

Running head: THE ROLE OF MINDFULNESS IN MOOD REGULATION AND MOOD

The Role of Mindfulness in Regulating Emotions
and Positive and Negative Affect

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Abstract

In the present study we investigated self-reported levels of mindfulness and its relation to both emotion regulation and mood. It was hypothesized that higher levels of mindfulness would be associated with reports of more adaptive emotion regulation strategies. Higher levels of mindfulness were also anticipated to relate to a neutral level of mood. In addition, it was hypothesized that a greater difficulty in regulating emotions would be related to higher negative affect and lower positive affect. Our results showed that a greater ability to be in the moment was related to a greater ability to regulate emotions. We also found that greater difficulty in regulating emotions was related to higher levels of negative mood and lower levels of positive mood. However, we did not find the expected neutral relationship between mindfulness level and mood. Instead, we found that mindfulness is related to higher levels of positive affect and lower levels of negative affect. Further analyses showed that emotion regulation might be mediating the relationship found between the mindfulness ability to be nonjudging in the moment and mood. This study extends the literature on mindfulness and mood to also include the possible mediating role of emotion regulation, which may be important in helping us to understand how the ability to be nonjudging of the moment might allow individuals to be accept emotional experiences that occur.

The Role of Mindfulness in Regulating Emotions and Positive and Negative Affect

Many of us are guilty of not living in the moment. We concern ourselves with things that we would rather be doing, should be doing, or wish we were doing rather than being aware of what we are doing in the moment. When we do not take the time to focus on where we are in the present we may get lost in our worries of the past and concerns for the future. Mindfulness involves bringing one's complete attention to the experiences occurring in the present moment, in a nonjudgmental or accepting way (Kabat-Zinn, 1990).

Since mindfulness involves present moment attention to emotions and feelings, we are interested in how awareness in the moment might be related to mood, and emotion regulation techniques. Mindfulness has been associated with both a more neutral mood and increased positive affect (Brown & Ryan, 2003). It has also been suggested that as mindfulness level increases the difficulties (e.g. nonacceptance and impulsivity) that are encountered when regulating emotions decreases (Rausch, Gramling, & Auerbuck, 2006). Our study has looked at how mindfulness is related to mood and regulating abilities, as well as how the ability to regulate emotions might be related to positive and negative affect.

Mindfulness

Mindfulness meditations have been practiced by Buddhists for centuries, but not until recently has mindfulness practice become utilized by western psychotherapy. Professionals involved in western psychotherapy have contributed different explanations about the experience of mindfulness.

Buddhism does not have a simple definition of mindfulness; however, professionals involved in western psychotherapy have contributed different perspectives on the experience of

mindfulness. Mindfulness can be thought of as a present-centered awareness where thoughts and feelings arising in the moment are acknowledged and accepted as is (Kabat-Zinn, 1990). In addition to being centered with one's awareness, mindfulness has been described as a way of regulating attention and awareness through observing and attending to changing thoughts, feelings, and sensations from moment to moment (Bishop et al., 2004). Mindfulness has also been conceptualized in terms of quality of consciousness, awareness of the environment, attention toward experiences, and receptivity of awareness and attention (Brown & Ryan, 2003). Each of these definitions focus on specific factors of mindfulness rather than a multifaceted conceptualization of the multiple ways that mindfulness is related to health and well-being. In the present study, we are conceptually defining mindfulness as a set of skills, including the ability to be aware and attentive in the moment, open to observation, and the ability to be nonjudging and nonreactive toward experiences (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006). Each of these skills involved in mindfulness is able to be learned and practiced in order to reduce psychological symptoms and increase health and well-being (Baer et al., 2006).

In order to better understand which skills an individual is utilizing, we must rely on self-report. When measuring mindfulness through self-report, the construct of mindfulness can be conceptualized in different ways. For example, mindfulness may be viewed as a trait which reflects stable individual differences in mindfulness levels across time (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000). A second view is to consider mindfulness a state of being which monitors the person's average level of mindfulness, and then looks at the fluctuations above and below that average level of mindfulness (Reis et al., 2000). Researchers who examine trait effects are looking at the differences between participants, while those studying state effects look into differences within the individual.

Although mindfulness practices may help to reduce stress, they should not be considered relaxation or mood management techniques, but instead a form of mental training used to reduce cognitive vulnerability to reactive modes of mind that otherwise might heighten stress and emotional distress (Bishop et al., 2004). Mindfulness levels have been shown to be connected to neutral emotional experiences (Brown & Ryan, 2003). The connection between mindfulness and mood might be important because self-report indications of being aware and nonjudging in the moment might relate to positive and negative mood.

Mindfulness and Affect

Positive affect reflects the extent to which one experiences positive states such as joy, interest, confidence, and alertness; whereas negative affect represents the extent to which an individual experiences negative emotional states such as fear, anger, sadness, guilt, contempt and disgust (Watson, 2002). Mindfulness has been shown to be related to a more neutral mood along with increased positive affect (Brown & Ryan, 2003). Participants of both the general population and students enrolled in introductory psychology courses monitored their self-regulatory and emotional well-being using an affect scale, a mindfulness scale, and an autonomy scale; a pager signal prompted filling out each questionnaire, and questionnaires were also completed after the experience-sampling period (Brown & Ryan, 2003). The study showed that mindfulness was related to a more neutral balance of emotion as well as an increased positive affect, and in all participants mindfulness appeared to regulate emotions through moderating the experience of emotions instead of eliminating certain emotions (Brown & Ryan, 2003). This is not to say that mindful individuals do not experience extremes in emotions, but rather that they are able to be aware of and accepting of these emotions without reacting to or judging them (Brown & Ryan, 2003).

Arch and Craske (2006) studied the effects of emotionally neutral, positive, and negative slides on undergraduate students with little or no history of mindfulness training. Individuals were assigned to an induced worry group or a focused breathing/meditation group. Those individuals in the focused breathing/meditation group were trained in a 15 minute focused breathing induction while those in the worry group were guided through instructions to worry (Arch & Craske, 2006). Participants in the meditation group showed an increased willingness and tolerance for remaining in contact with unpredictable, negative stimuli and also showed more positive responses to the neutral slides than did the worry group (Arch & Craske, 2006). This study shows that the awareness and attention developed through focused breathing and meditation is associated with less extreme emotional experiences.

Level of mindfulness may be different when it is induced rather than when it naturally occurs as part of a typical day. Mood and emotion regulation abilities might be affected through induction of mindfulness because the induction may lead the person to feel more relaxed and then less focused on both positive and negative moods. Given this possibility, we need to look at one's mindfulness level in their natural state, rather than the laboratory, because this allows us to better understand how the factors of mindfulness may be relating to positive and negative mood.

Mindfulness and Emotion Regulation

Mindfulness is not a passive activity; a mindful person is aware of and attentive to their environment in a nonjudging and nonreactive way. In order to be nonjudging and nonreactive one must become aware of the constant stream of judging and reacting toward experiences, and learn to step back from them (Kabat-Zinn, 1990). Therefore, mindfulness is a strategy that is used to promote a state of mind that does not react or judge emotions, but rather is accepting and aware of these feelings.

In the current study we are focusing on the ways in which mindfulness may allow individuals to be less reactive to experiences. Nonreactivity to inner experiences involves the ability to allow thoughts and feelings to come and go, without responding or becoming hindered by them (Baer et al., 2008). For example, if a student gives the wrong answer in class and feels embarrassed for a moment but then allows the feeling to pass, then he or she is being nonreactive. Whereas if this same student were to ruminate about how embarrassed he or she was and think about what should have been said instead and how it could have been different, long after the situation had passed, then this would be considered reacting and responding to the situation in a negative manner. Those who are not acting mindfully may attempt to cope with the associated negative emotions by reacting to them. Therefore, the experience of emotions may be different for those individuals who react versus more mindful individuals because when people are mindful they are more aware and nonjudging of their current situation and may be less likely to make attempts to alter their experiences through reacting.

