

Facets of Emotional Awareness and Associations With Emotion Regulation and Depression

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Emotion theories posit that effective emotion regulation depends upon the nuanced information provided by emotional awareness; attending to and understanding one's own emotions. Additionally, the strong associations between facets of emotional awareness and various forms of psychopathology may be partially attributable to associations with emotion regulation. These logically compelling hypotheses are largely uninvestigated, including which facets compose emotional awareness and how they relate to emotion regulation strategies and psychopathology. We used exploratory structural equation modeling of individual difference measures among a large adult sample ($n = 919$) recruited online. Results distinguished 4 facets of emotional awareness (type clarity, source clarity, involuntary attention to emotion, and voluntary attention to emotion) that were differentially associated with expressive suppression, acceptance of emotions, and cognitive reappraisal. Facets were associated with depression both directly and indirectly via associations with emotion regulation strategies. We discuss implications for theory and research on emotional awareness, emotion regulation, and psychopathology.

Keywords: emotional awareness, clarity of emotion, attention to emotions, emotion regulation, depression

Emotion theorists have consistently posited that emotional awareness is integral to emotion regulation and well-being (e.g., Barrett & Gross, 2001; Berking & Wupperman, 2012; Gratz & Roemer, 2004; Gross, 2014). As typically measured, emotional awareness is a multidimensional, individual differences construct consisting of metaknowledge (i.e., beliefs) about one's own emotional experiences. Emotional awareness is often considered to have two dimensions representing the extent to which one attends to his or her own emotional experiences, labeled attention to emotion, and the extent to which one understands or his or her emotional experiences, labeled emotional clarity (e.g., Coffey, Berenbaum, & Kerns, 2003; Gohm & Clore, 2000, 2002). Recent research has provided preliminary evidence that both attention to emotions (Huang, Berenbaum, & Chow, 2013) and understanding of emotions (Boden & Berenbaum, 2011) can be parsed into additional facets. However, no research has comprehensively examined these emotional awareness facets, leaving it unclear the extent to which these facets are unique and whether they differentially predict other constructs.

A limited body of research has supported theories positing strong links between emotional awareness and emotion regulation,

which we conceptualize as the use of specific strategies for the purpose of increasing, maintaining, or decreasing emotion responses (Gross, 2007; Gross & John, 2003). Specifically, the nuanced information provided by attending to and understanding one's emotions may facilitate the selection and use of emotion regulation strategies (Barrett & Gross, 2001). Additionally, facets of emotional awareness have been found to be consistent and strong predictors of many types of psychopathology, including depression (Bamonti et al., 2010; Berenbaum, Bredemeier, Thompson, & Boden, 2012; Fisher et al., 2010; Mennin, Holaway, Fresco, Moore, & Heimberg, 2007). Although research has demonstrated that emotional awareness facets are directly associated with psychopathology, the hypothesis that emotional awareness is indirectly associated with psychopathology via associations with emotion regulation has been empirically examined to a limited extent.

Facets of Emotional Awareness

Emotions are thought to facilitate adaptation to environmental challenges and, thus, well-being and survival (Lazarus, 1991). Emotions guide attention from less to more important stimuli that have implications for well-being and survival, prioritizing the processing of such stimuli (e.g., Gasper & Clore, 2000; see Matthews & Wells, 1999). People attend to emotions to greater or lesser extents, and develop a set of corresponding metaknowledge (i.e., beliefs). As explicated in a variety of information-processing related models of emotion (e.g., affect-as-information; Schwarz & Clore, 1988), emotions have the potential to provide information that can be used to facilitate adaptation (e.g., to guide decision-making that will benefit the person). This information may be

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understood to varying extents, potentially affecting people's beliefs about their emotional understanding. Factor analyses have demonstrated that individual differences in attention to and understanding of one's own emotions are empirically distinguishable from each other and from other individual differences in emotions, such as emotion intensity and lability (Coffey et al., 2003; Gohm & Clore, 2000, 2002; Palmieri, Boden, & Berenbaum, 2009).

Recent research has further parsed both attention to and understanding of emotions. In terms of attention to emotions, both automatic/involuntary and controlled/voluntary processes likely influence the extent to which emotions are attended to in real-time (see Matthews & Wells, 1999). Research examining the constructs of savoring (Bryant, Smart, & King, 2005) and sensation seeking (Roberti, 2004) has demonstrated that people voluntarily and purposefully attend to stimuli and engage in activities that have the potential to generate positive emotions, sensations, and experiences. Suggesting that people also involuntarily attend to emotions, research has shown that people sometimes prefer to avoid specific emotions and emotion-eliciting stimuli but are often unsuccessful at doing so (Kerns & Berenbaum, 2010). Following, Huang and colleagues (2013) empirically distinguished voluntary attention to emotions, assessed by self-report items from commonly used measures (Trait Meta Mood Scale [TMMS], Salovey, Mayer, Goldman, Turvey, & Palfai, 1995; Toronto Alexithymia Scale [TAS], Bagby, Taylor, & Parker, 1994) from involuntary attention to emotions, assessed by items developed for this purpose.

Several lines of research suggest that understanding of emotions can be parsed into related but unique facets: understanding of the source and type of one's own emotions. Attributions of the source of one's emotions are not linked to specific types of emotions in a one-to-one or consistent manner (Kuppens, 2013). This flexible linking suggests that unique information, which can be understood and mentally represented to varying degrees, is provided by the source and type of one's emotions. Studies of information processing have demonstrated that source clarity can be manipulated independently of type clarity, influencing subsequent judgments, decisions, and beliefs (e.g., Gasper & Clore, 1998; Lischetzke, Cuccodoro, Gauger, Todeschini, & Eid, 2005; Schwarz & Clore, 1983). Boden and Berenbaum (2011) found that type clarity, assessed by self-report items from commonly used measures was empirically distinguishable from, albeit highly associated with source clarity, assessed by items developed for this purpose. Research examining involuntary attention to emotions and source clarity is limited (Boden & Berenbaum, 2011, 2012; Huang et al., 2013), and no research to date has examined together the four facets of emotional awareness described above. Further, research examining emotional awareness facets has been limited to college student samples.

