels increased, conditional goal-setting decreased, $\beta = -.32, p < .001$. Step 3 then examined if there was a relationship between the potential mediator and the outcome variable while controlling for the causal variable. The relationship between conditional goal-setting and depression was statistically significant while controlling for mindfulness, $\beta = .26, p < .001$ (see Table 4). Finally, step 4 tested whether the relationship between the causal variable and the outcome variable while controlling the mediator is zero. Results indicate that the relationship between mindfulness and
CONDITIONAL GOAL-SETTING AND MINDFULNESS

depression while controlling for conditional goal-setting remained statistically significant and did not drop to zero, $\beta = -.48$, $p < .001$. Thus, conditional goal-setting partially mediated the relationship between mindfulness and depression (see Figure 1 below). The amount of mediation is $\beta_{\text{Indirect Effect}} = -.08$. According to Sobel’s test, this partially mediated effect was statistically significant ($z = -3.04$, $p < .01$).

Table 4

*Summary of the Multiple Regression Analysis for Variables Predicting Depression (N = 177)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>$SE$ $B$</th>
<th>$\beta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mindfulness</td>
<td>-.31</td>
<td>.04</td>
<td>-.48*</td>
</tr>
<tr>
<td>Conditional Goal-Setting</td>
<td>1.01</td>
<td>.25</td>
<td>.26*</td>
</tr>
</tbody>
</table>

Note. $R^2 = .37$; adjusted $R^2 = .37$,

*p < .001

$\beta_{\text{Total Effect}} = -.56$ *

$\beta_{\text{Direct Effect}} = -.48$ *

$\beta_{\text{Indirect Effect}} = -.08$ **
Figure 1. Relationship between mindfulness and depression as partially mediated by conditional goal-setting.

* $p < .001$, ** $p < .01$

**Conditional Goal-Setting as a Mediator in the Relationship between Mindfulness and Rumination**

Step 1 of the Baron and Kenny (2014) procedure examined the relationship between the proposed causal variable (mindfulness) and the outcome variable (rumination). Results indicate that as mindfulness levels increased, rumination decreased, $\beta = -.45, p < .001$. Step 2 tested if there was a relationship between the causal variable and the potential mediator (conditional goal-setting). As mindfulness levels increased, conditional goal-setting decreased, $\beta = -.32, p < .001$. Step 3 then examined if there was a relationship between the potential mediator and the outcome variable while controlling for the causal variable. The relationship between conditional goal-setting and rumination was statistically significant while controlling for mindfulness, $\beta = .19, p < .01$ (see Table 5). Finally, step 4 tested whether the relationship between the causal variable and the
outcome variable while controlling the mediator is zero. Results indicate that the relationship between mindfulness and rumination while controlling for conditional goal-setting was still statistically significant and did not fall to zero, $\beta = -0.39, p < .001$. Thus, conditional goal-setting also partially mediated the relationship between mindfulness and rumination (see Figure 2 below). The amount of mediation is $\beta_{\text{Indirect Effect}} = -0.06$. This partially mediated effect was statistically significant ($z = -2.35, p < .01$).

**Table 5**

*Summary of the Multiple Regression Analysis for Variables Predicting Rumination (N = 177)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>$SE B$</th>
<th>$\beta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mindfulness</td>
<td>-0.33</td>
<td>0.06</td>
<td>-0.39*</td>
</tr>
<tr>
<td>Conditional Goal-Setting</td>
<td>0.96</td>
<td>0.35</td>
<td>0.19**</td>
</tr>
</tbody>
</table>

*Note. $R^2 = .24$; adjusted $R^2 = .23$,*

*p < .001

**p < .01
Figure 2. Relationship between mindfulness and rumination as partially mediated by conditional goal-setting.

* $p < .001$, ** $p < .01$

*Conditional Goal-Setting as a Mediator in the Relationship between Mindfulness and Positive Affect*

The third test of mediation was for the well-being outcome variable of positive affect. Step 1 tested the relationship between the proposed causal variable (mindfulness) and the outcome variable (positive affect). As mindfulness increased, positive affect increased, $\beta = .44, p < .001$. Step 2 tested if there was a relationship between the proposed causal variable and the potential mediator (conditional goal-setting). Results show that as mindfulness increased, conditional goal-setting decreased, $\beta = -.32, p < .001$. Step 3 then examined if there was a relationship between the potential mediator and the outcome variable while controlling for the causal variable. The relationship between conditional goal-setting and positive affect was statistically significant while controlling for mindfulness, $\beta = -.15, p < .05$ (see Table 6). Finally, step 4 tested whether the relationship between the causal variable and the outcome variable while controlling the
mediator is zero. Results indicate that the relationship between mindfulness and positive affect while controlling for conditional goal-setting remained statistically significant and did not drop to zero, $\beta = .39, p < .001$, indicating that conditional goal-setting partially mediated the relationship between mindfulness and positive affect (see Figure 3 below).