When a person is unwilling to remain in contact with their experiences and makes attempts to alter these unwanted experiences, it is referred to as experiential avoidance (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). By using experiential avoidance attempts are made to cope with unwanted emotions in a way that denies the emotional experiences that are occurring. As previously discussed, Brown and Ryan (2003) have shown that individuals who are more open and accepting of certain experiences tend to report less mood disturbances and less stress. Acting mindfully encourages the full experience of feelings that are occurring in the moment, without trying to control them, so that the individual is able to learn that the emotions pass without using regulation strategies (Hayes & Feldman, 2004). By being active in allowing each emotion that is felt to occur we accept and become aware of our feelings. In addition, we

are being nonreactive by resisting the habitual nature of wanting to use regulation strategies when we feel unwanted emotions.

Meditation experience has been shown to be related to clarity in description of emotional experiences (Nielsen & Kaszniak, 2006). Long-term meditators (4-29 years) and nonmeditators viewed positive or negative emotion-evoking pictures in unmasked and masked conditions (where a stimulus is presented very briefly and preceded by a visual mask so as to block the stimulus from conscious perception) (Nielsen & Kaszniak, 2006). In the masked conditions it was found that long-term meditators rated themselves higher than controls in emotional clarity, and also showed more accurate valence discrimination than controls by being closest in their emotion description to the actual emotion that the masked picture was attempting to evoke (Nielsen & Kaszniak, 2006). Therefore, because the meditators rated higher in emotional clarity and were closest in their emotional description to the emotion that was trying to be evoked, it may be that meditation increases an awareness and acceptance of emotions, making meditators better able to describe their emotional experiences.

Much of the current literature has focused on the regulation of negative emotions, while few researchers have examined the regulation of positive emotions. We not only regulate negative emotions, but we also regulate positive emotions. Suppression is a common coping mechanism used with negative emotions that are seen as unacceptable (Campbell-Sills, Barlow, Brown, & Hofmann, 2006). Similarly, positive emotions are not always seen as favorable depending on societal and individual values; and attempts to suppress positive emotions may occur (Langston, 1994). When we regulate unfavorable positive emotions we may attempt to dampen positive affect through suppression of positive moods (Langston, 1994). In contrast to attempts to dampen or continue an emotional state, mindfulness involves experiencing and

accepting both positive and negative emotions that are occurring at the present moment (Brown & Ryan, 2003). It is important to understand how the regulation of emotions might relate to level of positive mood because the relationship of emotion regulation with positive moods may be different than the relationship between emotion regulation and negative moods.

Regulation of Negative Emotions

When emotions are seen as unfavorable, a person lacking mindful acceptance may be more likely to attempt to suppress those emotions which may then lead to an increase in negative emotions (Campbell-Sills et al., 2006). Many of us may find negative emotions such as sadness, anger, and guilt to be unfavorable, and may then make attempts to reduce these negative emotions. However, through the nonacceptance of current emotions and events, we remove ourself from the present and are no longer acknowledging our feelings and letting them pass.

Campbell-Sills and colleagues (2006) compared participants with anxiety and mood disorders to participants with no prior history of anxiety or mood disorders. After monitoring the reactions of both groups to an emotion-provoking film, it was found that those in the clinical setting were more likely to suppress their emotions and consequently had a higher level of negative affect (Campbell-Sills et al., 2006). It appears that when negative emotions are perceived as unacceptable and suppression is used, an increase in the negative emotions occurs because of sympathetic arousal which intensifies negative emotion, and/or because individuals become distressed by their inability to achieve complete suppression of negative emotions (Campbell-Sills et al., 2006).

In addition, when looking into avoidance behaviors of medical rehabilitation patients it was shown that the more that attempts were made to avoid unwanted emotions or events, the less satisfied individuals felt with their life (Kortte, Veiel, Batten, & Wegener, 2009). A person who

has difficulty regulating negative emotions may be having difficulty accepting their emotions and instead may try to ignore them, making it difficult for him or her to remain in the present. Most of the current research is looking into attempts at avoiding negative emotions but fails to look into the person's overall level of negative affect and how aware and attentive they are to these emotions. Further research is needed to look into how level of negative mood might relate to the ability to regulate emotions and how an ability to regulate emotions might be related to an awareness and acceptance of the present.

Regulation of Positive Emotions

As noted above, positive emotions are not always seen as favorable, and individuals may make attempts to suppress positive emotions if they perceive them to be unfavorable (Langston, 1994). Langston (1994) asked undergraduate students in a sorority to monitor their mood level and also their expressivity in a daily diary for 15 days. Initial and outcome questionnaires were used to assess each individual's life satisfaction and stress level; it was found that those individuals who made expressive responses to positive events had higher positive mood than those who simply ignored the positive event or were only slightly expressive (Langston, 1994). It appears that acknowledgement of positive emotions is related to higher levels of positive affect, whereas ignoring or only slightly acknowledging positive feelings is related to lower levels of positive affect.

Wood, Heimpel, & Michela, (2003) conducted a questionnaire study of the affect of introductory psychology students. They found that the more attempts made to lessen negative affect and savor positive affect, the less one responds to positive affect with dampening and joy killing (Wood et al., 2003). This suggests that the ability to regulate emotions relates to less negative affect and higher positive affect. However, this study does not look into the relationship

that positive and negative affect have with level of mindfulness, and in addition how an ability to regulate emotions is related to mindfulness level.

Positive emotions may be dampened based on one's view of themselves. Wood and colleagues (2003) asked participants with high and low self esteem (as indicated by a self-esteem measure) to think of a time when they felt good about themselves and to describe their feelings in terms of their desire to enhance or dampen these positive emotions. Participants also reported their level of affect at the time of the event and when the event occurred (Wood et al., 2006). Participants then reported back to the study one day later and affect levels were reported (Wood et al., 2006). It was found that those with higher levels of dampening or avoidance showed lower levels of positive mood during second day measures than those who had lower levels of dampening or avoidance (Wood et al., 2006). In addition, attempts to reduce positive mood were more likely to occur in participants with low self-esteem than in participants with high self esteem (Wood et al., 2006).

Dampening is a common term used when referring to the reduction of positive mood. However, dampening may be similar to the use of suppression. Suppression has been described as the exclusion of unacceptable emotions (Campbell-Sills et al., 2006), while dampening has been described as the tendency to reduce feelings of joy and excitement (Wood et al., 2006). In order to determine the possible differences in the reduction of negative and positive moods, it may be useful to look at how the skills used in regulating emotions may relate to both positive and negative mood.

When attempts are made to avoid positive emotions through dampening, suppressing, or eliminating certain feelings, the individual is not actually aware and accepting of the emotions that they are experiencing, and in effect positive mood is reduced. The limited research on

positive emotions tends to focus on awareness and acceptance of positive moods. It would be useful to look into how attempts to avoid negative emotions might relate to positive and negative affect, and specifically how an ability to regulate emotions might relate to mindfulness level.

The present study

Mindfulness has been defined as an active process of being aware, observing, and attending to the field of thoughts, feelings, and sensations from moment to moment, through the regulation of attention (Bishop et al, 2004). Previous studies have found that mindfulness relates to and predicts more positive well-being and less cognitive and emotional disturbances (Brown & Ryan, 2003). In contrast, avoidance efforts may increase negative affect (Campbell-Sills et al., 2006) and decrease positive affect (Wood et al., 2003). Given these findings, it is time to examine how attempts to regulate emotions as well as feelings of positive and negative affect, might relate to level of mindfulness. By understanding this relationship we can better understand how awareness in the moment might relate to an ability to reduce negative moods.

In addition, in order for us to better understand how mindfulness may affect or be affected by emotion regulation strategies, we need to understand how other factors such as positive and negative mood might be related to awareness and acceptance of the moment. By better understanding the role that mindfulness has with mood and regulation strategies we can begin to understand the potential benefit that mindfulness plays in regard to emotional state. Mindfulness has been shown to be related to an individual's ability to regulate emotions, as well as less extreme emotional experiences and higher positive affect (Arch & Craske, 2006; Brown & Ryan, 2003). The research on negative emotions tends to focus on the negative impacts that suppression has on negative mood, but does not explain how one time self-report indicators of emotion regulation strategies as a whole might relate to both positive and negative mood. After

all, having the ability to handle negative events in ways that reduce distress does not guarantee one will experience positive events in ways that promote well-being (Bryant, 2003). It is necessary to examine self-report indicators of positive and negative mood as well as self-reports of mindfulness and emotion regulation.