The current study examined whether type clarity, source clarity, voluntary attention to emotion, and involuntary attention to emotion facets are distinguishable in an adult sample representative of the population of the United States. This was done in part to address a counterintuitive finding in the literature. In theory, attention to and understanding of emotions are complimentary processes, as individuals learn about and presumably gain understanding of their emotions, at least in part by attending to them. However, previous research has demonstrated extensive variation in the degree of association between attention to and understanding

of emotions (e.g., Boden, Bonn-Miller, Kashdan, Alvarez, & Gross, 2012; Gohm & Clore, 2000, 2002; Lischetzke et al., 2005; Palmieri et al., 2009). One factor that might account for this variation is the degree to which people voluntarily versus involuntarily attend to emotions. Huang and colleagues (2013) posited that an individual involuntarily attending to emotions may draw quick and inaccurate conclusions about the source and type of emotions (i.e., resulting in low source and/or type clarity). Alternatively, voluntarily attending to emotions may entail greater extension of effort to understand emotions, resulting in higher levels of understanding. Indeed, Huang and colleagues (2013) found that type clarity was weakly but positively associated with voluntary attention and inversely associated with involuntary attention. Replication of these results has yet to be attempted, and it is unknown whether source clarity is associated with voluntary and involuntary attention to the same degree as type clarity.

Emotional Awareness, Emotion Regulation, and Depression

A logically compelling, yet relatively untested hypothesis states that effective emotion regulation depends upon the nuanced information provided by attending to and understanding emotions, which facilitates the optimal selection and use of an emotion regulation strategy (Barrett & Gross, 2001). Empirical support for this hypothesis is limited and indirect (e.g., Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006; Barrett, Gross, Christensen, & Benvenuto, 2001; Boden, Gross, Babson, & Bonn-Miller, 2013; Boden, Irons, Feldner, Bujarski, & Bonn-Miller, in press; Feldman, Hayes, Kumar, Greeson, & Laurenceau, 2007; Gross & John, 2003). The consistent and strong associations between emotional awareness facets and a variety of forms of psychopathology may be partially attributable to associations with emotion regulation. In other words, maladaptive levels and/or combinations of emotional awareness (e.g., high attention and low clarity) may contribute to problems with emotion regulation, and hence, to psychopathology. In this study, we take a first step in examining these hypotheses by investigating in a nonclinical sample whether emotional awareness facets are directly associated with depression, in addition to indirectly associated with depression via associations with the frequency of use of several emotion regulation strategies. We investigated anhedonic depression (i.e., composed of symptoms specific to depression and not anxiety; Nitschke, Heller, Imig, McDonald, & Miller, 2001) because it varies continuously in the population (Haslam, Holland, & Kuppens, 2012); is distinct from other facets of psychological distress (e.g., worry; Nitschke et al., 2001); and is associated with emotional awareness facets at subclinical (Berenbaum et al., 2012; Fisher et al., 2010; Huang et al., 2013) and clinical levels (Loas et al., 1998). Examining these associations provides a test of our hypotheses while providing further evidence of convergent and discriminant validity of emotional awareness facets.

Numerous distinct strategies can be utilized to regulate emotions. Large literatures have evolved around cognitive reappraisal (i.e., reevaluating any aspect of the emotion eliciting situation to regulate emotions; Gross, 2007), expressive suppression (i.e., restricting expression of emotions; Gross, 2007), and nonjudgmental acceptance of emotions (i.e., openly experiencing the causes, happening, and consequences of emotional experiences without judg-

ment; see Baer et al., 2006). Meta-analytic results confirm that depression is generally inversely associated with reappraisal to a small-to-moderate degree, positively associated with suppression to moderate-to-large degree, and not generally associated with acceptance (Aldao & Nolen-Hoeksema, 2013).

Emotion regulation strategies likely differ in the extent to which they are associated with individual facets of emotional awareness. Research suggests that strategies, such as reappraisal, utilize mental representation of the emotion source and/or response, including emotion type for repeated evaluation and elaboration (Sheppes et al., 2014). Thus, reappraisal might be positively associated with source and/or type clarity and voluntary attention to emotions. Expressive suppression likely requires minimal evaluation and elaboration of emotion source and type (Sheppes et al., 2014), but maximal attention, which is purposefully directed away from the emotion source and/or response. This could account for the biases in memory of emotional experience found to be associated with suppression (Richards & Gross, 2000). Thus, suppression might be positively associated with voluntary attention. In contrast, acceptance may require an acknowledgment of the source and/or type of emotion (see Baer et al., 2006) and re-evaluation and elaboration. Thus, acceptance might be positively associated with voluntary attention and with understanding of emotion—source clarity if targeted to the source of emotion (e.g., accepting the challenges to concerns that gave rise to the emotion) and type clarity if targeted to the emotion response (i.e., accepting the particular emotion experienced).

The limited research examining associations between facets of reappraisal and emotional awareness are mixed and show: (a) minimal, statistically insignificant associations with type clarity found among samples of college students (Gross & John, 2003) and people with posttraumatic stress disorder (PTSD; Boden, Bonn-Miller, et al., 2012); (b) moderate, positive associations with type clarity among college students (Boden, Feldner, Irons, Bujarski, & Bonn-Miller, 2013); (c) minimal, statistically insignificant associations with voluntary attention among college students (Gross & John, 2003); and (d) strong, positive associations with voluntary attention among individuals in treatment for PTSD (Boden, Bonn-Miller, et al., 2012). Research examining expressive suppression and emotional awareness has been limited to college student samples, finding that suppression is inversely associated with measures of emotional clarity (primarily assessing type clarity) and attention to emotion (primarily assessing voluntary attention to emotions; Boden et al., 2013; Gross & John, 2003). Acceptance has been found to be positively associated with (a) type clarity in both college student and adult community samples (Boden et al., 2013; K. A. Coffey, Hartman, & Fredrickson, 2010; Feldman et al., 2007; Vine & Aldao, 2014), (b) source clarity in a college student sample (Boden et al., *in press*), and (c) voluntary attention to emotions in college students (Boden et al., *in press*). In these studies, acceptance may have targeted thoughts, actions, and experiences, in addition to emotions. Research has not examined associations between emotion regulation strategies and involuntary attention or source clarity except Boden and colleagues (*in press*), which found positive relations between source clarity and acceptance.

In terms of direct associations between facets of emotional awareness and depression, we posit that lower levels of understanding of emotions are associated with higher levels of depression by (a) maintaining or increasing unpleasant emotional arousal,

and (b) contributing to inaccurate and maladaptive mental representations about oneself (e.g., “I am a loser,” “I can’t achieve any of my goals”). Research has demonstrated that limited understanding of emotions contributes to increased unpleasant emotional arousal (Zimbardo, Laberge, & Butler, 1993). Limited understanding of emotions may result in excessively intense or lengthy unpleasant emotions and has been shown to contribute to inaccurate and otherwise maladaptive, judgments, attitudes, and beliefs (Gasper & Clore, 1998; Schwarz & Clore, 1983; also see Berenbaum & Boden, *in press*). A variety of hypotheses have been posited to account for these effects (e.g., mental representations may be formed to explain confusing emotional experiences; Berenbaum & Boden, *in press*). Following, anhedonic depression has been found to be moderately, associated with lower levels of type clarity among college students (Berenbaum et al., 2012; Mennin et al., 2007; Vine & Aldao, 2014), college students oversampled for people with higher levels of depression and anxiety (Fisher et al., 2010), and middle-aged to older adults (Bamonti et al., 2010). On the other hand, anhedonic depression has not been examined in relation to source clarity.

