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# Decentering increases approach motivation among distressed individuals

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#### ABSTRACT

Decentering is the process of observing one's thoughts from a self-distanced (i.e. third-person) and non-judgmental perspective, and it is clinically known for its anxiolytic and anti-depressive effects. However there is only preliminary evidence relating decentering to improved motivation, and no studies have controlled for changes in affect which can obscure the measurement of motivation (Harmon-Jones, Harmon-Jones, & Price, 2013). In the current investigation, two experiments tested the hypothesis that decentering increases approach motivation, a buoyant state characterized by goal pursuit, independently of changes in affect. In Study 1 (N = 148), decentering was induced using a self-distancing manipulation (i.e. fly-on-the-wall; Kross & Ayduk, 2011), and in Study 2 (N = 143) decentering was induced using brief instructions on applying non-judgmental awareness of thoughts. Following previous research showing that decentering is most effective against negative emotional reactivity for distressed people (Kross & Ayduk, 2009), our hypothesis focused on high trait distress participants. Trait distress was operationalized as the average of standardized distress-related scales (e.g. rumination, depression, uncertainty aversion), and state affect was operationalized using the Felt Uncertainty Scale and the PANAS. Analyses revealed that decentering increased self-reported approach motivation for high trait distress individuals, and that this effect was not mediated by changes in state affect.

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# 1. Introduction

Decentering is the process of observing one's thoughts and feelings from a distanced and separate but at the same time present-focused and non-judgmental stance. Effectively it allows one to "take a step back" and observe thoughts and feelings with a wider, more inclusive and accepting perspective. In particular, many therapeutic modalities emphasize the clinical value of being able to observe negative self-referential information from a decentered perspective (e.g. Bernstein et al., 2015; Sauer & Baer, 2010).

Indeed, multiple experimental studies have shown that self-distancing (e.g. fly-on-the-wall) leads to less physiological and emotional reactivity, less rumination and depressogenic thinking, and more adaptive reconstruals of negative mental events compared to a self-immersed perspective (Ayduk & Kross, 2008; Kross & Ayduk, 2008, 2009). To be clear, self-distancing is a decentered stance wherein individuals "take a step back when thinking about past experiences and reason about them from the perspective of a distanced observer, akin to a fly on the

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<sup>1</sup> Present address: Rotman Research Institute (Baycrest), 3560 Bathurst St, Toronto, Ontario, M6A 2E1, Canada. wall" (Kross & Ayduk, 2011, p. 187). Self-distancing is typically contrasted with self-immersion, which involves visualizing the experience through one's own eyes (i.e. from a first-person perspective) usually resulting in more maladaptive recounting of negative experiences (e.g. rumination; Kross & Ayduk, 2008). As with decentering more generally, self-distancing's open minded and inclusive perspective is thought to reduce the emotional potency of negative mental events and instead enable more insight and emotional closure (Kross & Ayduk, 2008, 2011; Watkins, 2008; Watkins et al., 2007).

Decentering has also been shown to play a major role in enabling the anxiolytic and stress reducing effects of mindfulness based practices (Feldman, Greeson, & Senville, 2010; Hoge et al., 2015; Sauer & Baer, 2010). Non-judgmental awareness, a major functional component of mindfulness, is essentially considered a decentered perspective wherein individuals observe mental events in a non-elaborative and accepting manner (Sauer & Baer, 2010; Teasdale et al., 2002). Similarly to self-distancing, the purpose of non-judgmental awareness is to openly view thoughts and feelings without actually becoming enmeshed in them, thereby reducing avoidant behavior and increasing affect tolerance (Bishop, 2004). In fact, similar practices such as acceptance (vs. suppression) of thoughts and emotions have already been shown to reduce negative affect and physical reactivity after distress (Campbell-Sills, Barlow, Brown, & Hofmann, 2006). In line with the meaning of decentering, both non-judgmental awareness and self-distancing are therefore

means of observing thoughts and feelings with a distanced and non-judgmental stance, and without becoming entangled in them or any negative forms of thinking which might typically arise.

Although most of the research related to decentering has focused on the management of symptoms such as anxiety and rumination, there is some preliminary evidence demonstrating that decentering may also positively affect motivation. More specifically, we believe that decentering's ability to help individuals disengage from harmful self-referential forms of thinking (e.g. rumination and worry) also enables greater levels of approach motivation.