The amount of mediation is $\beta_{\text{Indirect Effect}} = .05$. This partially mediated effect was statistically significant ($z = 1.89, p < .05$).

**Table 6**

*Summary of the Multiple Regression Analysis for Variables Predicting Positive Affect (N = 177)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>$SE B$</th>
<th>$\beta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mindfulness</td>
<td>.17</td>
<td>.03</td>
<td>.39*</td>
</tr>
<tr>
<td>Conditional Goal-Setting</td>
<td>-.39</td>
<td>.19</td>
<td>-.15***</td>
</tr>
</tbody>
</table>

*Note. $R^2 = .21$; adjusted $R^2 = .20$,

*$p < .001$, **$p < .01$, ***$p < .05$
Figure 3. Relationship between mindfulness and positive affect as partially mediated by conditional goal-setting.

* $p < .001$ , ** $p < .01$ , *** $p < .05$

Conditional Goal-Setting as a Mediator in the Relationship between Mindfulness and Negative Affect

Lastly, a test of mediation was conducted for the outcome variable of negative affect. Step 1 tested the relationship between the proposed causal variable (mindfulness) and the outcome variable (negative affect). Results indicate that as mindfulness increased, negative affect decreased, $\beta = -.48, p < .001$. Step 2 tested if there was a relationship between the proposed causal variable and the potential mediator (conditional goal-setting). As mindfulness increased, conditional goal-setting decreased, $\beta = -.32, p < .001$. Step 3 then examined if there was a relationship between the potential mediator and the outcome variable while controlling for the causal variable. Results show that the relationship between conditional goal-setting and negative affect was statistically significant while controlling for mindfulness, $\beta = .20, p < .01$ (see Table 7). Finally, step 4 tested whether the relationship between the causal variable and the outcome variable while controlling the mediator is zero. The relationship between mindfulness and
negative affect while controlling for conditional goal-setting was still statistically significant and did not fall to zero, $\beta = -.41, p < .001$, indicating that conditional goal-setting partially mediated the relationship between mindfulness and negative affect (see Figure 4). The amount of mediation is $\beta_{\text{Indirect Effect}} = -.07$. This partially mediated effect was statistically significant ($z = -2.45, p < .01$).

Table 7

Summary of the Multiple Regression Analysis for Variables Predicting Negative Affect ($N = 177$)

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>$SE B$</th>
<th>$\beta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mindfulness</td>
<td>-.19</td>
<td>.03</td>
<td>-.41*</td>
</tr>
<tr>
<td>Conditional Goal-Setting</td>
<td>.54</td>
<td>.19</td>
<td>.20**</td>
</tr>
</tbody>
</table>

*Note. $R^2 = .26$; adjusted $R^2 = .25$,

*p < .001

**p < .01

$\beta_{\text{Total Effect}} = -.48 *$

$\beta_{\text{Direct Effect}} = -.41 *$

$\beta_{\text{Indirect Effect}} = .07 **$
**Discussion**

The current study tested conditional goal-setting as a potential mediator in the relationship between mindfulness and four outcomes of well-being: depression, rumination, positive affect, and negative affect. Past research has consistently demonstrated inverse relationships between mindfulness and depression (Kabat-Zinn et al., 1992), rumination (Jain et al., 2007), and negative affect (and a positive relationship with positive affect) (Brown & Ryan, 2003). In contrast, positive relationships have been observed between conditional goal-setting and depression and rumination (McIntosh, Harlow, & Martin, 1995; McIntosh, Gillanders, & Rodgers, 2009; Street, 2003; Schofield, Dickson, & Mummery, 2002; Street, O'Connor, & Robinson, 2007), and negative affect (and an inverse relationship with positive affect) (McIntosh, Martin, & Jones III, 2001). In addition, prior research has either strongly suggested (McIntosh, 1996; McIntosh, Martin, and Jones III, 2001; Coffey and Hartman, 2008; Crane, Barnhofer, Hargus, Amarasinghe, & Winder, 2010) or empirically demonstrated (Crane,
Jandric, Barnhofer, Williams, 2010) the inverse relationship between mindfulness and conditional goal-setting. These observed relationships have opened up the possibility of examining reduced conditional goal-setting as a mechanism of action through which mindfulness impacts well-being. Does mindfulness lessen engagement in conditional goal-setting? In turn, does this reduction in conditional goal-setting lead to lower levels of rumination, depression, and negative affect (and higher levels of positive affect)? It was predicted that conditional goal-setting would mediate the relationship between mindfulness and well-being for all four outcomes listed above.