In terms of attention to emotions, research suggests that an inability to shift attention away from negative content, as would occur among people with higher levels of involuntary attention, contributes to depression (Joormann & Gotlib, 2008). In the only study investigating involuntary attention, anhedonic depression was moderately, positively associated with involuntary attention (Huang et al., 2013). Research is mixed regarding associations between anhedonic depression and voluntary attention; some studies have found inverse, moderate associations (Berenbaum et al., 2012; Fisher et al., 2010), whereas Huang and colleagues (2013) did not find a significant association. However, voluntary and involuntary attention incrementally predicted anhedonic depression in negative and positive directions, respectively.

Three studies are relevant to one of our central hypothesis (i.e., emotional awareness is indirectly associated with depression via associations with emotion regulation; Boden, Bonn-Miller, et al., 2012; Subic-Wrana et al., 2014; Vine & Aldao, 2014), as they included measures of emotional awareness, emotion regulation, and psychopathology. Boden and colleagues (2012) found that cognitive reappraisal moderated the link between type clarity and PTSD severity among individuals in residential treatment for PTSD. Vine and Aldao (2014) found that one facet of emotional awareness, type clarity, was directly associated with anhedonic depression. Additionally, type clarity was indirectly, inversely associated with anhedonic depression via an association with a hypothesized component of effective emotion regulation, the ability to flexibly shift attention among goal-relevant tasks. In a representative sample, Subic-Wrana and colleagues (2014) examined relations between emotional awareness, emotion regulation strategies (suppression, reappraisal), and depression. However, as described in previous publications (Boden & Berenbaum, 2011; Boden, Thompson, Dizen, Berenbaum, & Baker, 2013), the Levels of Emotional Awareness Scale (Lane, Quinlan, Schwartz, Walker, & Zeitlin, 1990) used to assess emotional awareness does not clearly assess awareness of one’s own emotions. Instead, it may best be considered a measure of awareness of other people’s emotions. Further, research suggests that the LEAS is primarily associated with attention to emotions (Waller & Scheidt, 2004), not the multiple facets of emotional awareness of interest here.

Hypotheses

Based upon existing theory and research, we developed two sets of hypotheses. Our first set of hypotheses addresses the structure of emotional awareness facets. We hypothesized that: (a) facets representing type clarity, source clarity, voluntary attention, and involuntary attention to emotions would compose existing measures of emotional awareness (Boden & Berenbaum, 2011; Huang et al., 2013; Palmieri et al., 2009); (b) type and source clarity would be highly, positively associated (Boden & Berenbaum, 2011); (c) voluntary and involuntary attention to emotions would be moderately, positively associated (Huang et al., 2013); and (d) type and source clarity would be positively, moderately associated with voluntary attention to emotions, and inversely, moderately associated with involuntary attention to emotions (Huang et al., 2013).

Our second set of hypotheses focuses on the convergent and discriminant validity of emotional awareness facets while testing relations between emotional awareness, emotion regulation, and depression. We hypothesized that: (a) type and source clarity would be positively associated with acceptance and reappraisal (Baer et al., 2006; Boden, Feldner et al., 2013; K. A. Coffey et al., 2010; Barrett & Gross, 2001; Sheppes et al., 2014; Vine & Aldao, 2014); (b) voluntary attention would be positively associated with reappraisal and acceptance and inversely associated with suppression (Gross, 2007; Gross & John, 2003; Sheppes et al., 2014); (c) understanding of emotions, and especially type clarity would be directly, inversely associated with depression (Berenbaum et al., 2012; Mennin et al., 2007), and indirectly, inversely associated with depression via links with reappraisal (as acceptance has not typically found to be associated with depression; Aldao & Nolen-Hoeksema, 2013); (d) involuntary attention would be directly, positively associated with depression (Joormann & Gotlib, 2008); and (e) voluntary attention would not be directly associated with depression (Huang et al., 2013) but would be indirectly associated with depression via a positive relation with reappraisal and inverse relation with suppression. We used a series of exploratory structural equation models (Asparouhov & Muthén, 2009; Marsh et al., 2009) to test our hypotheses among a large adult sample from the online labor market Mechanical Turk (Mturk).

Method

Participants and Procedure

The study was advertised on MTurk with the following posting: "The study is about understanding the relations between emotional experiences, personality and well-being. Participation entails completing a series of surveys, which should take about 30 minutes." Out of the 1,022 people who signed-up for the study, 103 people did not complete any survey items and were excluded from all analyses. Participants were asked their age, whether English was their first language and if they were United States citizens. Individuals who were younger than 18, did not learn English as their first language or were not U.S. citizens (64 of 1,022 potential participants) were ineligible to participate. Eligible individuals provided informed consent before completing the study. A university review board approved the procedures. The final sample was composed of 919 participants (66.9% female; $M_{age} = 35.4$, $SD_{age} = 13.1$, $range_{age} = 18$ to 79). The racial/ethnic composition was:

White (83.8%), Black (7.5%), biracial/bicultural (4.2%), Asian (3.7%), Native American (0.4%), and native Hawaiian (0.3%). More than half of the participants reported graduating from college (51.6%) and were employed full- or part-time (61.0%). The majority of participants were married or living with a romantic partner (52.8%).

Samples obtained from Mturk are generally representative of the American population and provide data of similar or better quality to other samples (Paolacci & Chandler, 2014), such as student participants and other online participants. Research has found that MTurk users provide reliable results (Goodman, Cryder, & Cheema, 2013) and are truthful and consistent when answering demographic questions (Rand, 2012). Regardless, we conducted all of our analyses with progressively more stringent filters to ensure that potentially biased data did not unduly affect our results. Further, the study was visible only to users with Internet IP addresses originating in the United States and who had a HIT Approval Rate greater or equal to 95%. Participants were compensated US\$.50. The mean duration to complete the survey was 28.4 min ($SD = 60.3$ min, $range = 2$ to 1371 min). The mean percentage of survey items completed was 97.2% ($SD = 14.2\%$, $range = 1.6\%$ to 100%).