#### 1.1. Decentering and motivation

According to the revised reinforcement sensitivity theory (RST; Corr, 2008; Gray & McNaughton, 2000) behavior can be explained in terms of the behavioural activation system (BAS), the behavioural inhibition system (BIS) and the fight-flight-freeze system. The BAS and BIS are most relevant to the current investigation.

The BAS is the neurobiological system that manages appetitive behavior and incentive motivation. Its primary output, approach motivation, eagerly motivates individuals towards desirable goals and appetitive stimuli (Davidson, 1998). The BIS is the neurobiological system that detects goal conflict, elicits anxiety, and inhibits behavior so that goals and response options can be reassessed (Gray & McNaughton, 2000). Importantly, there is a reciprocal relationship between BIS and BAS activation, such that when the BIS is deactivated, there is an increase in BAS activity (Corr, 2002; Nash, Inzlicht, & McGregor, 2012). Accordingly, if decentering quells preoccupation with self-referential conflict then it should lower BIS activation and increase BAS activation.

Manipulations related to self-distancing have already been shown to result in more positive self-construals and greater achievement motivation, both of which are related to approach motivation (Elliot & Church, 1997; Kross & Ayduk, 2008, 2009, 2011; Libby, Eibach, & Gilovich, 2005). Furthermore, Davidson et al. (2003) found that an 8-week mindfulness based stress reduction program resulted in increased left-frontal cortical activity (LFA), a robust marker of approach motivation. Similarly, Keune, Bostanov, Hautzinger, and Kotchoubey (2013) demonstrated greater LFA after a brief mindfulness manipulation compared to a rumination control group. Although these studies suggest a relationship between decentering and approach motivation, none have explicitly examined this. Furthermore, these studies have not controlled for changes in affect when assessing motivation. To be clear, approach motivation's key underlying characteristic is its motivational direction (i.e. moving towards something). Positive changes in affect (i.e. increases in positive affect or reductions in negative affect) are not the same thing as approach motivation, and should therefore "be held conceptually distinct from approach motivation" (Harmon-Jones et al., 2013, p. 293). Anger, for example, is typically regarded as a negative affect but it is approach-motivated because it involves the "impulse to move" towards the target (Harmon-Jones et al., 2013, p. 292). Given that decentering may improve affect, it is important to control for such changes when assessing its effects on approach motivation.

## 1.2. Current investigation

In the following two studies, we predicted that decentering, as practiced through self-distancing (Study 1) and non-judgmental awareness (Study 2), would increase levels of approach motivation. Furthermore, previous research has shown that decentering is particularly effective for distressed people perhaps inclined towards self-referential rumination and conflict (Kross & Ayduk, 2009). As such, we focused on distressed individuals in the present research. Given its ostensibly BIS reducing (and therefore BAS increasing) qualities, we predicted that decentering would increase approach motivation for distressed participants, and that this increase would hold even when controlling for affect.

## 2. Study 1

### 2.1. Method

#### 2.1.1. Participants

One-hundred and forty-eight undergraduate psychology students (107 females, 40 males, 1 other; mean age = 20 years) participated over their university's online system for partial course credit. Five participants were dropped for scoring less than 3 on the average of a 5-item compliance scale (scores ranging from 1 to 5 on each item) provided at the end of the study (e.g. "I tried my best to answer all of the questions honestly"). Three additional participants were dropped for leaving a large portion of their materials incomplete.

#### 2.1.2. Procedure

2.1.2.1. Trait distress related measures. Participants first completed a series of trait distress-related personality measures which were presented in a randomized order. Multiple measures were used to obtain a more comprehensive profile of participant trait distress. Measures used included the Center for Epidemiological Studies Depression Scale (CESD; Radloff, 1977), the Uncertainty Response Scale (specifically the Emotional Uncertainty subscale that measures uncertainty aversion; Greco & Roger, 2001), the Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983), the Reflection-Rumination Questionnaire (specifically the Rumination subscale; Trapnell & Campbell, 1999), the Rosenberg Self-Esteem Scale (Rosenberg, 1989, reverse scored), and the Philadelphia Mindfulness Scale (PMS; Awareness and Acceptance subscales; Cardaciotto, Herbert, Forman, Moitra, & Farrow, 2008, reverse scored). With the exception of the PMS Awareness subscale, there were moderate to strong correlations between almost all measures (Table 1). Therefore, participants' mean scores (not including the PMS Awareness subscale) were standardized and an overall mean trait distress score was created for each participant.