The results of the present study showed that conditional goal-setting partially mediated the relationship between mindfulness and each individual outcome. Though the relationships were not fully/completely mediated, the finding suggests that a beneficial effect of mindfulness is reduced conditional goal-setting, which in turn leads to reduced depressive symptomatology, rumination, and negative affect, and increased positive affect.

The current research is the third study to date to empirically demonstrate this strong and significant relationship between increased mindfulness and decreased conditional goal-setting. However, the present study goes beyond the studies conducted by Crane, Barnhofer, Hargus, Amarasinghe, and Winder (2010a) and Crane, Jandric, Barnhofer, & Williams (2010b) by further examining the role of conditional goal-setting as a mediator in the relationship between mindfulness and well-being. Along with the results found by Crane and colleagues (2010a; 2010b), the current findings suggest that mindfulness undermines one’s tendency to conditionally goal-set. This empirically confirmed relationship highlights the fact that these two psychological processes contrast
with each other along several critical dimensions: time orientation, attachment to experiences, and judging one’s internal experiences.

Present-centeredness involves being in the moment, and not worrying about the past or future. Though mindfulness does not preclude remembering, it does not entail dwelling on memories. Mindfulness brings one’s attention to the present moment, and as Kabat-Zinn (1990) explained, mindfulness teaches people that there is nowhere else to be but the present moment, and to directly experience each moment as it occurs. In contrast, when individuals engage in conditional goal-setting, they become considerably more outcome- and future-oriented. These individuals are far more focused on the end product as opposed to the ongoing process of goal achievement. The present study suggests that by being more mindful, conditional goal-setters focus less on perceived proximity to goals, and in doing so, are reducing their ruminative and depressive responses to this perceived distance, and experiencing more positive and less negative affect.

Mindfulness also allows individuals to become less attached to desired internal and external experiences. This could include pursuing positive experiences (getting a new car, being promoted at work, etc.) or avoiding negative experiences (losing a romantic partner, being fired, etc.). In conditional goal-setting, individuals believe strongly that they will only be happy, fulfilled, and have a sense of self-worth if particular personal goals (desired internal and external experiences) are achieved. Therefore, there is a strong attachment to one’s goals. The present study suggests that mindfulness decreases one’s tendency to conditionally goal-set, and in doing so, creates a healthier non-attachment to goals in life. By experiencing less attachment to goals, individuals are not overly
distressed or burdened by goal progress/lack of progress, allowing individuals to experience a better sense of well-being.

Lastly, an important aspect of mindfulness is what Baer et al. (2006) describe as *non-judging of inner experience*. This involves refraining from evaluation of one’s sensations, cognitions, and emotions. Mindfulness teaches individuals recognition and acceptance of occurrences, without immediately and mindlessly assessing whether they are “good,” “bad,” or anything else. Conversely, the experience of conditional goal-setting is primarily based on assessment. To conditionally goal-set is to have the inherent belief that progress towards a goal will “bring happiness” and lack of progress towards a goal will “not bring happiness.” Street (2002) asserts that conditional goal-setters are trapped in the belief that the goal they are pursuing is the means to their happiness. The present study suggests that being mindful decreases the tendency to judge one’s life events or thoughts, and in doing so, decreases the tendency towards conditional goal-setting.