In the present study, we examined how mindfulness relates to a person's positive and negative mood, and difficulties in regulating emotions. Please refer to Figure 1 for a more detailed outline of the hypothesized relationships. Based on findings from previous research, it was anticipated that the relationship between mindfulness and positive affect would be non-significant and the relationship between mindfulness and negative affect would be non-significant. In addition, we expected mindfulness to be negatively related to difficulties in regulating emotions. The relationship between difficulties in regulating emotions, positive affect, and negative affect were also examined. It was hypothesized that higher levels of negative affect would be related to more difficulties in regulating emotions and higher levels of positive affect would be related to less difficulties in emotion regulation.

Figure 1. Expected model.

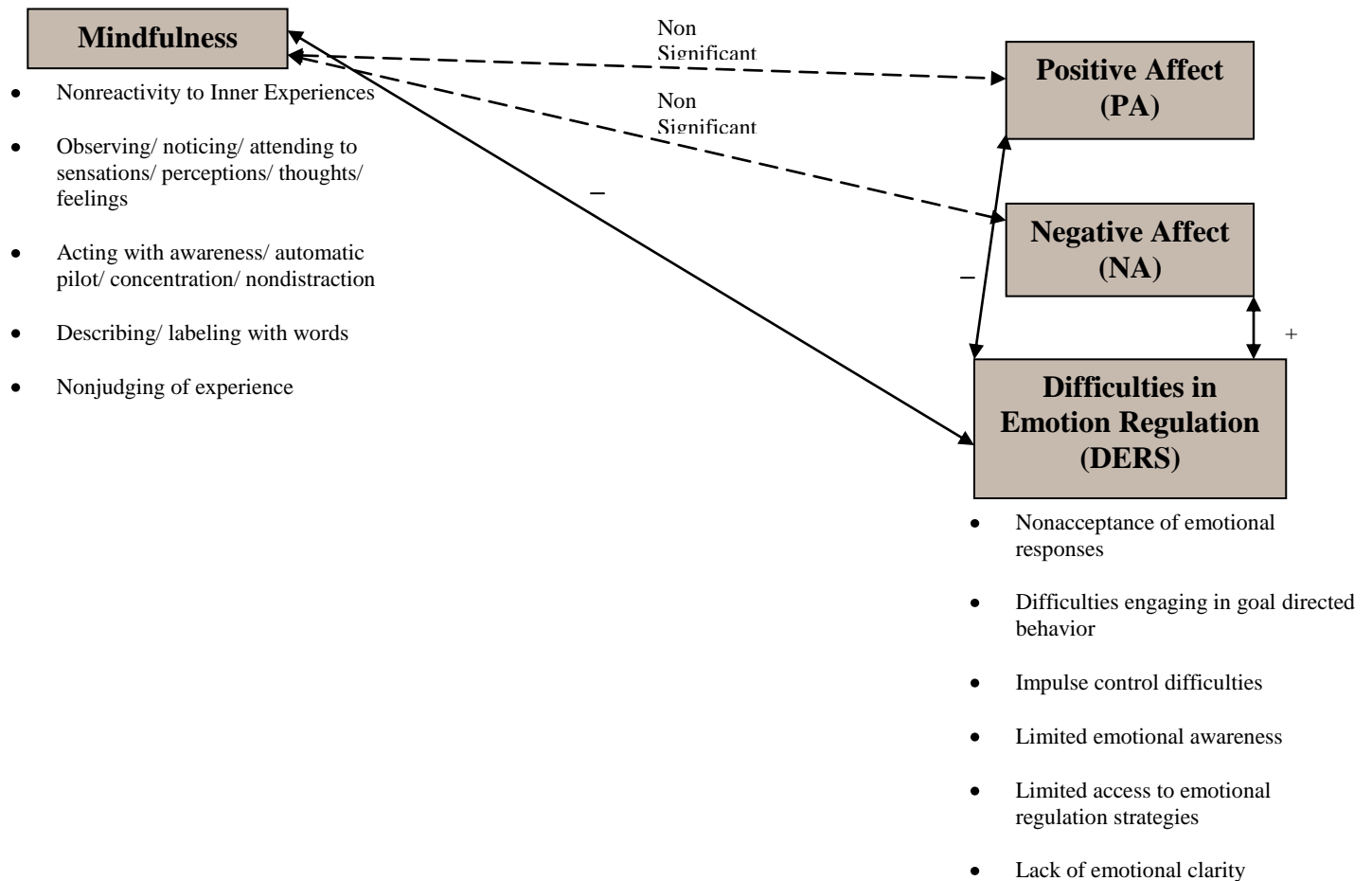


Figure 1. The figure above shows the expected relationships between Mindfulness, Difficulties in Regulating Emotions, and Positive and Negative Affect.

Method

Participants

The data described in this paper were part of a larger data set including measurements of savoring beliefs, measured by the Savoring Beliefs Inventory (Bryant, 2003), and life satisfaction, measured by the Satisfaction with Life Scale (Diener, 1985). Participants completed all questionnaires (see Appendix A), but information from the Savoring Beliefs Inventory and Satisfaction with Life Scale was not used in the present analyses. Participants were 149 undergraduate students enrolled in Psychology courses. Based on individual instructor policies, some participants were given extra credit for their participation.

Of the participants, 53 were male and 96 were female. The mean age was 19.88, with a range of 18-31 years. Based on self-report, the ethnicity of the sample was as follows: 85.2% of participants described themselves as being European American, 6% as being African American, 3.4% as being Hispanic, 3.4% as being Asian American or Pacific Islander, and .7% as being Native American. Participants reported status of mainly upper middle class, with 37.3% reporting a family income of over \$70,000 a year and 31% reporting a family income between \$41,000 and \$70,000 a year.

We were interested in the familiarity of our subjects with meditation techniques because we wanted to understand how meditation understanding might relate to mindfulness levels. Therefore, we asked participants about their interest in meditation and their previous engagement in meditation practices. With regard to interest in meditation, 40.9% of participants reported that they were interested in meditation but have not yet learned about meditation, 32.2% said that they were not interested in meditation, and 26.8% said that they were interested in meditation and have read or otherwise learned about meditation. We also asked about the amount of

experience that participants have had with meditation: 47% reported that they had never engaged in a meditation practice, 45.6% reported engaging in a meditation practice in the past, but not currently, 4.7% reported that they were currently engaged in a meditation practice less than twice each week, and 2.7% reported that they were currently engaged in a regular meditation technique practice at least twice each week.

Materials

The Five Factor Mindfulness Questionnaire (FFMQ; Baer et al., 2006) is a 39-item questionnaire used to measure levels of mindfulness on five facets. The first facet is nonreactivity to inner experience (NONREACTIVITY), an item measuring this is: “I perceive my feelings and emotions without having to react to them.” The second facet is observing, noticing, attending to sensations, perceptions, thoughts, and feelings (OBSERVE), an item measuring this is: “I pay attention to sensations, such as the wind in my hair or sun on my face.” The third facet is acting with awareness, automatic pilot, concentration, and nondistractedness (AWARENESS), an item measuring this is: “When I do things, my mind wanders off and I’m easily distracted.” The fourth facet is describing or labeling with words (DESCRIBE), an item measuring this is: “I’m good at finding words to describe my feelings”. The fifth facet is nonjudging of experience (NONJUDGE), an item measuring this is: “I criticize myself for having irrational or inappropriate emotions.” Participants indicate their agreement with the items on a 5-point Likert scale ranging from 1 = Never to 5 = Always. Based on previous studies, the FFMQ has been reported to have good internal consistency ($\alpha = .96$) and all facets except for OBSERVE and DESCRIBE have been found to be significantly negatively correlated with the Brief Symptom Inventory, indicating that higher mindfulness level relates to lower psychological symptoms (Baer et al., 2006).

The Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004) is a 36-item scale that measures levels of emotional regulation on six facets. The first is nonacceptance of emotional responses (NONACCEPTANCE), an item measuring this is: “When I’m upset, I feel guilty for feeling that way.” The second facet is difficulties engaging in goal-directed behavior (GOALS), an item measuring this is: “When I’m upset, I have difficulty concentrating.” The third facet is impulse control difficulties (IMPULSE), an item measuring this is: “When I’m upset, I lose control over my behaviors.” The fourth facet is lack of emotional awareness (AWARENESS), an item measuring this is: “When I’m upset, I acknowledge my emotions.” The fifth facet is limited access to emotion regulation strategies (STRATEGIES), an item measuring this is: “When I’m upset, it takes me a long time to feel better.” The sixth facet is lack of emotional clarity (CLARITY), an item measuring this is: “I have no idea how I am feeling.” Participants rate their use of the emotion regulation strategies on a Likert scale ranging from 1 = Almost Never to 5 = Almost Always. The DERS has been reported to have good internal consistency ($\alpha = .93$) and was significantly positively correlated with the Negative Mood Regulation Scale (Gratz, 2004).

The Positive Affect Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1998) is a 20-item scale which includes single word statements asking the participant to read the word and then rate it according to the extent to which they have felt the way the word describes on the day they were completing the scale. An item measuring positive affect (PA) is: Enthusiastic. An item measuring negative affect (NA) is: Distressed. Participants rate the emotion words on a 5 point scale ranging from 1 = very slightly to 5 = extremely. Watson and colleagues (1998) developed this scale to assess the individual’s subjective reports of positive and negative mood. The internal consistency of PA and NA is low, indicating quasi-independence between the two

scales, it has good reliability ($\alpha = .90$ for PA and $\alpha = .84 - .87$ for NA) and test-retest reliability is moderate (.45 - .71) (Watson et al., 1998). The PANAS scale was significantly related to the Hopkins Symptom Checklist, a measure of general distress and dysfunction, the Beck Depression Inventory, and State Anxiety Scale; positive affect was significantly negatively related to each of these scales while negative affect was significantly positively related to each scale. (Watson et al., 1998).

Procedure

Participants were recruited from undergraduate classrooms. Some professors offered extra credit for participation. All participants who volunteered were allowed to participate. The researcher distributed binders containing questionnaires and scantrons for response recording. Informed consent was obtained from all participants. Instructions were given in a group setting and participants individually completed the questionnaires. Most participants completed the questionnaire in twenty minutes. After questionnaires were completed participants were asked to bring their red binders to the researcher. All were given a certificate of participation which could be used to obtain extra credit and a debriefing statement.

Results

Of the 149 participants on whom data was collected, one participant did not finish the PANAS scale and for that reason this data was not included in any analysis that included the PANAS scale. The Pearson Correlation Coefficient and the Pearson Partial Correlation Coefficient were used to analyze all of the relationships between the variables. Please refer to Table 1 for the means and standard deviation from each facet. Please see Figure 2 for a more detailed model of the overall results of the study.

Table 1.

Mean and Standard Deviation of Each Facet

Scale	Facet	Mean	Standard Deviation
<u>FFMQ</u>	OBSERVE	3.355	.600
	DESCRIBE	3.579	.764
	AWARENESS	3.248	.640
	NONJUDGE	3.406	.805
	NONREACT	3.031	.551
<u>DERS</u>	NONACCEPTANCE	2.011	.814
	GOALS	2.971	.966
	AWARENESS	2.335	.685
	IMPULSE	1.734	.703
	STRATEGIES	1.928	.706
	CLARITY	2.058	.659
<u>PANAS</u>	PA	3.008	.780
	NA	1.791	.66

Note: FFMQ = Five Facet Mindfulness Questionnaire, DERS = Difficulties in Emotion

Regulation Scale, PANAS = Positive Affect Negative Affect Scale

Internal Correlation of Mindfulness Facets

We assessed the intercorrelation of the FFMQ facets. Correlations found between each facet of the FFMQ can be found in Table 2. Our findings differed from Baer and colleagues (2006) because we did not find that each of the items were correlated with one another. The only item that was shown to be significantly correlated with each of the facets was DESCRIBE.

Table 2.

Intercorrelation of FFMQ facets

DERS	FFMQ				
	NONREACT	OBSERVE	AWARENESS	DESCRIBE	NONJUDGE
NONREACT	1	.248 (.002)**	.156 (.059)	.179 (.029)*	.159 (.054)
OBSERVE	.248 (.002)**	1	-.089 (.281)	.189 (.021)*	-.132 (.110)
AWARENESS	.156 (.059)	-.089 (.281)	1	.280 (.001)**	.375 (.000)**
DESCRIBE	.179 (.029)*	.189 (.021)*	.280 (.001)**	1	.309 (.000)**
NONJUDGE	.159 (.054)	-.132 (.110)	.375 (.000)**	.309 (.000)**	1

Note. Pearson correlations are listed with significance levels in parentheses. FFMQ = Five Facet Mindfulness Questionnaire

Intercorrelation of Emotion Regulation Facets

Next we assessed the intercorrelation of the emotion regulation facets. (Correlation coefficients can be found in Table 3). It was found that each of the facets of the DERS were correlated with one another except for the facet of AWARENESS which did not show significant relationships with GOALS, IMPULSE, or STRATEGIES.

Table 3.

Intercorrelation of DERS facets

	<u>DERS</u>					
	NONACCEPT	GOALS	IMPULSE	AWARENESS	STRATEGIES	CLARITY
NONACCEPT	1	.331 (.000)**	.492 (.000)**	.283 (.001)**	.546 (.000)**	.445 (.000)**
GOALS	.331 (.000)**	1	.405 (.000)**	-.069 (.403)	.542 (.000)**	.319 (.000)**
IMPULSE	.492 (.000)**	.405 (.000)**	1	.143 (.085)	.639 (.000)**	.352 (.000)**
AWARENESS	.546 (.000)**	.542 (.000)**	.639 (.000)**	1	.126 (.129)	.474 (.000)**
STRATEGIES	.546 (.000)**	.542 (.000)**	.639 (.000)**	.126 (.129)	1	.468 (.000)**
CLARITY	.445 (.000)**	.319 (.000)**	.352 (.000)**	.474 (.000)**	.468 (.000)**	1

Note. Pearson correlations are listed with significance levels in parentheses. DERS = Difficulties in Emotion Regulation Scale, NONACCEPT = NONACCEPTANCE.

Intercorrelation of Positive and Negative Mood

The intercorrelation of PA and NA were assessed. (Correlation coefficients can be found in Table 4). Consistent with past findings, PA and NA were shown to be significantly related to one another but did not correlate strongly.

Table 4.

Intercorrelation of PANAS

	<u>PANAS</u>	
	PA	NA
PA	1	-.216 (.008)**
NA	-.216 (.008)**	1

Note. Pearson correlations are listed with significance levels in parentheses. PANAS = Positive Affect Negative Affect Scale.

Mindfulness Relation to Emotion Regulation

In the first hypothesis it was predicted that all factors of mindfulness would be negatively related to difficulties in the ability to regulate emotions. This hypothesis was partially supported. (Correlation coefficients may be found in Table 5). The factor of NONJUDGE supports our hypotheses; it was found that NONJUDGE was negatively related to each factor of the DERS. However, contrary to expectations, OBSERVE was not correlated in the expected direction with any of the facets except for AWARENESS, and its relationship with AWARENESS fits our hypothesis by showing that as OBSERVE increases difficulties in AWARENESS decrease. The relationships of FFMQ factors or DESCRIBE, NONREACT, and AWARENESS each show the expected relationships to emotion regulation; however these correlations are not shown to be significant across all of the individual emotion regulation factors.

Table 5.