2.1.2.2. Uncertainty threat. In order to test the effects of self-distancing under more stressful circumstances, we included an uncertainty threat (in the context of an important relationship) for all participants prior to the self-distancing (or control) manipulation. Specifically, participants were asked to answer two questions:

- Please describe, as specifically as you can, a relationship with a friend, partner, or family member in which things seem to be going poorly and the future of the relationship feels uncertain.
- Please describe the emotions that thinking about this uncertain relationship arouses in you.

Participants were given 2 min to complete each of these questions (total of 4 min). This uncertainty threat has caused anxious distress and felt uncertainty in past research (McGregor & Marigold, 2003; Nash, McGregor, & Prentice, 2011).

**Table 1** Bivariate correlations between the trait distress related measures in Study 1 (N = 140).

Measures	1	2	3	4	5	6
1. Depression 2. Uncertainty 3. Perceived stress 4. Rumination 5. Self-esteem 6. Acceptance 7. Awareness	0.62** 0.66** 0.43** -0.67** -0.44** -0.08	0.62** 0.50** - 0.53** - 0.44** - 0.06	0.55** - 0.61** - 0.35** - 0.19*	-0.40** -0.35** 0.14*	0.26** 0.26**	-0.36**

<sup>\*</sup> *p* < 0.05.

<sup>\*\*</sup> *p* < 0.01.

2.1.2.3. Self-distancing manipulation. Participants were then randomly assigned to either a self-distancing or relaxation (control) condition. Participants in the former condition were asked to perceive the uncertainty threat they previously experienced from a self-distanced perspective (i.e. from the perspective of a fly on the wall; adapted from Kross & Ayduk, 2011). Specifically, they were given 3 min to complete the following task:

Regarding the uncertain relationship you just wrote about, imagine viewing yourself in the context of this relationship from the perspective of a fly on the wall–that is, an observer's perspective from which you can see yourself, other relevant people, and the surroundings all at once. In the space below, please describe how the interactions and feelings in your uncertain relationship might seem from such a third person perspective.

Alternatively, participants in the relaxation (control) condition were asked to choose an area of their life that they associated with relaxation, and were then asked to write about it. Again, they were given 3 min to complete the following task:

Select the domain from the list in which you are most relaxed, and in the box below describe why being relaxed is important to you, and how you've been relaxed in this domain in the past and plan to in the future.

This control condition was created so that it would seem therapeutic and have equal demand characteristics as the self-distancing condition. It was a conservative control condition insofar as recalling past examples of successful relaxation could conceivably be palliative, and was used due to our view that any importantly useful intervention should do better than simply asking people to focus on relaxing.

2.1.2.4. State approach motivation. Participants then completed the BAS scale (Carver & White, 1994). Following McGregor, Nash, and Prentice (2010), we focused only on the BAS subscale with the most face-valid link to general approach motivation–BAS Drive ( $\alpha=0.76$ ; Carver & White, 1994). One of the four items in the Drive subscale is "If I see a chance to get something I want, I move on it right away." In order to capture state levels of approach motivation, we modified the BAS scale such that the items were preceded by a situational stem. Specifically, the questionnaire was introduced by asking participants to "please rate the extent to which each of the following statements applies to you **right now**." This was followed by the items as they appear on the original BAS scale or slightly modified to better follow the situational stem. Participants rated their agreement on each item from 1= strongly disagree to 5= strongly agree.

2.1.2.5. State affect. Participants then completed the Felt Uncertainty Scale ( $\alpha=0.89$ ; McGregor, Prentice, & Nash, 2013), which has been shown to be an adequate measure of state distress and anxious uncertainty after experiencing self-integrity, mortality and goal threats (Hayes, Ward, & McGregor, 2016; McGregor, Zanna, Holmes, & Spencer, 2001). Specifically, participants rated (on a scale of 1 to 5) how they presently felt on 19 items that measure conflict-related discomfort, such as "I feel uneasy" and "I feel unclear" (McGregor et al., 2013).

Participants also completed the PANAS (Watson, Clark, & Tellegen, 1988), which was used to complement the Felt Uncertainty Scale as a generalized measure of positive and negative affect. Once more, participants rated (on a scale of 1 to 5) how they presently felt on items such as "I feel irritable" and "I feel ashamed" (Negative Affect subscale), as well as "I feel excited" and "I feel inspired" (Positive Affect subscale).