Beyond empirically establishing the inverse relationship between mindfulness and conditional goal-setting, the current study tested reduced conditional goal-setting as a possible mechanism of action for mindfulness. Though mediation was established in the present study, conditional goal-setting only partially mediated the relationship between mindfulness and each of the well-being outcomes. Thus, the beneficial effects of mindfulness cannot be completely accounted for or explained by conditional goal-setting. A host of other mechanisms of action can also be at play. For instance, in the case of the relationship between mindfulness and depression, decentering (the ability to distance and dis-identify from the contents of one’s thoughts and emotions) has been identified and
tested as a mechanism of action in a study by Gecht and her colleagues (2014).
Nonetheless, the current study contributes to the growing literature that has focused on
how mindfulness works and has identified the various mechanisms through which it
facilitates and enhances well-being (Coffey & Hartman, 2008; Hölzel et al., 2011;
Carmody, Baer, Lykins, & Olendzki, 2009). Identifying mediators in the relationship
between mindfulness and well-being (like conditional goal-setting) improves the
effectiveness of mindfulness-based therapies. Much like a doctor would like to know why
a given medicine or treatment has its beneficial effects on a patient, so too do
therapists/researchers seek to understand the mechanisms through which a therapy or
intervention works. Understanding why a therapy works is just as, or might even be far
more important, than knowing that it does.

Clinical Implications

McIntosh (1996) described conditional goal-setters as individuals who
“experience a lot of negative affect, who worry excessively, and who are prone to
depression and stress-related illness,” as a function of their problematic beliefs about goal
attainment/non-attainment. How should therapy be designed and implemented to reduce
the tendency to engage in conditional goal-setting? Regardless of whether the
intervention was initially intended to be mindfulness-based or not, the following elements
could be introduced and highlighted in therapy. They include: being mindfully aware of
goal-relevant thoughts and beliefs, becoming more process- and present-oriented,
becoming more psychologically flexible by learning to disengage from one’s goals, and
becoming less judgmental of the self.
It would be beneficial to help linkers/conditional goal-setters to become mindfully aware of their thoughts and beliefs, particularly those related to goal achievement. Oftentimes, people are not aware of their own dysfunctional beliefs, and as prior researchers have consistently shown, ineffective beliefs towards goals can have many deleterious effects (McIntosh, Harlow, & Martin, 1995; McIntosh, Gillanders, & Rodgers, 2009; Street, 2003; Schofield, Dickson, & Mummery, 2002; Street, O'Connor, & Robinson, 2007; McIntosh, Martin, & Jones III, 1997; McIntosh, Martin, & Jones III, 2001; Hadley & MacLeod, 2010). This element can be easily incorporated into the MBCT program (Segal, Williams, & Teasdale, 2002) mentioned in the introduction section of this write-up. This program teaches individuals to observe their thoughts and feelings nonjudgmentally and to view them simply as mental events that come and go. It incorporates elements of cognitive therapy that cultivate a detached/decentered view of one’s thoughts and feelings, including statements like “thoughts are not facts” and “I am not my thoughts.” For the conditional goal-setter, these thoughts may include, “Goals do not define my happiness,” or “My personal goals can be important to me, but do not determine my happiness alone.” Through a more detached/decentered outlook, individuals can better examine their dysfunctional thoughts about goals/goal achievement, and experience greater well-being.

Also, demonstrating the benefits of becoming more process- and present-oriented can help these individuals. According to Street (2002), outcome- and future-oriented individuals place undue importance and stress on their goals, and spend a great deal of time working towards happiness, as opposed to just experiencing the process of goal pursuit regardless of goal attainment.
Another important clinical consideration for those engaging in conditional goal-setting is disengagement from goals. Klinger (1975) has suggested that if an individual believes that they are unable to attain an important goal due to problems in goal pursuit, they enter a period where they become completely absorbed by the pursuit of that goal. Various authors have suggested that where the achievement of a lower-order goal proves difficult, it can be advantageous for a person to disengage from the goal and direct their efforts elsewhere (Carver & Scheier, 1998; Schroevers, Kraaij, & Garnefski, 2008; Wrosch, Scheier, Carver, & Schulz, 2003; Wrosch, Scheier, Miller, Schulz, & Carver, 2003). This “psychological flexibility” can greatly benefit individuals overly engrossed in personal goals.

Lastly, helping to discover ways for clients to become less judgmental and evaluative of the self is a key consideration as well. Failing to reach goals is a natural part of existence, and should not be considered a reflection of someone as a person. Once again, this element could be included in the MBCT program (Segal, Williams, & Teasdale, 2002) in helping an individual examine his/her dysfunctional beliefs that are related to the self and learn to view them from a detached/decentered view. In doing so, an individual can begin to engage in less judgmental and evaluative thoughts about the self.