Measures

Emotional awareness. Items hypothesized to assess four facets of emotional awareness were obtained from existing scales. As recommended by research using multidimensional scaling and factor analyses (Boden & Berenbaum, 2012; Palmieri et al., 2009), *type clarity* was targeted for assessment by eight items from the clarity subscale of the Trait Meta-Mood Scale (TMMS; Salovey et al., 1995) and five reverse-coded items from the difficulty identifying feelings subscale of the Toronto Alexithymia Scale-20 (TAS; Bagby et al., 1994). Similarly, as recommended by Palmieri et al. (2009), *voluntary attention* was targeted for assessment by eight items from the TMMS attention subscale and two reverse-coded items from the TAS externally oriented thinking subscale. As recommended by Boden and Berenbaum (2012), *source clarity* was targeted for assessment by six items from their Source of Emotions Scale. *Involuntary attention* was targeted for assessment by seven items recommended by Huang and colleagues (2013). Items were rated on a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*). All items were scored so that higher scores represented higher levels of each construct.

Emotion regulation. We measured *expressive suppression* and *cognitive reappraisal* using four- and six-item subscales, respectively, from the Emotion Regulation Questionnaire (ERQ; Gross & John, 2003). To indicate the frequency with which they use expressive suppression and cognitive reappraisal, respectively, participants rated each item on a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*). *Nonjudgmental acceptance* was measured using the respective subscale from the Five Facet Mindfulness Questionnaire (FFMQ; Baer et al., 2006). Because of our focus on emotion regulation, we used only the three items from the FFMQ pertaining to acceptance of emotional experience. Participants rated each item on a 5-point scale (1 = *never or very rarely true*, 5 = *very often or always true*).

Depression. We measured anhedonic depression symptoms using an 8-item version of the anhedonic depression subscale from

the Mood and Anxiety Symptom Questionnaire (MASQ; Watson et al., 1995). This shorter version was developed for the purpose of screening for depressive disorders and has demonstrated excellent sensitivity, specificity, and psychometric properties (Bredemeier et al., 2010). Participants rated each item on a 5-point scale (1 = never or very rarely true, 5 = very often or always true).

Analytic Overview

We conducted a series of exploratory structural equation modeling (ESEM) analyses using Mplus 7.0 (Muthén & Muthén, 2013). ESEM allows for less restrictive exploratory factor analysis (EFA) measurement models, with factor loading matrix rotations, to be used in combination with confirmatory factor analysis (CFA) models. CFA is useful when the underlying structure is known, but often too restrictive, requiring each indicator to load onto only one factor, which is inconsistent with many measurement instruments. Model modifications used to improve fit, which in a sense renders the procedure exploratory, contributes to potentially distorted factors with biased factor correlations and associations with other constructs included in latent variable modeling (Asparouhov & Muthén, 2009; Marsh et al., 2009). Thus, ESEM provides modeling parameters, goodness-of-fit statistics, and the ability to model with additional variables (Asparouhov & Muthén, 2009; Marsh et al., 2009).

We began by using SPSS V.20 to randomly split the total samples into two samples of ~50% of the total (*ns* = 471, 448). We conducted a set of ESEM analyses examining the fit and structure of 1-, 2-, 3-, 4-, 5-, and 6-factor models of emotional awareness items in each sample, with analyses conducted in the second sample used to establish reliability and stability of the structure. Model fit, match with theoretically posited structure, and parallel analysis were used to determine the optimum number of factors to retain. Parallel analysis computes eigenvalues from the correlation matrix of random data with an identical number of observations and variables as the original data to which eigenvalues are compared (Fabrigar, Wegener, MacCallum, & Strahan, 1999). The number of eigenvalues in the original data that are greater than those from the random data equals the optimum number of factors to retain.

Next, among the total sample, a latent-variable modeling approach using ESEM was used to construct a path model to examine direct association between emotional awareness facets and emotion regulation strategies and depression, and indirect associations between emotional awareness items and depression via emotion regulation strategies. We used the total sample because larger sample sizes have increased power that help ensure that individual parameter estimates are precise, stable, and closely approximate the population from which the sample is obtained. We constrained emotional awareness items to load onto the number of factors found to best represent the data in the previous ESEM analyses. We constrained MASQ items to load onto a depression factor, FFMQ items to load onto an acceptance factor, ERQ items targeted to assess suppression and reappraisal to load onto suppression and reappraisal factors, respectively. Consequently, this model included an exploratory component for emotional awareness items, and a confirmatory component for emotion regulation and depression items (Asparouhov & Muthén, 2009; Marsh et al., 2009). Emotional awareness facets were allowed to correlate with each other, as were emotion regulation strategies. Direct paths from

emotional awareness facets to (a) emotion regulation strategies and (b) depression were examined. Indirect paths from emotional awareness facets to depression via emotion regulation strategies, calculated as part of the ESEM analysis module in Mplus 7.0 (Muthén & Muthén, 2013) were also examined.

Lastly, we repeated all ESEM analyses using less-to-more stringent filters to exclude participants whose data may have been biased, as indicated by (a) an extremely low variance of responses to emotional awareness items potentially indicating random responding (*n* = 10, 1.1% of sample), (b) a less than 10-min duration to complete the entire survey (*n* = 33, 3.6% of sample), (c) a lack of completion of one or more survey items (*n* = 49, 5.3% of sample), or (d) a combination of the previous three criteria (*n* = 75; 8.2% of sample).

Emotional awareness facets were expected to correlate, so the oblique “oblimin” rotation of factors (identical to Jennrich & Sampson’s [1966] direct quartimin rotation) was used to determine the simple structure of the modeling solutions. The maximum-likelihood estimator allowed for missing data estimation. Model fit is influenced by a variety of factors (e.g., sample size, parameter estimation; Bentler, 1990; Hu & Bentler, 1999). To conservatively and reliably assess model fit, we considered together commonly used cutoffs for several indices: root-mean-square error of approximation (RMSEA; Browne & Cudeck, 1992) less than .08; comparative fit index (CFI; Bentler, 1973) greater than .90; and standardized root-mean-square residual (SRMR, Bentler, 1990) less than .08. Because of the large sample size, where applicable, we focused our interpretation on results statistically significant at *p* less than .01.