## 2.2. Results

## 2.2.1. State approach motivation

Following the West, Aiken, and Krull (1996) guidelines for analyzing experimental personality designs involving interactions between categorical and continuous variables, the self-distancing condition was effect coded, and the distribution of the overall trait distress scores was

centered (i.e. mean = 0). Furthermore, following West et al. (1996), the first order and interaction terms were entered into the regression simultaneously. These same steps were applied to all subsequent regression analyses

Approach motivation was simultaneously regressed on trait distress, self-distancing condition (self-distancing vs. control), and the trait distress X self-distancing condition interaction. The first order effect of trait distress was significant, B = -0.21, t(136) = -2.66, p = 0.01, 95% CI [-0.37, -0.05], and the first order effect of self-distancing condition was non-significant, B = 0.10, t(136) = 1.59, p = 0.12, 95% CI [-0.02, 0.21]. Consistent with our primary hypothesis, there was a significant trait distress X self-distancing condition interaction effect on approach motivation, B = 0.17, t(136) = 2.15, p = 0.03, 95% CI [0.01, 0.33].

Simple effects analysis further revealed a significant simple effect for manipulated self-distancing at high trait distress, B = 0.45, t(136) = 2.63, p = 0.01, 95% CI [0.11, 0.79]. As shown in Fig. 1, at one standard deviation above the mean in trait distress, approach motivation was significantly higher in the self-distancing condition than in the relaxation (control) condition (Cohen's d = 0.45). In support of our hypothesis, self-distancing caused a significant increase in approach motivation among high trait distress participants.

#### 2.2.2. State affect

Felt uncertainty, as well as the Positive and Negative Affect subscales of the PANAS, were all individually regressed on trait distress, self-distancing condition (self-distancing vs. control) and the trait distress X self-distancing condition interaction. The trait distress X self-distancing condition interactions on these three affect measures were all non-significant (ps > 0.30). Furthermore, and consistent with our hypothesis, the effect of self-distancing on approach motivation at high trait distress remained significant with the three affect measures included as covariates, B = 0.43, t(132) = 2.48, p = 0.01, 95% CI [0.09, 0.77].

# 3. Study 2

In Study 2, we manipulated decentering using non-judgmental awareness. Furthermore, given that introspective self-focus can already be aversive for distressed individuals (Watkins, 2008; Wood, Perunovic, & Lee, 2009), no threat was included in order to test the effects of decentering on its own.

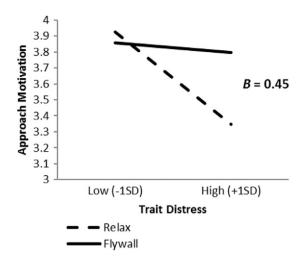
#### 3.1. Method

## 3.1.1. Participants

One-hundred and forty-three undergraduate psychology students (106 females, 37 males; mean age =20 years) participated over their university's online system for partial course credit. Seven participants were dropped for scoring less than 3 on the average of a 5-item compliance scale (scores ranging from 1 to 5 on each item) provided at the end of the study (e.g. "I tried my best to answer all of the questions honestly"). One additional participant was dropped for leaving a large portion of his/her materials incomplete.

 $<sup>^2</sup>$  The shape of the interaction was also consistent for the various individual moderator scales that were combined into the composite scale. Individual scale statistics for the self-distancing X trait distress component interaction, in order of magnitude, were: t(136) = 2.17, p = 0.03 for self-esteem (reverse scored), t(136) = 1.99, p = 0.05 for depression, t(136) = 1.97, p = 0.05 for uncertainty aversion, t(136) = 1.90, p = 0.06 for rumination, t(136) = 1.57, p = 0.12 for acceptance (reverse scored), and t(136) = 1.14, p = 0.26 for perceived stress.

<sup>&</sup>lt;sup>3</sup> Additional analyses demonstrated a significant interaction for the BAS fun-seeking subscale, B=0.15, t(136)=2.22, p=0.03, 95% CI [0.02, 0.29], and simple effects analysis revealed a significant simple effect for manipulated self-distancing at high trait distress, B=0.32, t(136)=2.16, p=0.03, 95% CI [0.03, 0.62], Cohen's d=0.37. No significant interaction was found for the BAS reward responsiveness subscale, B=0.06, t(136)=1.20, p=0.23, 95% CI [-0.04, 0.17].