Limitations of the Study and Suggestions for Future Research

The current study has some important limitations to note. The first of which is its correlational nature. Causal explanations cannot be drawn from the present research since mindfulness was measured as a trait or disposition and was not manipulated or tested as an intervention. The question remains: how would direct mindfulness training affect
conditional goal-setting and well-being? Future studies may examine causal relationships with an experimental design that is longitudinal in nature, with some participants completing a mindfulness training program and others not, and then examining the association between the increases in mindfulness and changes in conditional goal-setting (after training) and the long-term effects of the latter on improvements in well-being. This will allow researchers to examine if mindfulness training results in reduced conditional goal-setting, which then leads to greater well-being.

Another consideration is the pathway of influence that was specified and tested. The present study investigated if mindfulness enhanced well-being by undermining conditional goal-setting. This pathway was selected given the research question or theoretical goal of the study, and also the current status of research on the relevant variables. Mindfulness has been demonstrated to increase well-being (Kabat-Zinn et al, 1992; Jain et al., 2007; Brown & Ryan, 2003). Likewise, Crane et al. (2010b) have demonstrated the causal influence of mindfulness on conditional goal-setting, and previous studies have shown the causal influence of conditional goal-setting on the well-being outcomes (McIntosh, Harlow, & Martin, 1995; McIntosh, Gillanders, & Rodgers, 2009; Street, 2003; Schofield, Dickson, & Mummery, 2002; Street, O’Connor, & Robinson, 2007; McIntosh, Martin, & Jones III, 1997; McIntosh, Martin, & Jones III, 2001; Hadley & MacLeod, 2010). These have set the direction of the pathway of influence to be specified in the study as: increased mindfulness $\rightarrow$ reduced CGS $\rightarrow$ enhanced well-being.

It is also possible that the positive effects of mindfulness on well-being could lead to decreased conditional goal-setting (i.e., increased mindfulness $\rightarrow$ enhanced well-being
reduced CGS). In this case, mindfulness strengthens one’s sense of well-being, which in turn, prevents engagement in conditional goal-setting. However, while the causal influences of mindfulness on well-being and conditional goal-setting have been demonstrated (as mentioned in the previous paragraph), no studies to date have attempted to test the causal influence of well-being on conditional goal-setting (e.g., when people become less depressed they do not engage in conditional goal-setting). Nonetheless, along with testing the proposed pathway of influence, this alternative pathway was also examined but not reported in the results section of this write-up. The four well-being variables were individually tested as potential mediators in the relationship between mindfulness (as the proposed causal variable) and conditional goal-setting (the outcome variable). Results of the tests of mediation showed that each of the four well-being variables was a partial mediator in the relationship. This suggests that mindfulness indirectly undermines conditional goal-setting by reducing depressive symptomatology, rumination, or negative affect, or by increasing positive affect. Future studies could examine this alternative pathway more closely.

The Baron and Kenny (1986, 2014) approach to testing mediation was employed in this study and was supplemented by Sobel tests. Although both have been criticized for lacking power in testing mediation effects and thus, requiring large sample sizes, (Fritz & MacKinnon, 2007), the current study’s sample size of 177 meets the sample size requirement of 100 suggested by MacKinnon et al. (2002) to detect medium effects sizes in tests of mediation. Likewise, the results of all four Sobel tests conducted were statistically significant. Nonetheless, the study could benefit from other approaches such as statistical bootstrapping (Preacher & Hayes, 2004), which is recommended for small
sample sizes and when assumptions of normality in the data are not violated. While the present study has an adequate sample size for mediation testing purposes, some of the variables departed from normality (depression, rumination, negative affect, and linking) using Kolmogrov-Smirnov and Shapiro-Wilk tests.

The characteristics of the study sample used in the current research also presents issues. The sample consisted of predominantly Caucasian females between the ages of 18-22 who are attending college. The study results are not readily generalizable to a more diverse population.