Results

ESEM of Emotional Awareness

As shown in Table 1, in both samples, 4-, 5- and 6-factor models of emotional awareness items fit the data well in terms of all fit indices. Within each sample, each successively more complicated model fit better than the immediate simpler model (i.e., 6-factor models fit better than the 5-factor models, which fit better than the 4-factor models, etc.) as revealed by statistically significant $\Delta\chi^2$ (all *ps* < .001). Parallel analysis revealed that 5 and 4 nonspurious factors could be retained in Samples 1 and 2, respectively. In each sample, the

Table 1
Fit Statistics for Exploratory Structural Equation Models of Emotional Awareness Items

	χ^2	<i>df</i>	RMSEA (90% CI)	CFI	SRMR
Sample 1					
1 first-order factor	6522.1	594	.146 (.142–.149)	.435	.197
2 first-order factors	2686.9	559	.090 (.087–.093)	.797	.056
3 first-order factors	2002.7	525	.077 (.074–.081)	.859	.047
4 first-order factors	1419.4	492	.063 (.059–.067)	.912	.036
5 first-order factors	1012.9	460	.051 (.046–.055)	.947	.024
6 first-order factors	858.1	429	.046 (.042–.051)	.959	.022
Sample 2					
1 first-order factor	5810.9	594	.140 (.137–.143)	.474	.172
2 first-order factors	2964.8	559	.098 (.095–.102)	.757	.070
3 first-order factors	2214.5	525	.085 (.081–.088)	.829	.053
4 first-order factors	1392.2	492	.064 (.060–.068)	.909	.034
5 first-order factors	928.6	460	.048 (.043–.052)	.953	.024
6 first-order factors	772.2	429	.042 (.037–.047)	.965	.022

4-factor models replicated the hypothesized structure of emotional awareness facets, with three caveats (below). The 5-factor model split type clarity into dimensions consisting of regularly keyed and reverse-keyed items. Consequently, we chose to retain the 4-factor model.

As shown in Table 2, in both samples, the structure of the 4-factor solution replicated the hypothesized emotional awareness factor structure, with four higher-order facets representing type clarity (Factor 1), source clarity (Factor 2), voluntary attention (Factor 3), and involuntary attention (Factor 4). However, there were three caveats. First, the item, "It does not take me long to determine who made me sad, angry, or scared" targeted to assess source clarity (SES item 3 in Table 2) did not substantially load onto any factor, and its highest loading was on the type clarity factor. For these reasons, we excluded this item from the remaining analysis. Second, the item, "I often don't know why I am angry" (TAS item 5 in Table 2) loaded most strongly onto type rather than source clarity, although it would seem to assess source

clarity. Because this item clearly and strongly loaded onto type clarity and did not strongly load onto any other factors, it was retained. Third, two items targeted to assess voluntary attention ("I often think about my feelings," "I pay a lot of attention to how I feel"; TMMS items 11 and 15; see Table 2) strongly loaded onto the involuntary attention, more so than the voluntary attention factor. Because ESEM allows for cross loadings, these items were retained.

As hypothesized, all emotional awareness factors were significantly associated, with substantial associations found in both samples between type and source clarity ($r_s = .50, .66, p < .01$) and to a lesser degree between voluntary and involuntary attention ($r_s = .48, .27, p < .01$). Additionally, as hypothesized, in both samples voluntary attention was positively associated with type ($r_s = .24, .32, p < .01$) and source ($r_s = .24, .30, p < .01$) clarity, and involuntary attention was inversely associated with type ($r_s = -.30, -.12, p < .01$) and source ($r_s = -.19, -.24, p < .01$)

Table 2

Standardized Rotated Factor Loadings for Four-Dimensional Solutions for Exploratory Structural Equation Models for Samples 1 (S1) and 2 (S2)

Item from	Text	Factor 1		Factor 2		Factor 3		Factor 4	
		Type clarity		Source clarity		Voluntary attention		Involuntary attention	
		S1	S2	S1	S2	S1	S2	S1	S2
TMMS 1	I can't make sense . . .	.68	.50	-.03	.24	.08	.16	-.20	-.21
TMMS 2	I am rarely confused . . .	.51	.59	-.01	.02	-.07	-.14	-.12	-.08
TMMS 3	Sometimes I can't tell . . .	.71	.52	.02	.18	-.02	.05	.02	-.12
TMMS 4	I am usually very clear . . .	.67	.69	-.09	-.07	.00	-.10	.12	.01
TMMS 5	I can never tell . . .	.58	.41	.06	.29	.23	.30	.01	-.05
TMMS 6	I almost always know . . .	.74	.82	-.07	-.03	.02	-.11	.13	.11
TMMS 7	I am usually confused . . .	.72	.50	.05	.29	.10	.18	-.10	-.11
TMMS 8	I usually know . . .	.55	.64	.07	.08	.08	-.03	.05	.13
TAS 1	I am often confused . . .	.74	.52	.14	.35	-.01	.12	.04	-.10
TAS 2	When I am upset . . .	.71	.42	.05	.38	-.03	.07	-.06	-.09
TAS 3	I have feelings . . .	.69	.54	.08	.24	-.08	.08	-.02	-.17
TAS 4	I don't know what's . . .	.68	.51	.06	.23	-.05	.11	-.03	-.23
TAS 5	I often don't know why . . .	.67	.52	.03	.22	-.04	.07	-.05	-.14
SES 1	I often . . . happy or excited	.22	.05	.55	.79	.04	-.02	-.05	.04
SES 2	I usually don't know . . .	.12	.06	.69	.78	.08	.07	-.05	.04
SES 3	It does not take me . . .	.28	.29	.11	.10	.02	.04	.18	.12
SES 4	It takes me a long time . . .	.01	.00	.86	.90	.02	.02	-.04	.02
SES 5	I sometimes have to . . .	-.05	.03	.97	.88	.00	.00	.02	.05
SES 6	I often . . . angry, or scared	.16	.17	.64	.55	-.04	.10	.07	-.02
TMMS 9	I never give into . . .	-.08	-.22	.07	.18	.37	.47	.20	.12
TMMS 10	I don't think it's worth . . .	.01	-.08	.07	.13	.76	.77	-.06	-.01
TMMS 11	I often think about . . .	-.03	.14	-.10	-.21	.33	.27	.56	.54
TMMS 12	I don't usually care . . .	-.12	-.08	.16	-.02	.67	.69	.11	.11
TMMS 13	It is usually a waste . . .	.05	-.08	-.01	.03	.83	.81	-.08	-.07
TMMS 14	People would be better . . .	.14	.02	-.11	.04	.51	.55	-.12	-.15
TMMS 15	I pay a lot of attention . . .	.03	.33	-.09	-.22	.44	.33	.44	.48
TMMS 16	I don't pay much . . .	.03	.06	.04	.03	.70	.71	.17	.15
TAS 6	Being in touch with . . .	.07	.23	-.04	-.15	.61	.52	.08	.17
TAS 7	I find examination . . .	.04	.27	-.02	-.16	.53	.39	.07	.08
IAS 1	I can't help paying . . .	-.03	.06	.05	-.02	.12	.15	.72	.68
IAS 2	I find myself paying . . .	-.05	.02	.00	-.01	.04	.03	.83	.87
IAS 3	I tend to pay attention . . .	-.05	-.04	-.01	.09	.01	-.03	.86	.90
IAS 4	It would be difficult . . .	.04	-.05	.03	.06	-.04	.04	.83	.81
IAS 5	Paying attention . . .	.02	-.08	-.01	.10	-.10	-.18	.80	.74
IAS 6	I unintentionally think . . .	-.01	-.12	-.07	.02	-.04	.01	.83	.78
IAS 7	I automatically evaluate . . .	.02	.23	.02	-.12	.08	.07	.62	.56