Correlation between FFMQ and DERS levels

DERS	<u>FFMQ</u>				
	NONREACT	OBSERVE	AWARENESS	DESCRIBE	NONJUDGE
NONACCEPTANCE	-.131 (.110)	.024 (.767)	-.419 (.000)**	-.310 (.000)**	-.603 (.000)**
GOALS	-.439 (.000)**	-.144 (.079)	-.385 (.000)**	-.113 (.171)	-.258 (.001)**
IMPULSE	-.323 (.000)**	.021 (.801)	-.272 (.001)**	-.160 (.052)	-.366 (.000)**
AWARENESS	-.113 (.171)	-.210 (.010)*	-.142 (.085)	-.487 (.000)**	-.273 (.001)**
STRATEGIES	-.390 (.000)**	-.131 (.111)	-.407 (.000)**	-.302 (.000)**	-.489 (.000)**
CLARITY	-.303 (.000)**	-.122 (.138)	-.309 (.000)**	-.540 (.000)**	-.399 (.000)**

Note. Pearson correlations are listed with significance levels in parentheses. FFMQ = Five Facet Mindfulness Questionnaire, DERS = Difficulties in Emotion Regulation Scale

Relationship Between Emotion Regulation and Positive and Negative Affect

Difficulty in regulating emotions was predicted to be positively related to NA and negatively related to PA. This hypothesis was supported. (Correlation coefficients can be found in Table 6). NONACCEPTANCE, GOALS, STRATEGIES, and CLARITY were each shown to be positively related to NA and negatively related to PA. In contrast, while higher AWARENESS was related to higher PA, AWARENESS was not significantly related to NA.

Table 6.

Correlations between DERS and PANAS levels

	<u>DERS</u>				
	PANAS NONACCEPT	GOALS	IMPULSE	AWARENESS	STRATEGIES CLARITY
PA	-.175 (.033)*	-.184 (.025)*	-.216 (.008)**	-.224 (.006)**	-.380 (.000)**
NA	.370 (.000)**	.393 (.000)**	.415 (.000)**	.051 (.538)	.462 (.000)**

Note. Pearson correlations are listed with significance levels in parentheses. DERS = Difficulties in Emotion Regulation Scale, NONACCEPT = NONACCEPTANCE, PANAS = Positive Affect Negative Affect Scale.

Mindfulness Relation to Positive and Negative Affect

It was expected that mindfulness would not be significantly correlated with either PA or NA; correlation coefficients can be found in Table 7. However, the only factor that supported our hypothesis was the nonsignificant relationship between OBSERVE and PA and NA. The results tended to support the notion that with higher levels of mindfulness, one also has higher levels of PA and lower levels of NA. This was shown through, DESCRIBE, NONJUDGE, NONREACT, and AWARENESS, where each of these factors were positively related to PA and negatively related to NA.

Table 7.

Correlation between FFMQ and PANAS levels

	<u>FFMQ</u>				
	PANAS NONREACT	OBERVE	AWARENESS	DESCRIBE	NONJUDGE
PA	.252 (.000)**	.075 (.367)	.294 (.001)**	.307 (.000)**	.376 (.000)**
NA	-.247 (.002)**	-.118 (.154)	-.382 (.000)**	-.197 (.016)*	-.426 (.000)**

Note. Pearson correlations are listed with significance levels in parentheses. FFMQ = Five Facet Mindfulness Questionnaire, PANAS = Positive Affect Negative Affect Scale

Partial Correlations of the DERS

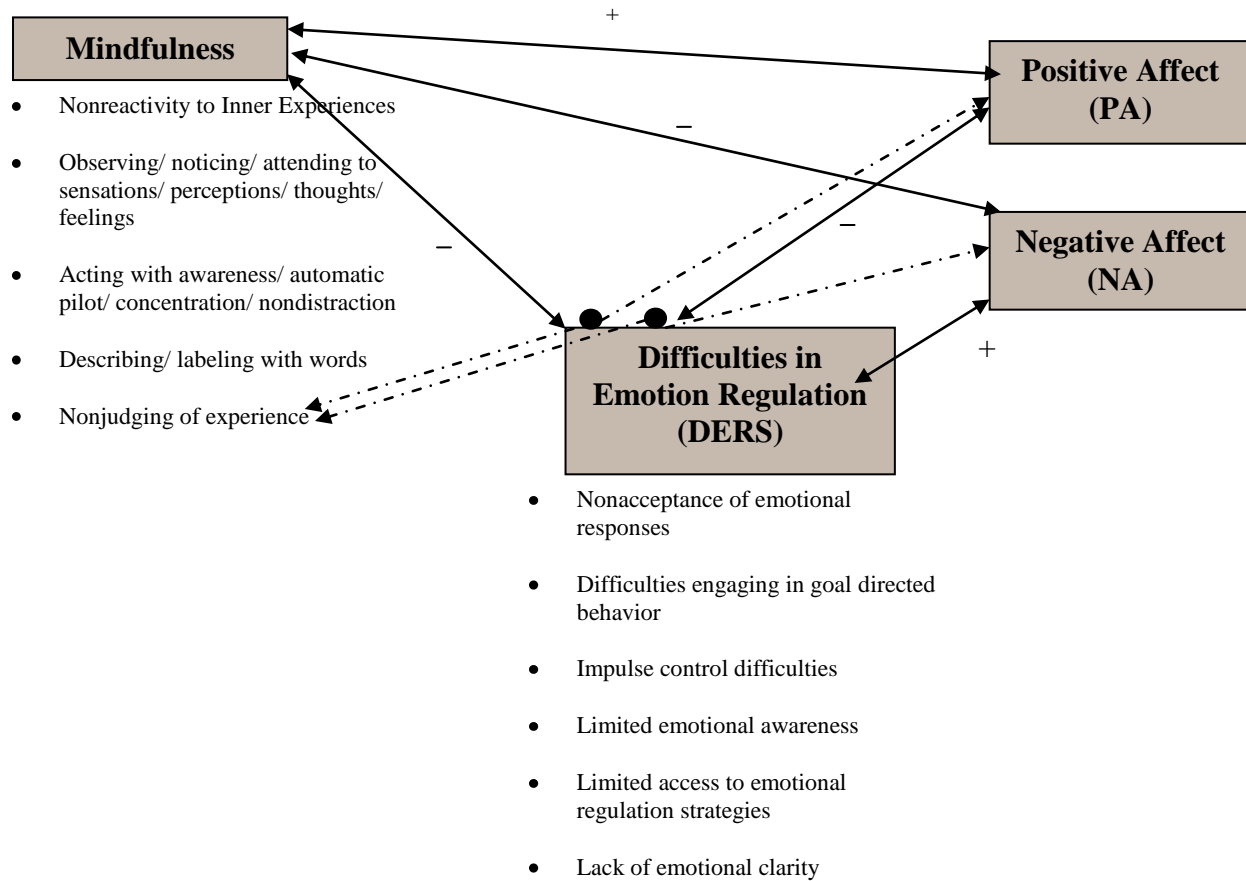
Contrary to predictions, all factors of the FFMQ, except for OBSERVE, were shown to be significantly positively related to PA and significantly negatively related to NA. Therefore, we decided to look into how emotion regulation might be mediating this relationship. We used the FFMQ factor of NONJUDGE because this was the only factor of the FFMQ that was significantly related to all factors of the DERS.

We examined the relationship between NONJUDGE and PA, and controlled for each individual factor of the DERS. It was found that while all DERS items appeared to be mediating the relationship, STRATEGIES, CLARITY, AWARENESS, and GOALS were mediating the relationship most strongly. Controlling for STRATEGIES, CLARITY, AWARENESS, and GOALS, reduced the strength of the correlation and made it non significant as shown in the initial correlation of ($r(148) = .376, p = .000$) to ($r(148) = .184, p = .028$).

Next, we looked into the relationship between NONJUDGE and NA, and controlled for each individual factor of the DERS. It was found that all DERS factors were mediating the relationship, except for AWARENESS. However, STRATEGIES, NONACCEPTANCE, and LACK OF CLARITY were the factors mediating the relationship between NONJUDGE and NA

most strongly. Controlling for STRATEGIES, NONACCEPTANCE, and CLARITY, reduced the strength of the correlation and made it non significant as shown in the initial correlation of ($r(148) = -.426, p = .000$) to ($r(148) = -.196, p = .018$).

Figure 2. Confirmation of the model



● = Mediating the relationship found

Figure 2. The figure above shows the relationships found between Mindfulness, Difficulties in Regulating Emotions, and Positive and Negative Affect.