The Cronbach's alpha for the Linking Questionnaire is also a limitation in the current research. The .59 value obtained is at the bottom end of what George and Mallery (2003) describe as “questionable” reliability. This low internal reliability indicates that the scale items are not as related to each other as was hoped for. Unfortunately, removal of one or several items from the scale did not improve the Cronbach's alpha value obtained. In future studies, researchers may try to use the Conditional Goal-Setting (CGS) Scale (Street, 1999) in place of the Linking Questionnaire (McIntosh et al., 1997). The CGS Scale asks individuals to identify three important goals and to rate on a scale of 1 (“I can be happy even if I do not achieve this goal”) to 7 (“I can only be happy if I achieve this goal”) how dependent their happiness was on achieving each goal. The scale is scored by adding together each of the three items, with the minimum score being 3, and the maximum score being 15. The scale has been compared favorably to the Linking Questionnaire (Street et al., 2004). However, it is important to note that this scale has a Cronbach’s alpha of .67, a mark slightly lower than the .73 for the Linking Questionnaire (McIntosh et al., 1997). The best course of action may be to administer both in
subsequent research. It appears as though the .59 obtained in the current study is simply a function of the particular sample of participants used considering that a better value (.73) was obtained by other researchers (McIntosh et al., 1997; McIntosh, Martin, & Jones III, 2001).

Finally, the current study relied solely on self-report measures to assess the relevant constructs. Future studies may try to employ more objective measures (if possible). Although the present study was anonymous and the participants were given the opportunity to complete the survey on their personal computers, it is possible that participants may have been biased and may have responded in the most socially acceptable manner.

Conclusion

This study contributes to the growing literature on how mindfulness facilitates well-being. The current research has shown the mediating role of conditional goal-setting in the relationship between mindfulness and well-being. Given the correlational nature of the study, however, more causal tests of the relationships can be conducted in the future to confirm the relationships. This study also has important clinical implications. Clinicians using mindfulness or mindfulness-based treatments will better understand the role mindfulness plays in undermining conditional goal-setting, and in enhancing well-being. Although the current research is not entirely conclusive or exhaustive, the findings add to the growing base of literature on the effectiveness of mindfulness.
References


CONDITIONAL GOAL-SETTING AND MINDFULNESS


Crane, C., Barnhofer, T., Hargus, E., Amarasinghe, M., & Winder, R. (2010a). The relationship between dispositional mindfulness and conditional goal setting in


McIntosh, W. D. (1996). When does goal nonattainment lead to negative emotional reactions, and when doesn't it?: The role of linking and rumination. *Striving and feeling: Interactions among goals, affect, and self-regulation, 53*-77.


Suicide and Life-Threatening Behaviors, 32(2), 146-157.


Appendix A: Demographic Information

Demographics Questionnaire

Instructions: Please provide a response to the following statements.

1. Age: __________

2. Gender: Male or Female

3. Ethnicity:
   ______ White/Caucasian
   ______ Black/African-American
   ______ Hispanic
   ______ Native American
   ______ Asian American
   ______ Hawaiian or Pacific Islander
   ______ Multi-ethnic
   ______ Other

4. Year in School
   ______ Freshman
   ______ Sophomore
   ______ Junior
_____ Senior

_____ Graduate

5. Academic Major: __________________________
Appendix B: Five Facet Mindfulness Questionnaire

**Five Facet Mindfulness Questionnaire**

**Instructions:** Please rate each of the following statements using the scale provided. Write the number in the blank that best describes your own opinion of what is generally true for you.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Never or very rarely true</td>
<td>Rarely true</td>
<td>Sometimes true</td>
<td>Often true</td>
<td>Very often or always true</td>
</tr>
</tbody>
</table>

---

1. When I’m walking, I deliberately notice the sensations of my body moving. 

2. I’m good at finding words to describe my feelings.

3. I criticize myself for having irrational or inappropriate emotions.

4. I perceive my feelings and emotions without having to react to them.

5. When I do things, my mind wanders off and I’m easily distracted.

6. When I take a shower or bath, I stay alert to the sensations of water on my body.

7. I can easily put my beliefs, opinions, and expectations into words.

8. I don’t pay attention to what I’m doing because I’m daydreaming, worrying, or otherwise distracted.

9. I watch my feelings without getting lost in them.

10. I tell myself I shouldn’t be feeling the way I’m feeling.

11. I notice how foods and drinks affect my thoughts, bodily sensations, and emotions.

12. It’s hard for me to find the words to describe what I’m thinking.

13. I am easily distracted.

14. I believe some of my thoughts are abnormal or bad and I shouldn’t think that
way.

____ 15. I pay attention to sensations, such as the wind in my hair or sun on my face.

____ 16. I have trouble thinking of the right words to express how I feel about things.

____ 17. I make judgments about whether my thoughts are good or bad.

____ 18. I find it difficult to stay focused on what’s happening in the present.

____ 19. When I have distressing thoughts or images, I “step back” and am aware of the thought or image without getting taken over by it.