**Fig. 1.** Approach motivation as a function of trait distress and self-distancing condition in Study 1.

#### 3.1.2. Procedure

3.1.2.1. Trait distress related measures. Participants completed the same trait distress related measures as in Study 1, with the exception that the PMS was replaced with the Mindful Awareness Attention Scale (MAAS; Brown & Ryan, 2003) in order to avoid having multiple subscales for mindfulness. Given the moderate to strong correlations between almost all of the measures (Table 2), the mean of participants' standardized scores on all measures was used as the overall index of trait distress.

3.1.2.2. Non-judgmental awareness manipulation. After completing the trait distress related measures, participants were randomly assigned to either a non-judgmental awareness or free thought (control) condition. Both the non-judgmental awareness and free thought conditions were introduced with the following statement:

People process their thoughts and feelings in different ways. This task investigates ways people notice and then process the thoughts and feelings that come across their minds.

Subsequently, participants specifically in the non-judgmental awareness condition were asked to:

Write any thoughts that come to your mind **just as they are**. In other words, try to observe your thoughts **nonjudgmentally** as you write them down. We would appreciate it if you tried to do this as best you can.

Alternatively, participants in the free thought (control) condition were asked to:

Write any thoughts that come to your mind. We would appreciate it if you tried to do this as best you can.

In both instances, participants were given a text box to complete and were required to spend at least 2 min typing out their thoughts.

**Table 2** Bivariate correlations between the trait distress related measures in Study 2 (N = 135).

Measures	1	2	3	4	5
1. Depression					<u>.</u>
2. Uncertainty	0.59*				
3. Perceived stress	0.65*	0.62*			
4. Rumination	0.55*	$0.59^*$	0.63*		
5. Self-esteem	$-0.59^{*}$	$-0.38^{*}$	$-0.54^{*}$	$-0.48^{*}$	
<ol><li>Mindfulness</li></ol>	$-0.51^*$	$-0.41^{*}$	$-0.44^{*}$	$-0.31^*$	$0.38^{*}$

<sup>\*</sup> *p* < 0.01.

3.1.2.3. State approach motivation. Once more, participants completed the BAS scale (Carver & White, 1994), and the Drive subscale was used as our index of approach motivation. As in Study 1, the BAS scale was slightly modified to measure state (vs. trait) approach motivation.

3.1.2.4. State affect. As in Study 1, participants then completed the Felt Uncertainty Scale (McGregor et al., 2001; McGregor et al., 2013) and the PANAS (Watson et al., 1988).

#### 3.2. Results

#### 3.2.1. State approach motivation

Approach motivation was simultaneously regressed on trait distress, non-judgmental awareness condition (non-judgmental awareness vs. control), and the trait distress X non-judgmental awareness condition interaction. The first order effects of both trait distress, B=0.09, t(131)=1.14, p=0.26, 95% CI [-0.07,0.26] and non-judgmental awareness condition, B=-0.02, t(131)=-0.24, p=0.81, 95% CI [-0.14,0.11] were non-significant. Consistent with our primary hypothesis, however, there was a significant trait distress X non-judgmental awareness condition interaction, B=0.23, t(131)=2.76, p=0.01, 95% CI [0.07,0.39].

Simple effects analysis further revealed a marginally significant simple effect for non-judgmental awareness at high trait distress, B=0.32, t(131)=1.80, p=0.08, 95% CI [-0.03, 0.67]. As shown in Fig. 2, at one standard deviation above the mean in trait distress, approach motivation was higher in the non-judgmental awareness condition than in the control condition (Cohen's d=0.31). Therefore, in support of our hypothesis, non-judgmental awareness caused a marginally significant increase in approach motivation among high trait distress participants.

# 3.2.2. State affect

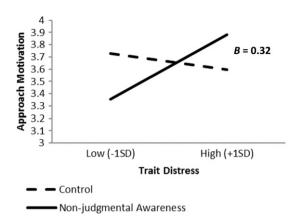
Felt uncertainty, and the Positive and Negative Affect subscales of the PANAS, were all individually regressed on trait distress, non-judgmental awareness condition (non-judgmental awareness vs. control) and the trait distress X non-judgmental awareness condition interaction. The trait distress X non-judgmental awareness condition interactions on these three affect measures were all non-significant (ps > 0.30). Furthermore, the effect of non-judgmental awareness on approach motivation at high trait distress became significant when the three affect measures were included as covariates, B = 0.36, t(128) = 2.01, p = 0.04, 95% CI [0.01, 0.71].