Discussion

This study was intended to examine the relationships between mindfulness, emotion regulation, and positive and negative affect. Contrary to our predictions, it appears that an ability to be nonjudging and aware of the present is related to greater positive affect and lower negative affect. However, because the ability to regulate emotions appears to be mediating this relationship, it may be that being nonjudging of the moment also reflects an ability to regulate emotions, suggesting that as one is better able to acknowledge their emotions without making judgments on them he or she may be less likely to use undesirable forms of emotion regulation such as avoidance and suppression. As predicted, our results suggest that the more aware and accepting one is of experiences, the better able he or she is to regulate emotions. In addition, it was found that difficulty in regulating negative emotions is related to higher negative affect and less positive affect.

Mindfulness and Positive and Negative Affect

Our initial results did not support the hypothesis that mindfulness is related to a more neutral balance of mood. However, the mindfulness component of observing and noticing sensations did show the expected nonsignificant relationship with positive and negative affect. In the initial validation testing of the FFMQ, it was found that an ability to be observing and attending to sensations did not show the expected relationship with other variables (Baer et al., 2006). It was suggested that this lack of relationship with other variables may be largely due to one's meditation experience, whereas meditation experience is not as influential with the other four facets (Baer et al., 2006). Therefore, the non existing relationship between observing of sensations in the moment and positive and negative affect may actually be due to the lack of meditation experience of our participants.

Contrary to past studies by Brown and Ryan (2003) who found that mindfulness is related to a more neutral mood overall along with a higher positive mood over time, our study found that most facets of mindfulness were related to greater positive affect and less negative affect. However, differences may be due to Brown and Ryan (2003) monitoring mindfulness and mood on a day-to-day self-reporting system, while our study asked participants to rate the extent to which they had felt positive and negative moods throughout that one day and only assessed mindfulness at one point in time. It may be that over time those who are more mindful have more neutral moods, but in any particular moment mindful individuals may have more positive affect because they are attending to their thoughts and feelings and fully experiencing them in a nonreactive way. It is also possible that emotion regulation may be mediating this relationship, because after controlling for emotion regulation the ability to be nonjudging was no longer as strongly related to positive and negative affect. Although our findings were only a one-time in assessment of mood, it may be that emotion regulation is playing a role in the relationship found between nonjudging and positive and negative mood.

Through acting in a mindful way by accepting and not judging current experiences, one may actually be reducing their need to regulate emotions. Our study defined mindfulness as a set of skills that are able to be learned and practiced in order to reduce psychological symptoms and increase health and well-being (Baer et al., 2006). This suggests that reports of mindfulness level might actually be measuring a need to regulate emotions. As previously discussed, as one is more accepting and nonjudging of his or her relationships, attempts to suppress or avoid unwanted moods are reduced (Campbell-Sills et al., 2006). Therefore, a mindful stance of choosing not to judge or alter experiences may be measuring a form of effective emotion regulation. When an individual chooses to be aware of and not judge his or her emotions, this is

seen as an effective form of regulation because no attempts are being made to alter experiences, and instead the individual is accepting all emotions that he or she is feeling (Campbell-Sills et al., 2006).

Previous researchers have found that perceiving emotions as unacceptable appears to mediate the relationship between negative emotional intensity and the use of suppression (Campbell-Sills et al., 2006). While the present study did not specifically measure attempts at suppression, we did focus on how limited use of emotion regulation strategies and nonacceptance relate to both mood and mindfulness. Although different from suppression, it can be argued that if one is not willing to accept his or her emotions and believes that there is little that can be done to regulate emotions effectively, suppression may be used as a way of regulating emotions. Therefore, someone who has difficulties accepting and regulating their emotions may be less likely to be nonjudging of their current state, and in addition show more negative mood. Whereas perceptions of positive mood may be seen as more favorable (Langston, 1994), and our ability to be accepting of these positive emotions might be due to less attempts at suppression and enhanced acceptance and awareness.

It has been suggested that an increased awareness and acceptance of emotions works to make individuals more tolerant of emotional experiences, possibly increasing positive affect and reducing negative affect (Arch & Craske, 2006). We found that as an individual is more aware and less judging in the moment, fewer attempts may be made to alter mood. An ability to be nonjudging of current situations may in effect be a way of regulating emotions which may be the reason why an ability to be nonjudging was initially showing a relationship with increased level of positive affect and a decreased level of negative affect. While it appears that emotion regulation may be playing a mediating role between an ability to be nonjudging and mood, we

must also remember that these were self-report assessments of mindfulness, emotion regulation ability, and mood levels of that particular day. Future studies are needed to look further into the role of emotion regulation and how it may be related to mindfulness capacity by not only looking at one time self-report data, but by looking at differences in day-to-day self-report measurements of mindfulness, emotion regulation, and mood.

Mindfulness and Emotion Regulation

As expected, most facets of mindfulness were significantly negatively related to difficulties in regulating emotions. However, the mindfulness component of observing and noticing sensations did not relate to any of the emotion regulation items in the anticipated direction. As discussed earlier, this lack of relationship may be related to the very limited level of mindfulness experience in our participants. Therefore, we may not be seeing the expected relationships with observing and other factors because the group that we studied did not have a great deal of meditation experience.

While our participants did not have a great deal of mindfulness and meditation experience, it is interesting that there were still reports of mindfulness by participants. The self-report data suggests that mindfulness may not necessarily be a state of mind that needs to be learned and practiced in order to be utilized. A capacity to be mindful has been said to differ in individuals as a willingness to be aware and sustain attention to the current moment (Brown & Ryan, 2003). However, those who utilize mindfulness techniques more frequently may benefit from the training as a way of becoming more aware of emotions by learning to live in the moment (Kabat-Zinn, 1990). Therefore, rather than mindfulness being a state of being that is learned, it may be that mindfulness is a level of consciousness that can be displayed by

individuals without practice, but the utilization of mindfulness may be strengthened through such practice as meditation.

Our results showed that an awareness of the current moment was related to a better ability to regulate emotions. Similar findings were reported by Rausch and colleagues (2006) who found that mindfulness techniques led participants to be more accepting and able to let go of thoughts and emotions than those not previously trained in mindfulness techniques. Our results also support past findings that suggest that individuals who are more open and accepting of certain experiences tend to have less mood disturbance because of their ability to regulate emotions (Brown & Ryan, 2003).

While our results showed that greater self-reported mindfulness appears to be related to less difficulty in regulating emotions, these relationships were not completely consistent between each factor. One of the relationships most notable for its nonsignificance is the factor of mindfulness which is measuring an awareness of the moment, and its nonsignificant relationship with the difficulties in emotion regulation scale item measuring a lack of emotional awareness. Each of these items are titled “awareness”, and it might be assumed that they would each be measuring a similar ability to be aware, with the mindfulness factor measuring the ability to act with awareness and nondistracted in the moment and the emotion regulation factor measuring a tendency to attend to and acknowledge emotions (Baer et al., 2006; Gratz & Roemer, 2004).

The items of the facet of awareness on the DERS scale do not seem to be focusing on an awareness of the moment, but rather may be measuring the way in which the individual is inattentive to emotional responses. Gratz and Roemer (2003) state that the facet measuring awareness was most highly negatively correlated with a scale measuring emotional expressivity, suggesting that awareness may be measuring an ability to be expressive and attentive to emotions

rather than an awareness of emotional experiences. As mindfulness is defined in this study as a set of skills encompassing an ability to be aware and accepting of the moment (Baer et al., 2003), expressiveness of emotions may not be tapping into a form of emotion regulation that would be expected to be related to being in the moment. In addition, when assessing the intercorrelations of the emotion regulation scale, the facet measuring awareness was the only facet that was not significantly correlated with each of the emotion regulation facets. Therefore, the title of awareness may not be an appropriate title for these items on the DERS because the items appear to be assessing something other than just an awareness of emotions. This may explain the nonsignificant relationship found between an inattention to emotional responses and an ability to act with awareness through nondistractedness.

Although the majority of our findings were as predicted, our study focused on the regulation of negative emotions, rather than the regulation of positive emotions. While we did not look into the regulation of positive emotions, our larger study did encompass a scale measuring an ability to savor positive emotions, which may relate to an ability to regulate negative mood as well as positive and negative mood level. Future research is needed to look into how attempts at regulating positive moods may be related to acceptance and awareness of the current moment.