____ 20. I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing.

____ 21. In difficult situations, I can pause without immediately reacting.

____ 22. When I have a sensation in my body, it’s difficult for me to describe it because I can’t find the right words.

____ 23. It seems I am “running on automatic” without much awareness of what I’m doing.

____ 24. When I have distressing thoughts or images, I feel calm soon after.

____ 25. I tell myself that I shouldn’t be thinking the way I’m thinking.

____ 26. I notice the smells and aromas of things.

____ 27. Even when I’m feeling terribly upset, I can find a way to put it into words.

____ 28. I rush through activities without being really attentive to them.

____ 29. When I have distressing thoughts or images I am able just to notice them without reacting.

____ 30. I think some of my emotions are bad or inappropriate and I shouldn’t feel them.
____ 31. I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow.

____ 32. My natural tendency is to put my experiences into words.

____ 33. When I have distressing thoughts or images, I just notice them and let them go.

____ 34. I do jobs or tasks automatically without being aware of what I'm doing.

____ 35. When I have distressing thoughts or images, I judge myself as good or bad, depending what the thought/image is about.

____ 36. I pay attention to how my emotions affect my thoughts and behavior.

____ 37. I can usually describe how I feel at the moment in considerable detail.

____ 38. I find myself doing things without paying attention.

____ 39. I disapprove of myself when I have irrational ideas.
Appendix C: The Linking Questionnaire

The Linking Questionnaire

Instructions: Which of the two possible reactions more closely describes how you feel about the preceding statement? Indicate by checking the space next to that choice.

1. You've won $10,000 in a contest
   _____ A. Now that I can afford many of the things I've always wanted, I will be much happier.
   _____ B. I'm glad that I won the money, although I don't think it will influence how happy I am overall.

2. Does your weight influence your happiness?
   _____ A. I am only happy when I am at my ideal weight.
   _____ B. It would be nice to be at my ideal weight, but I would be just as happy if I were not.

3. Do you get more happiness out of pursuing your goals or as a result of reaching them?
   _____ A. I get more happiness out of striving for my goals; reaching them is just icing on the cake.
   _____ B. My happiness comes primarily from reaching my goals.

4. How critical for your happiness is it for you to be in a romantic relationship?
   _____ A. It is difficult for me to be truly happy if I do not have someone in my life.
B. I prefer to have someone in my life, but I can be just as happy without a
boyfriend/girlfriend.

5. Imagine that over the next 6 months the following things happen: Someone gives you a
new car, then you fail two classes, then you go on a great vacation to Hawaii, then
someone steals your car.

A. My happiness will swing up and down as events in my life change.

B. These are natural events in my life, and they won’t necessarily influence my
happiness.

6. One day you realize you have all the things you want—the job you want, the spouse
you want, the free time you want.

A. This will not directly influence how happy I am, because happiness is
something determine, regardless of what happens outwardly.

B. If I have all the things I want, then I will be completely happy.

7. How important is having money to your happiness?

A. Being able to buy things I want when I want them definitely makes me
happier.

B. Once I have enough money for the basic necessities of life (like food, clothing,
and shelter), more money will not make me happier.
8. Your roommate is one of the most annoying, unpleasant people you’ve ever known.
   _____ A. I’m probably going to be unhappy whenever I’m around my roommate.
   _____ B. I can be happy when I’m around my roommate if I really want to be.

9. How does good and bad luck affect your happiness?
   _____ A. How I respond to good and bad luck in my life is more important than the good
       and bad events themselves.
   _____ B. The best way for me to keep from being unhappy is to keep bad things from
       happening to me. The best way for me to be happier is to make good things
       happen to me.

10. What would it take for you to be happy right now?
    _____ A. There are certain things that must happen in my life for me to be truly happy.
    _____ B. The only thing that is keeping me from being happy right now is myself.

11. You just lost the job which you’ve had for 5 years and enjoyed very much.
    _____ A. I’ll only be happy if I find another good job.
    _____ B. I can be happy whether I get another good job or not.

12. Does being outgoing affect your happiness?
    _____ A. I would be happier if I was more outgoing.
    _____ B. I would be about as happy as I am now if I was more outgoing.
13. Think about the things in your life that you really want but just can’t get. Maybe you want to be a doctor, but you realize that your grades are not going to be good enough. Or maybe you want to go out with a certain person, but that person won’t go out with you. How does this affect your happiness?