# 4. General discussion

Among high trait distress participants, decentering enabled higher levels of approach motivation compared to control conditions regardless of the presence of an explicit threat. Although the effect of decentering among distressed individuals in Study 2 was only marginally significant, it was characterized by a medium effect size and became significant after controlling for positive and negative affect. Furthermore, decentering had no effect on either positive or negative affect among distressed participants, suggesting that its effects on approach motivation were not simply mediated by changes in affect.

<sup>&</sup>lt;sup>4</sup> The shape of the interaction was also consistent for the various individual moderator scales that were combined into the composite scale. Individual scale statistics for the non-judgmental awareness X trait distress component interaction, in order of magnitude, were: t(131) = 3.38, p = 0.001 for self-esteem (reverse scored), t(131) = 2.96, p = 0.004 for mindfulness (reverse scored), t(131) = 2.11, p = 0.04 for depression, t(131) = 1.53, p = 0.13 for uncertainty aversion, t(131) = 1.51, p = 0.13 for rumination, and t(131) = 1.33, p = 0.19 for perceived stress.

<sup>&</sup>lt;sup>5</sup> Additional analyses did not demonstrate a significant non-judgmental awareness X trait distress interaction for either the BAS reward responsiveness subscale B = 0.07, t(131) = 1.17, p = 0.24, 95% CI [-0.05, 0.18], or the BAS fun-seeking subscale, B = 0.10, t(131) = 1.14, p = 0.26, 95% CI [-0.072, 0.27].



**Fig. 2.** Approach motivation as a function of trait distress and non-judgmental awareness condition in Study 2.

The current investigation provides preliminary evidence that decentering's effects may not be limited to lowering problematic symptoms such as rumination and anxiety. Although past clinical research has linked different general therapeutic methods, such as mindfulness based stress reduction (Davidson et al., 2003) and acceptance and commitment therapy (Hayes, Strosahl, & Wilson, 1999), with improved motivation, it is possible that decentering is playing an underlying but crucial role in this process. It is especially encouraging that two different forms of decentering similarly resulted in increased approach motivation among distressed participants, suggesting that decentering may be a common element across different therapies responsible for improved motivation.

Although our findings do not answer the question as to how decentering increases approach motivation for distressed individuals, it seems unlikely that it is merely due to temporary distraction from negative mental events. The decentering specifically instructed participants to pay attention to mental events as they arose, and prior research demonstrates that mindfulness and acceptance related practices actually increase awareness of mental events (Kerrigan et al., 2011) and decrease distraction (Jain et al., 2007).

Our results are more consistent with our view that decentering enables distressed participants to observe negative mental events with less aversion, thereby lowering BIS activity and enabling greater approach motivation. Distressed individuals can become so immersed in their subjective and emotional responses to mental events that alternative emotional responses and interpretations become inaccessible (Bennett-Goleman, 2001). Decentering may encourage a more balanced awareness with less focus on reliving negative experiences and more on reconstruing them for improved closure and insight (Kross & Ayduk, 2008, 2009, 2011), thereby reducing perceived goal conflict, anxiety and overall BIS activity (Gray & McNaughton, 2000). Given the reciprocal relation between the BIS and BAS, as well as decentering's ability to bolster positive expectations which have also been shown to improve motivation (Erez & Isen, 2002), this should in turn increase BAS activity and approach motivation as evidenced in the present series. Further research, however, is needed to test the specific mechanism through which decentering heightens approach motivation.

A limitation for these studies is the relatively short duration of the decentering manipulations which may have benefited from further instruction and longer practice time. In particular Study 2's non-judgmental awareness exercise may be difficult to conceptualize for beginners and especially for distressed individuals with ruminative tendencies, which may also explain the weaker effect compared to Study 1. Mindfulness based therapies for example, which have been shown to lower levels of trait and state anxiety (Hofmann, Sawyer, Witt, & Oh, 2010), typically last eight or so weeks. However, prior studies have also demonstrated that even brief mindfulness practices can effectively improve motivation (Keune et al., 2013), and brief self-distancing manipulations

similar to that in Study 1 have repeatedly been shown to lower anxiety and depression (Kross & Ayduk, 2008, 2009, 2011). Nonetheless, future studies would benefit from more extensive instructions and practice time, such as in the form of guided audio and workshop sessions, in order to ensure decentering is effectively learned by participants.

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