Emotion Regulation and Positive and Negative Affect

Consistent with past research, it appears that the difficulties in regulating emotions are related to greater experience of negative mood and less experience of positive mood (Wood et al., 2003). In experimental studies it has been found that greater attempts to suppress emotions, actually lead to an increase in negative emotions (Campbell-Sills et al., 2006). As previously discussed, in our assessment of difficulties in regulating negative emotions, we found that a

lower acceptance level and a lack of emotion regulation strategies were assessing regulation strategies similar to suppression, and found that these forms of difficulties in regulating emotions were related to more negative mood and less positive mood.

Consistent with past results, it appears that an ability to accept emotions without attempting to alter them is related to lower negative affect and higher positive affect (Campbell-Sills et al., 2006). However, there was one factor of emotion regulation that did not show the expected relationship to negative affect. It appears that the ability to be aware of emotions is not related to level of negative affect. As indicated earlier when discussing the lack of relationship between an inattention to emotional responses and an ability to act with awareness through nondistractedness, it may be that the DERS factor of awareness is not tapping into an actual awareness of emotions, but rather is focusing on the person's ability to express emotions and display emotions. Therefore, instead of showing that awareness of emotions is related to positive mood and that awareness of emotions is not related to negative moods, our findings may be showing that higher expressivity of emotions is related to higher positive mood but expressivity is not related to negative moods.

If the factor said to be measuring awareness of emotions is actually measuring expressivity of emotions, our findings are consistent with previous findings that have shown that expressivity is related to positive affect but not to negative affect. Kleinke, Peterson, and Rutledge (1998) used participants from undergraduate courses to look at pictures showing people depicting both positive and negative emotions, and positive and negative mood were reported both before and immediately following the experiment. Participants were assigned to one of three groups; participants in the expressivity group were instructed to emulate the emotion in the picture shown, participants in the expressivity-mirror group were instructed to emulate the

emotion in the picture shown and were allowed to use a mirror to match their expression, and participants in the control group were given instructions to show a neutral expression when shown the pictures (Kleinke et al., 1998). The study showed that participants engaging in positive expressions reported higher positive mood changes than the control group, and when participants engaged in negative facial expressions participants reported lower positive mood than participants in the control group (Kleinke et al., 1998). However, similar to our findings, results did not show any significant relationship with negative affect and expressivity (Kleinke et al., 1998)

While some previous researchers have examined the regulation of positive emotions, and have found that regulating positive emotions leads to more negative affect and less positive affect (Wood et al., 2006), the majority of past results focus on the regulation of negative mood. These studies focusing on the regulation of negative mood suggest that the use of suppression and avoidance are related to an increase in negative affect (Campbell-Sills et al., 2006; Korte et al., 2009, Rausch, et al., 2006). However, few studies actually look into the regulation of both positive and negative affect, and how regulating positive and negative affect relates to level of mood. Our results show that difficulties in regulating negative emotions are related to more negative affect and less positive affect. Future research needs to focus on the relationship that the regulation of positive emotions might have with positive and negative affect.

Limitations

Limitations of the present study include the relatively homogenous sample of participants. All participants were undergraduate students within a similar age group, of similar ethnicity, and of similar social economic standing, and their results may not be able to generalize to a broader population. The study also involved self-report questionnaire data which were

examined via correlational analyses, so any inferences of causation are not possible. Bias due to self-report is also possible, particularly with regard to reports of emotion and its regulation. In addition, the study lacked a measurement which looked into an ability to regulate positive emotions, which limits our ability to understand how the regulation of emotions relates to mood and mindfulness.

Conclusions

Our results show that individuals who are more accepting and aware of their experiences are less likely to make attempts at regulating negative emotions. In addition, an ability to regulate emotions is related to a higher positive affect and a lower negative affect. While we found that mindfulness may be related to a higher level of positive affect and lower level of negative affect, it is noteworthy that an ability to regulate emotions might be mediating this relationship. In addition, individuals not familiar with mindfulness trainings reported feelings of mindfulness which may suggest that mindfulness is a state of mind that does not necessarily need to be learned. Further research should focus on differences found in the role of mindfulness amongst males and females. In addition, further research is needed to fully understand the role that emotion regulation is playing in the relationship between mindfulness and positive and negative affect, and emotion regulation should be looked at not only for the regulation of negative mood but also the regulation of positive mood.

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Appendix A

Research Study

This research study you are participating in will take about 20-40 minutes.

Through this project we want to examine how personality characteristics and the tendency to worry are related to how familiar one is with themselves.

Today you will be asked to respond to about 137 questions which will be handed out by the researcher. During your participation period, I will be available for any questions you might have.

***** Read These Instructions BEFORE You Begin Responding To The Questionnaires!!!**

1. Use only a #2 pencil.
2. After deciding on your response to a given item on the questionnaire, fill in the circle on the scantron score sheet for the letter corresponding to the answer you have chosen. Be sure to fill in the circles completely.

Note: The questionnaires may not be in numerical order. Make sure your answers correspond to the right questions. In addition, there will be some spaces left blank between each of the questionnaires.

3. Put the information requested below in the appropriate corresponding bubbles on the scantron sheet before you begin responding to the questionnaires.
 - a. Your age in the “Special Codes” section.

NOTE: MARK YOUR RESPONSES TO THE FOLLOWING QUESTIONS ON THE ANSWER SHEET, ITEM NUMBERS 1 THROUGH 7.

Background Information

For item #1, please indicate your current class status:

- A. Freshman
- B. Sophomore
- C. Junior
- D. Senior
- E. Other

For item #2, please indicate your ethnic background:

- A. African American
- B. Hispanic
- C. Native American
- D. Asian American or Pacific Islander
- E. European American

For item #3, please indicate your gender:

- A. Male
- B. Female

For item #4, please indicate your current field of study:

- A. College of Business and Economics
- B. College of Arts and Communication
- C. College of Letters and Science
- D. College of Education
- E. Undeclared

For item #5, please indicate the range in which your family's annual income falls:

- A. over \$70,000 a year
- B. \$41,000 - \$70,000 a year
- C. \$31,000 - \$40,000 a year
- D. \$20,000 - \$30,000 a year
- E. under \$20,000 a year

Please continue to the next page.

For item #6, please indicate the highest level of education your **father** completed. Leave blank if not applicable.

- A. Some junior and senior high school but no high school diploma
- B. A high school diploma or the equivalent (e.g., GED)
- C. Some post-secretary courses (college, technical school, etc.)
- D. A bachelor's degree or equivalent
- E. A graduate degree or equivalent

For item #7, please indicate the highest level of education your **mother** completed. Leave blank if not applicable.

- A. Some junior or senior high school but no high school diploma
- B. A high school diploma or the equivalent (e.g., GED)
- C. Some post-secretary courses (college, technical school, etc.)
- D. A bachelor's degree or equivalent
- E. A graduate degree or equivalent

Please continue to the next scale.

NOTE: MARK YOUR RESPONSES TO THE FOLLOWING QUESTIONS ON THE ANSWER SHEET, ITEM NUMBERS 20 – 58.

FFMQ

Using the rating scale below, select the letter that best represents your evaluation of the statements in regard to how well they fit you. Although many of the statements may seem similar, please respond to each statement by indicating the extent to which it is true for you.

A	B	C	D	E
Never or Very Rarely True	Rarely True	Sometimes True	Often Very True	Often Very Often or Always True

- 20) When I'm walking, I deliberately notice the sensations of my body moving.
- 21) I'm good at finding words to describe my feelings.
- 22) I criticize myself for having irrational or inappropriate emotions.
- 23) I perceive my feelings and emotions without having to react to them.
- 24) When I do things, my mind wanders off and I'm easily distracted.
- 25) When I take a shower or bath, I stay alert to the sensations of water on my body.
- 26) I can easily put my beliefs, opinions, and expectations into words.
- 27) I don't pay attention to what I'm doing because I'm daydreaming, worrying, or otherwise distracted.
- 28) I watch my feelings without getting lost in them.
- 29) I tell myself I shouldn't be feeling the way I'm feeling.
- 30) I notice how foods and drinks affect my thoughts, bodily sensations, and emotions.