______ A. The more things I want but can’t get, the less happy I am.

______ B. Wanting things I can’t get does not make me less happy.
Appendix D. Center for Epidemiologic Studies Depression Scale (CES-D)

**Center for Epidemiologic Studies Depression Scale**

**Instructions:** Below is a list of the ways you might have felt or behaved. Please tell me how often you have felt this way during the past week: (circle one number on each line).

<table>
<thead>
<tr>
<th>During the past week…</th>
<th>Rarely or none of the time (less than 1 day)</th>
<th>Some or a little of the time (1-2 days)</th>
<th>Occasionally or a moderate amount of time (3-4 days)</th>
<th>All of the time (5-7 days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.) I was bothered by things that usually don’t bother me</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2.) I did not feel like eating; my appetite was poor</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3.) I felt that I could not shake off the blues even with help from my family or friends.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4.) I felt I was just as good as other people.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5.) I had trouble keeping my mind on what I was doing.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6.) I felt depressed.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7.) I felt that everything I did was an effort</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8.) I felt hopeful about the future.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9.) I thought my life had been a failure.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>10.) I felt fearful.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>11.) My sleep was restless</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>12.) I was happy.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>13.) I talked less than usual.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>14.) I felt lonely.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>15.) People were unfriendly.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>16.) I enjoyed life.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>17.) I had crying spells.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>18.) I felt sad.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>19.) I felt that people disliked me.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>20.) I could not get “going.”</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
Appendix E. Ruminative Responses Scale

**Ruminative Responses Scale**

**Instructions:** People think and do many different things when they feel sad, blue, or depressed. I’m going to read a list of possibilities. Turn to the next scale in your book and please tell me if you never, sometimes, often, or always think or do each one when you feel down, sad, or depressed. Please indicate what you generally do, not what you think you should do.

<table>
<thead>
<tr>
<th></th>
<th>Almost Never</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

1. Think about how alone you feel
2. Think “I won’t be able to do my job if I don’t snap out of this.”
3. Think about your feelings of fatigue and achiness
4. Think about how hard it is to concentrate
5. Think “What am I doing to deserve this?”
6. Think about how passive and unmotivated you feel
7. Analyze recent events to try to understand why you are depressed
8. Think about how you don’t seem to feel anything anymore
9. Think “Why can’t I get going?”
10. Think “Why do I always react this way?”
11. Go away by yourself and think about why you feel this way
12. Write down what you are thinking and analyze it
13. Think about a recent situation, wishing it had gone better
14. Think “I won’t be able to concentrate if I keep feeling this way.”
15. Think “Why do I have problems other people don’t have?”
16. Think “Why can’t I handle things better?”
17. Think about how sad you feel
18. Think about all your shortcomings, failings, faults, mistakes
19. Think about how you don’t feel up to doing anything
20. Analyze your personality to try to understand why you are depressed
21. Go someplace alone to think about your feelings
22. Think about how angry you are with yourself
Appendix F. Positive and Negative Affect Scale

Positive and Negative Affect Scale

Instructions: This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you generally feel this way, that is, how you feel on average. Use the following scale to record your answers:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Very slightly or not at all</td>
<td>A little</td>
<td>Moderately</td>
<td>Quite a bit</td>
<td>Extremely</td>
</tr>
<tr>
<td>1</td>
<td>1. Interested</td>
<td></td>
<td></td>
<td></td>
<td>11. Irritable</td>
</tr>
<tr>
<td>2</td>
<td>2. Distressed</td>
<td></td>
<td></td>
<td></td>
<td>12. Alert</td>
</tr>
<tr>
<td>3</td>
<td>3. Excited</td>
<td></td>
<td></td>
<td></td>
<td>13. Ashamed</td>
</tr>
<tr>
<td>5</td>
<td>5. Strong</td>
<td></td>
<td></td>
<td></td>
<td>15. Nervous</td>
</tr>
<tr>
<td>7</td>
<td>7. Scared</td>
<td></td>
<td></td>
<td></td>
<td>17. Attentive</td>
</tr>
<tr>
<td>8</td>
<td>8. Hostile</td>
<td></td>
<td></td>
<td></td>
<td>18. Jittery</td>
</tr>
<tr>
<td>9</td>
<td>9. Enthusiastic</td>
<td></td>
<td></td>
<td></td>
<td>19. Active</td>
</tr>
</tbody>
</table>