Note. TMMS = Trait Meta Mood Scale; TAS = Toronto Alexithymia Scale; SES = Source of Emotions Scale; IAS = Involuntary Attention to Emotions Scale. Values less than $-.10$ and greater than $.10$ are statistically significant ($p < .01$). Largest loadings within samples are bolded. Item numbers do not refer to the item numbers in the originally published scales.

clarity. Forming emotional awareness facet scales consisting only of items that most strongly loaded onto each factor (bolded items in Table 2 except for SES item, “It does not take me . . .”) revealed: (a) both samples reported moderate-to-high levels of type clarity ($M = 3.79/3.80$, $SD = 0.77/0.79$, $range = 1.31 - 5.00/1.23 - 5.00$), source clarity ($M = 3.99/3.97$, $SD = 0.89/0.90$, $range = 1.00 - 5.00/1.00 - 5.00$), voluntary attention ($M = 3.68/3.71$, $SD = 0.71/0.70$, $range = 1.13 - 5.00/1.50 - 5.00$), and involuntary attention ($M = 3.39/3.29$, $SD = 0.94/0.86$, $range = 1.00 - 5.00/1.00 - 5.00$); and (b) derived scales in both samples demonstrated high internal reliability (Cronbach’s $\alpha = .84$ to $.93$).

Emotional Awareness Facets, Emotion Regulation and Depression

The model examining associations between emotional awareness facets and emotion regulation strategies and depression in the total sample fit adequately ($\chi^2[1,363] = 4569.0$, $RMSEA = .051$, $90\% CI = .049$ to $.052$, $CFI = .900$, $SRMRI = .045$). Emotional awareness items most strongly loaded onto the same factors as in the previous analyses, and derived scales had adequate levels of internal reliability (Cronbach’s $\alpha = .77$, $.88$, $.90$, and $.91$, respectively).

As shown in Figure 1, emotional awareness facets were significantly associated with each other in a similar manner and to a

similar degree as the previous set of analyses. Suppression was significantly, positively associated with reappraisal and inversely associated with acceptance, and acceptance and reappraisal were not significantly associated. Emotional awareness facets were differentially associated with emotion regulation strategies at $p < .01$. As hypothesized, type clarity was positively associated with both acceptance and reappraisal. Although source clarity was expected to show the same patterns, source clarity was only inversely associated with suppression. As hypothesized, voluntary attention was positively associated with reappraisal and acceptance and inversely associated with suppression. Unexpectedly, involuntary attention was inversely associated with acceptance. As hypothesized, type clarity and involuntary attention were directly associated with depression (in negative and positive directions, respectively), whereas source clarity and voluntary attention were not. Consistent with past research, suppression was positively associated with depression; however, inconsistent with past research, acceptance was inversely associated with depression, and reappraisal and depression were not associated. Focusing on indirect effects that were significant at $p < .01$, unexpectedly, type clarity was indirectly associated with depression via acceptance and not via reappraisal (see Table 3). Voluntary attention was indirectly associated with depression via suppression, as hypothesized, but also, unexpectedly, via acceptance and not reappraisal. Although

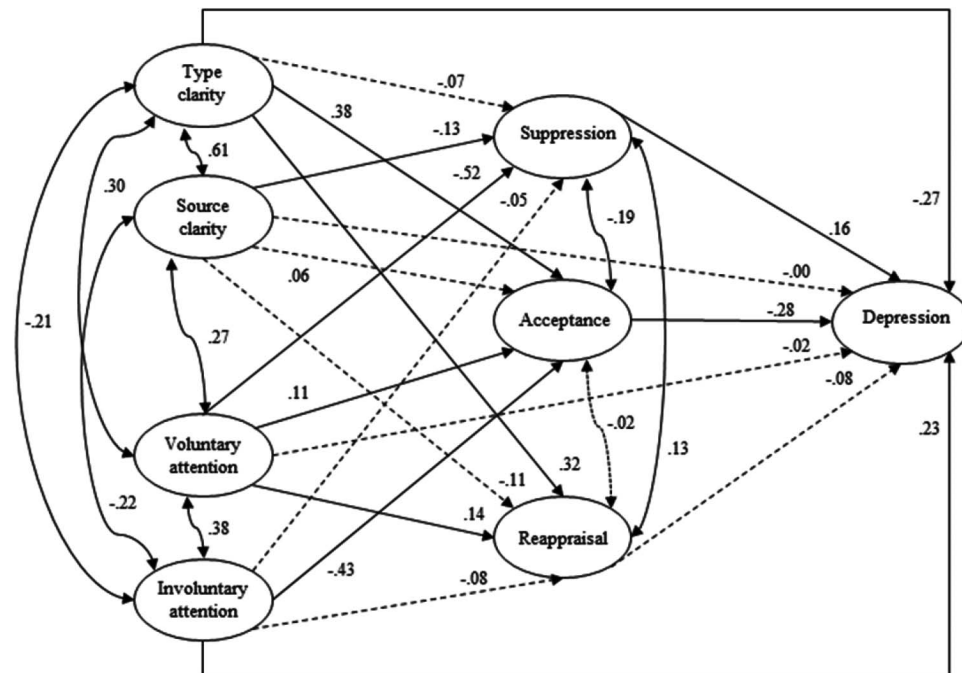


Figure 1. Structural model of associations between latent factors representing emotional awareness facets, three emotion regulation strategies, and depression. Parameter estimates are standardized beta coefficients. Paths statistically significant at $p < .01$ are indicated by solid lines; nonsignificant paths are indicated by dashed lines. Indicators of latent factors are not displayed. The range of standardized factor loadings for indicators of facets of emotional awareness (bolded items in Table 2 except for SES item 3, “It does not take me . . .”, which was not included in this analysis) were .50 to .80 for type clarity; .59 to .88 for source clarity; .45 to .81 for voluntary attention; and .49 to .88 for involuntary attention. The range of standardized factor loadings for indicators of emotion regulation and depression were .57 to .74 for suppression, .80 to .86 for acceptance, .65 to .87 for reappraisal, and .56 to .86 for depression.