Please continue to the next page

- 31) It's hard for me to find the words to describe what I'm thinking.
- 32) I am easily distracted.
- 33) I believe some of my thoughts are abnormal or bad and I shouldn't think that way.
- 34) I pay attention to sensations, such as the wind in my hair or sun on my face.
- 35) I have trouble thinking of the right words to express how I feel about things
- 36) I make judgments about whether my thoughts are good or bad.
- 37) I find it difficult to stay focused on what's happening in the present.
- 38) When I have distressing thoughts or images, I "step back" and am aware of the thought or image without getting taken over by it.
- 39) I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing.
- 40) In difficult situations, I can pause without immediately reacting.
- 41) When I have a sensation in my body, it's difficult for me to describe it because I can't find the right words.
- 42) It seems I am "running on automatic" without much awareness of what I'm doing.
- 43) When I have distressing thoughts or images, I feel calm soon after.
- 44) I tell myself that I shouldn't be thinking the way I'm thinking.
- 45) I notice the smells and aromas of things.

Please continue to the next page.

- 46) Even when I'm feeling terribly upset, I can find a way to put it into words.
- 47) I rush through activities without being really attentive to them.
- 48) When I have distressing thoughts or images I am able just to notice them without reacting.
- 49) I think some of my emotions are bad or inappropriate and I shouldn't feel them.
- 50) I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow.
- 51) My natural tendency is to put my experiences into words.
- 52) When I have distressing thoughts or images, I just notice them and let them go.
- 53) I do jobs or tasks automatically without being aware of what I'm doing.
- 54) When I have distressing thoughts or images, I judge myself as good or bad, depending on what the thought/image is about.
- 55) I pay attention to how my emotions affect my thoughts and behavior.
- 56) I can usually describe how I feel at the moment in considerable detail.
- 57) I find myself doing things without paying attention.
- 58) I disapprove of myself when I have irrational ideas.

Please continue to the next scale.

NOTE: MARK YOUR RESPONSES TO THE FOLLOWING QUESTIONS ON THE ANSWER SHEET, ITEM NUMBERS 65 - 100.

DEERS

Using the rating scale below, select the letter that best represents your evaluation of the statements in regard to how well they fit you. Then mark your response on the scantron using the following scale.

A	B	C	D	E
Almost Never	Sometimes	About Half the Time	Most of the Time	Almost Always

- 65) I am clear about my feelings.
- 66) I pay attention to how I feel.
- 67) I experience my emotions as overwhelming and out of control.
- 68) I have no idea how I am feeling.
- 69) I have difficulty making sense out of my feelings.
- 70) I am attentive to my feelings.
- 71) I know exactly how I am feeling.
- 72) I care about what I am feeling.
- 73) I am confused about how I feel.
- 74) When I'm upset, I acknowledge my emotions.
- 75) When I'm upset, I become angry with myself for feeling that way.
- 76) When I'm upset, I become embarrassed for feeling that way.
- 77) When I'm upset, I have difficulty getting work done.
- 78) When I'm upset, I become out of control.
- 79) When I'm upset, I believe that I will remain that way for a long time.

Please continue to the next page.

- 80) When I'm upset, I believe that I'll end up feeling very depressed.
- 81) When I'm upset, I believe that my feelings are valid and important.
- 82) When I'm upset, I have difficulty focusing on other things.
- 83) When I'm upset, I feel out of control.
- 84) When I'm upset, I can still get things done.
- 85) When I'm upset, I feel ashamed with myself for feeling that way.
- 86) When I'm upset, I know that I can find a way to eventually feel better.
- 87) When I'm upset, I feel like I am weak.
- 88) When I'm upset, I feel like I can remain in control of my behaviors.
- 89) When I'm upset, I feel guilty for feeling that way.
- 90) When I'm upset, I have difficulty concentrating.
- 91) When I'm upset, I have difficulty controlling my behaviors.
- 92) When I'm upset, I believe there is nothing I can do to make myself feel better.
- 93) When I'm upset, I become irritated with myself for feeling that way.
- 94) When I'm upset, I start to feel very bad about myself.
- 95) When I'm upset, I believe that wallowing in it is all I can do.
- 96) When I'm upset, I lose control over my behaviors.
- 97) When I'm upset, I have difficulty thinking about anything else.
- 98) When I'm upset, I take time to figure out what I'm really feeling.
- 99) When I'm upset, it takes me a long time to feel better.
- 100) When I'm upset, my emotions feel overwhelming.

Please continue to the next scale.

NOTE: MARK YOUR RESPONSES TO THE FOLLOWING QUESTIONS ON THE ANSWER SHEET, ITEM NUMBERS 110 - 133.

SBI

Using the rating scale below, select the letter that best represents your evaluation of the statements in regard to how well they fit you. Then mark your response on the scantron using the following scale.

A	B	C	D	E
Strongly	Somewhat	Unsure	Somewhat	Strongly
Disagree	Disagree		Agree	Agree

110) Before a good thing happens, I look forward to it in ways that give me pleasure in the present.

111) It's hard for me to hang onto a good feeling for very long.

112) I enjoy looking back on happy times from my past.

113) I don't like to look forward to good times too much before they happen.

114) I know how to make the most of a good time.

115) I don't like to look back at good times too much after they've taken place.

116) I feel a joy of anticipation when I think about upcoming good things.

117) When it comes to enjoying myself, I'm my own "worst enemy".

118) I can make myself feel good by remembering pleasant events from my past.

119) For me, anticipating what upcoming good events will be like is basically a waste of time.

120) When something good happens, I can make my enjoyment of it last longer by thinking or doing certain things.

121) When I reminisce about pleasant memories, I often start to feel sad or disappointed.

122) I can enjoy pleasant events in my mind before they actually occur.

123) I can't seem to capture the joy of happy moments.

Please continue to the next page.

- 124) I like to store memories of fun times that I go through so that I can recall them later.
- 125) It's hard for me to get very excited about fun times before they actually take place.
- 126) I feel fully able to appreciate good things that happen to me.
- 127) I find that thinking about good times from the past is basically a waste of time.
- 128) I can make myself feel good by imagining what a happy time that is about to happen will be like.
- 129) I don't enjoy things as much as I should.
- 130) It's easy for me to rekindle the joy from pleasant memories.
- 131) When I think about a pleasant event before it happens, I often start to feel uncomfortable.
- 132) It's easy for me to enjoy myself when I want to.
- 133) For me, once a fun time is over and gone, it's best not to think about it.

Please continue to the next scale.

NOTE: MARK YOUR RESPONSES TO THE FOLLOWING QUESTIONS ON THE ANSWER SHEET, ITEM NUMBERS 140 - 159.

PANAS

This scale consists of a number of words that describe different feelings and emotions. Read each item and then decide to which extent you have felt this way today. Then mark your response on the scantron using the following scale:

	A	B	C	D	E
	Very Slightly or not at all	a Little	Moderately	Quite a Bit	Extremely
140)	Interested			150)	Irritable
141)	Distressed			151)	Alert
142)	Excited			152)	Ashamed
143)	Upset			153)	Inspired
144)	Strong			154)	Nervous
145)	Guilty			155)	Determined
146)	Scared			156)	Attentive
147)	Hostile			157)	Jittery
148)	Enthusiastic			158)	Active
149)	Proud			159)	Afraid

Please continue to the next scale.

NOTE: MARK YOUR RESPONSES TO THE FOLLOWING QUESTIONS ON THE ANSWER SHEET, ITEM NUMBERS 165 - 170.

SWLS

Using the rating scale below, select the letter that best represents your evaluation of the statements in regard to how well they fit you. Then mark your response on the scantron using the following scale.

A	B	C	D	E
Strongly Disagree	Somewhat Disagree	Unsure	Somewhat Agree	Strongly Agree

- 165) In most ways my life is close to my ideal.
- 166) The conditions of my life are excellent.
- 167) I am satisfied with life.
- 168) So far I have gotten the important things I want in life.
- 169) If I could live my life over, I would change almost nothing.
- 170) Overall I am happy.