Table 3
Standardized Indirect Effects of Emotional Awareness Facets on Depression Via Emotion Regulation

	Suppression	Acceptance	Reappraisal	Sum
Type clarity	-.01	-.11***	-.03*	-.14***
Source clarity	-.02*	-.02	.01	-.03
Voluntary attention	-.08***	-.03**	-.01*	-.12
Involuntary attention	-.01	.12***	.01	.12***

* $p < .05$. ** $p < .01$. *** $p < .001$. Due to the large sample size, only indirect effects at significance levels less than .01 are described in the text.

involuntary attention was not expected to be indirectly associated with depression via any emotion regulation strategies, it was indirectly associated with depression via acceptance.

Data Reliability

In all cases, ESEM analyses conducted with progressively more conservative filters revealed that 4-factor models fit well in both samples (*range* $\chi^2[492] = 1315.3$ to 1392.4 , RMSEA = .063 to .064, CFI = .908 to .915, SRMRI = .033 to .036), and significantly better than 3-factor models (all $ps < .001$). Model fit, match with theoretically posited structure, and results of parallel analyses all suggested that 4-factor solutions were optimal. Additionally, 4-factor models replicated the analyses conducted with the split samples, including the three caveats mentioned above. Results obtained from ESEM analyses examining associations between emotional awareness facets, emotion regulation strategies, and depression using progressively more conservative filters were nearly identical to those conducted in the total sample in terms of model fit (*range* $\chi^2[1,415] = 4642.7$ to 4498.2 , RMSEA = .050 to .051, CFI = .898 to .900, SRMRI = .045), structure, and statistical significance of individual paths.

Discussion

The current study extends the literature on emotional awareness in four ways. First, this is the first study to demonstrate that type clarity, source clarity, involuntary attention, and voluntary attention are distinguishable facets. More importantly, the study was conducted with an adult community sample, extending the literature that has been limited to college student samples (Boden & Berenbaum, 2011; E. Coffey et al., 2003; Gohm & Clore, 2000, 2002; Huang et al., 2013; Palmieri et al., 2009). The findings demonstrate a broadly generalizable structure of emotional awareness facets while supporting the parsing of emotional awareness to include source clarity and involuntary attention to emotions facets in addition to the traditionally investigated facets of type clarity and voluntary attention to emotions. Second, this study addresses a limitation of previous research by demonstrating convergent and discriminant associations among emotional awareness facets (Boden & Berenbaum, 2011, 2012; Huang et al., 2013). Third, this study provided support for differential and incremental associations between emotional awareness facets and emotion strategies of reappraisal, suppression, and acceptance, extending the literature on emotional awareness and emotion regulation while supporting the convergent and discriminant validity of emotional awareness facets (Barrett et al., 2001; Boden, Bonn-Miller, et al.,

2012; Boden et al., in press; K. A. Coffey et al., 2010; Lischetzke et al., 2005). Fourth, this is the first study to find evidence for the parsimonious and logically compelling hypothesis that multiple emotional awareness facets are associated with psychopathology both directly and indirectly via associations with emotion regulation (also see Vine & Aldao, 2014). More importantly, we obtained evidence that our findings were not unduly affected by biased responding.

Emotional Awareness

The associations among facets of emotional awareness are informative in several ways. First, people who understand the type of their emotions will generally understand the source of their emotions (and vice versa). This could be because information regarding source and type of emotions may be derived simultaneously or information regarding one may be used to infer the other. Second, although people who voluntarily attend to their emotions will also involuntarily attend to their emotions to some extent, involuntary attending may be stronger for some people and for some emotional experiences. For example, based on existing theories (Gasper & Clore, 2000; Matthews & Wells, 1999), we posit that situations with greater implications for well-being and survival, in actuality or perceived as such, may be linked to involuntarily attending to a greater degree. Third, voluntary attention was (a) positively associated with type and source clarity and (b) inversely associated with involuntary attention. This suggests that the extensive variation in the degree of association between attention to and understanding of emotions found in prior studies (e.g., Boden, Bonn-Miller, et al., 2012; E. Coffey et al., 2003; Gohm & Clore, 2000, 2002; Lischetzke et al., 2005; Palmieri et al., 2009) may be because of self-report measures commonly used in prior research (e.g., TAS, TMMS) assessed voluntary and involuntary attention to varying degrees. Voluntarily attending to emotions infers a controlled and effortful process by which people may gain valuable and accurate information about the source and type of their emotions. Thus, voluntary attention would be positively associated with source and type clarity. Alternatively, involuntarily attending to emotions infers an automatic and less effortful process that may result in quick and inaccurate conclusions about the source and type of emotions experienced. People who are unsuccessful in their attempts to avoid specific emotions and emotion-eliciting stimuli and who report limited understanding of their emotions (e.g., those who have experienced trauma; Boden, Bonn-Miller, et al., 2012) are exemplary. A variety of methodologies can be used to test these hypotheses, including true experiments with mood inductions relevant to well-being/survival combined with (a) manipulation of the source of an emotion to examine the effect on understanding of type (and vice versa), and/or (b) measurement of voluntary and involuntary attention to emotions. This and other research will clearly benefit from using measures that cleanly and clearly assess emotional awareness facets.

The evaluation of the structure of emotional awareness by ESEM was ideal because of the numerous and sometimes substantial cross-loadings of items. Typically, ESEM is not tenable because of sample size requirements. Thus, for deriving composite scores from self-report items, our finding suggest: (a) excluding the SES item, "It does not take me long to determine who made me sad, angry, or scared," from a source clarity composite; (b) includ-

ing the TMMS item, “I often think about my feelings” in an involuntary rather than voluntary attention to emotion composite; and (c) excluding the TMMS item, “I pay a lot of attention to how I feel” from attention to emotion composites or including it in an involuntary rather than voluntary attention to emotion composite. Additional research utilizing diverse samples can help to determine whether the TAS item, “I often don’t know why I am angry,” which loaded onto type clarity, can be used to assess type clarity, source clarity, or neither.

Emotion Regulation

Our findings suggest that information provided by understanding one’s emotions, especially type clarity, facilitates the choice of reappraisal and acceptance. In other words, an individual who has a clear understanding of emotion type is more likely to implement reappraisal and acceptance in contexts in which these strategies will be most effective, and thus, choose to use them. Alternatively, information about emotion source appears to be less supportive of reappraisal and acceptance than information about emotion type (also see Barrett et al., 2001). Perhaps this is because of both reappraisal and acceptance occurring after the emotion response has begun (i.e., response-focused; Gross, 2007), when information regarding emotion type has greater salience than information about emotion source. Following, information regarding emotion source may facilitate antecedent-focused emotion regulation strategies, such as distraction, to a greater degree than information regarding type. Optimally, future research testing these hypotheses would pair mood inductions and experimental manipulations of information about emotion type and source (Gasper & Clore, 1998; Schwarz & Clore, 1983) with emotion regulation choice paradigms (e.g., Sheppes et al., 2014).

The strong inverse association between voluntary attention and suppression speaks to suppression as a strategy centered on the active diversion of attention away from emotions (Gross, 2007; Sheppes et al., 2014). The strong inverse association between involuntary attention and acceptance suggests that acceptance may be limited in situations with greater perceived challenges to well-being and survival. In situations that elicit automatic, involuntary attention to emotions (e.g., Gasper & Clore, 2000; Matthews & Wells, 1999), people may use strategies that directly contend with the challenges (e.g., running from a knife waving stranger) rather than passive strategies, such as acceptance. Future research testing these hypotheses would benefit from using emotion regulation choice paradigms and experimental manipulation of perceived challenges to well-being and survival in combination with measurement of attention to emotions.

Psychopathology

Consistent with previous research (e.g., Bamonti et al., 2010; Berenbaum et al., 2012; Fisher et al., 2010; Mennin et al., 2007; Vine & Aldao, 2014), decreased type clarity was directly associated with higher levels of depression, potentially by contributing to excessively intense or lengthy unpleasant emotions (Zimbardo et al., 1993) and/or inaccurate and maladaptive mental representations about oneself (see Berenbaum & Boden, in press). Also consistent with previous research (Huang et al., 2013), increased involuntary attention was directly associated with higher levels of

depression, potentially reflecting an inability to shift attention away from negative content (Joormann & Gotlib, 2008). Extending previous research, decreased type clarity and increased involuntary attention were indirectly associated with more depression via lower levels of acceptance. We were unable to test causal hypotheses because of the cross-sectional nature of the study. However, these results suggest that emotion regulation strategy use may partially mediate the link between emotional awareness and depression, and that emotion regulation may be one mechanism through which emotional awareness contributes to psychopathology. Specifically, increased type clarity may facilitate the use of acceptance to regulate emotions, contributing to decreases in depression through adaptive emotion regulation. Furthermore, involuntary attention is discordant with acceptance of emotions and limits the adaptive use of acceptance to regulate emotions, possibly contributing to higher levels of depression. True experiments and longitudinal prospective studies are needed to test these directional hypotheses and the additional possibility that emotion regulation contributes to depression by influencing emotional awareness.

Despite providing broad support for the hypothesized model, our findings were nuanced in several ways. First, we found generally null results regarding reappraisal and source awareness. However, previous research demonstrating moderate associations between reappraisal and depression (Aldao & Nolen-Hoeksema, 2013) and between source clarity and at least one other type of psychopathology (e.g., suspiciousness; Boden & Berenbaum, 2012) suggests the need for future investigations of our hypothesized model. Second, associations between voluntary attention to emotions and depression were limited to indirect associations via acceptance and suppression. These results may help explain inconsistent findings in the literature. Our findings were consistent with those of Huang and colleagues (2013), who also cleanly distinguished voluntary from involuntary attention to emotions. However, our results were inconsistent with the findings of Berenbaum and colleagues (2012) and Fisher and colleagues (2010), possibly resulting from their using composite scores that, based on the current research, assess both involuntary and voluntary attention to emotions. Following, the influence of voluntary attention to emotions on depression may be limited to the promotion of the generally adaptive use of emotion regulation strategies (e.g., acceptance), and reducing the generally maladaptive use of emotion regulation strategies (e.g., suppression). True experiments and longitudinal studies are needed to test these causal hypotheses.

Limitations and Conclusions

The conclusions we draw from this study are tempered by several limitations. First, we were limited in testing both temporal and causal associations between constructs because of the cross-sectional design. Future research should examine facets of emotional awareness using an experience sampling method (see Thompson, Mata, Jaeggi, Buschkuhl, Jonides, & Gotlib, 2011). Doing so will shed light on the temporal dynamics between the emotional awareness facets and their relations with emotion regulation strategies. True experiments that include active regulation of an induced mood in addition to measurement or manipulation of attention to and understanding of emotions will be especially useful in testing the directionality implicit in many of our hypotheses. Including indirect behavioral and physiological measures of

emotional awareness facets (e.g., Lischetzke et al., 2005) and emotion regulation (Sheppes et al., 2014) will help to address a second limitation to the current research; namely, that all constructs were measured by self-report. Consistent with previous theorists (Nosek, Hawkins, & Frazier, 2011; Robinson & Clore, 2002), however, we posit that both indirect and direct measures validly assess unique aspects of these constructs, as they rely on different types of information and knowledge. Research has demonstrated that direct and indirect measures of attention to emotions and emotional clarity are associated to a similar, moderate degree (see Huang et al., 2013; Lischetzke et al., 2005), as are direct and indirect measures of other social-cognitive constructs (Greenwald, Poehlman, Uhlmann, & Banaji, 2009).

Third, because our data were collected online, we did not have direct contact with the participants. We are confident that we obtained data of high quality because we conducted analyses to exclude potentially biased data without varying results. Although there is evidence that data from MTurk samples are more generalizable to the American population than are college student samples (Paolacci & Chandler, 2014), it is still important that future research tests whether our results are replicated in other samples, including clinical samples. It is important to note that relations among facets of emotional awareness and various types of psychopathology, including depression, are consistent across clinical and nonclinical populations (e.g., Ehling, Fischer, Schnulle, Bostering, & Tuschen-Caffier, 2008; Loas et al., 1998). Regardless, without replication in clinical samples, the implications of our results will be limited to informing theory and research on psychological distress generally found in nonclinical populations.

Finally, we limited our investigation to aspects of emotional awareness conceptualized as metaknowledge about one's own emotional experiences, but emotional awareness likely includes additional aspects that are not conceived of as metaknowledge, such as emotion differentiation (i.e., the complexity with which individuals identify, label, and represent their discrete affective; see Barrett et al., 2001). Future theory and research might consider parsing facets of attention to and understanding of emotions according to existing and widely agreed upon conceptualizations of emotions that distinguish emotion antecedents and responses (e.g., Gross, 2007). Thus, one might attend to and understand antecedents/sources of emotion or emotion responses to varying extents. We included measures of understanding of source (i.e., source clarity) and response (i.e., type clarity). To our knowledge, we are the first to make the distinction between attending to emotion sources and responses, both of which can be attended to voluntarily or involuntarily. Future research is needed to develop and validate measures that specifically and clearly assess attention to source and response, and to investigate all facets of emotional awareness, emotion regulation strategies, and psychopathology.

Psychological well-being requires flexible emotion responding to continually evolving environmental challenges (Gross, 2007). Both emotional awareness and emotion regulation play central roles in well-being and psychopathology. Our results suggest a potential way by which emotional awareness and emotion regulation together contribute to psychopathology, and thus indirectly, reduced well-being.

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