

# Internalizing Symptoms in Female Adolescents: Associations with Emotional Awareness and Emotion Regulation

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**Abstract** The transition into adolescence involves a number of changes that for many adolescents result in increased negative affect and internalizing symptoms, especially for females. In the current study we examined the direct and indirect effects of emotional awareness on internalizing symptoms by exploring the extent to which certain emotion regulation strategies influence this relationship. Participants were 123 female adolescents aged 13–16 years ( $M = 14.51$  years) who completed measures of emotional awareness, emotion regulation (emotional reappraisal and expressive suppression), and symptoms of depression and social anxiety. Two multiple indirect effect models were conducted including both reappraisal and suppression (one for each of the dependent variables, depression and social anxiety) via the bootstrapping method. Results found that reappraisal accounted for the effect of emotional awareness on depressive symptoms but suppression accounted for the effect of emotional awareness on social anxiety symptoms. Results suggest that emotion regulation strategies play an important role in determining depressive and social anxiety symptoms and are associated with an adolescent's level of emotional awareness.

**Keywords** Adolescence · Emotional awareness · Emotion regulation · Depression · Social anxiety

## Introduction

The transition into adolescence involves a number of biological, cognitive, and social changes that result in increased negative affect, emotional reactivity, and risk for internalizing symptoms for many adolescents (Arnett 1999; Larson and Ham 1993). While both male and female adolescents experience problems related to emotional arousal and reactivity, gender differences in emotional disorders emerge during the adolescent transition. Female adolescents in particular are at risk, experiencing increases in the development of depression (Galambos et al. 2004; Nolen-Hoeksema and Girgus 1994) and anxiety symptoms (Lewinsohn et al. 1998). With respect to depression, female adolescents are twice as likely to experience depression compared to male adolescents (Bearman et al. 2003). In fact, depression is the most prevalent psychological disorder to affect adolescent females (Bearman et al. 2003; MacPhee and Andrews 2006) with approximately 20–25 % experiencing clinically significant levels of depression before the age of 19 (Kessler et al. 2001; Lewinsohn et al. 1993, 2003). While gender differences in anxiety disorders tend to develop during childhood (Lewinsohn et al. 1998), certain anxiety symptoms, such as social phobia, show marked increases during adolescence for females but not for males (Costello et al. 2003).

A growing number of studies have shown that children and adolescents who have difficulties identifying, describing, and expressing their emotions (e.g., poor emotional awareness; Lane and Schwartz 1987) have higher rates of both depressive and anxiety symptoms (Fine et al. 2003; Lahaye et al. 2010; Penza-Clyve and Zeman 2002; Rieffe and De Rooij 2012; Sim and Zeman 2004; Zeman et al. 2002). Several theoretical models posit increases in emotional awareness across development

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(Buckley and Saarni 2006; Halberstadt et al. 2001; Lane and Schwartz 1987; Mayer and Salovey 1997; Saarni 2000), whereby the experience of emotion is hypothesized to become more sophisticated and differentiated as individuals acquire further cognitive resources (Lane and Schwartz 1987). Thus, individual differences in emotional awareness may be especially important during the adolescent transition when emotional arousal is high yet emotional awareness is not yet fully mature.

Being aware of one's own emotions, however, is only one component of an emotional response. Emotion regulation strategies refer to "the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions" (Gross 1998b, p. 275) and are believed to occur relatively late in the emotional responding process (Gottman et al. 1997; Lambie and Marcel 2002). It has therefore been argued that emotion regulation efforts are dependent upon the degree of emotional awareness, with lower levels of emotional awareness leading to less adaptive regulatory strategies (Izard et al. 2011; Mayer et al. 2001; Saarni 1999). Emotion dysregulation, in turn, is known to be related to a number of psychosocial problems experienced during adolescence (Arnett 1999; Larson and Ham 1993). However, what is not known is the extent to which individual differences in emotional awareness are associated with the use of particular emotion regulation strategies and subsequent internalizing symptoms.

Emotional awareness increases across development, ranging from global feeling states to complex and differentiated emotional experiences (Lane and Schwartz 1987). During infancy, at the most basic level of awareness, emotions are experienced as physical symptoms and are expressed behaviorally as the infant's needs, desires, and satisfaction. At this level of awareness emotions are experienced as global feeling states, representing overall contentment and distress (Hesse and Cicchetti 1982; Osofsky 1992). Over the course of development, emotions become more differentiated and complex as children develop language and the cognitive capacity to represent emotions as abstract. At the highest level of emotional awareness, individuals are able to understand that multiple feelings can be experienced at the same time (e.g., mixed emotions) and are able to differentiate between subtle nuances of emotions in themselves and in others (Lane and Schwartz 1987). In a large sample of girls and adolescent females aged 9–16 years, the ability to report mixed emotional states involving basic emotions (e.g., anger and fear) was equivalent in younger and older participants. However, mixed emotion reporting continued to increase for social emotions (e.g., embarrassment and guilt) across development up to the age of 16 years (Burnett et al. 2011). Thus, both theory and empirical findings suggest that more

sophisticated forms of emotional awareness, such as being aware of mixed emotions in social contexts, continue to develop across adolescence.

Individuals with high emotional awareness understand not only personal emotional experiences, but emotional experiences of others (Lane and Schwartz 1987). Effective emotional awareness is thus a basic constituent of many emotional processes, and is a hallmark of emotionally competent behavior (Buck 1991; Crick and Dodge 1994; Denham 1998; Halberstadt et al. 2001; Hubbard and Coie 1994; Izard 2002; Mayer et al. 2004; Saarni 1999; Thompson 1990). For instance, higher levels of emotional awareness enable individuals to interact effectively within their social environments (Greenberg 2002). An adolescent with high emotional awareness is better able to distinguish the anger they feel at a parent for grounding them from the guilt they feel for breaking a rule, compared to an adolescent with poor emotional awareness. Because each emotion is experienced as separate, the adolescent can understand the cause of the emotion, the particular context in which it arose, the corresponding bodily sensations, and the appropriate display rules and action tendencies unique to that emotion in that particular situation (Feldman Barrett et al. 2001). Highly differentiated emotions therefore function as signals indicating the need to change or adjust appraisals, behaviors, or goals. It is not surprising, then, that individuals with poor emotional awareness have trouble determining appropriate responses to daily situational challenges. Specific emotional cues, if perceived, prepare us for danger as well as opportunity, and help us to realize short- and long-term goals (Stegge and Terwogt 2007). Individuals with low awareness therefore have difficulty gaining information about their current situation from their emotions (Schwarz and Clore 1996). This can be particularly costly in terms of negative emotions since the individual may be unable to take the necessary precautions to avoid potential harm (Quigley and Feldman Barrett 1999). Thus, emotional awareness is a necessary, albeit not sufficient, precursor to effective regulatory strategies (Gottman et al. 1997; Izard et al. 2011; Mayer et al. 2001).

Adaptive emotion regulation involves a number of strategies aimed at altering the experience and/or the expression of an emotion, such as its duration and intensity (Thompson 1990). Prior to the onset of puberty, parents play a fundamental role in assisting children in how to deal with their emotions. However, during the adolescent transition there is a decrease in parental involvement (Collins 1990; Collins and Russell 1991) and adolescents become more independent in their regulation efforts. With age, individuals continue to develop greater capacity to modulate emotional arousal, as cognitive and social strategies for regulating emotions mature (John and Gross 2004). An adolescent with poor emotional awareness, however, is

likely to experience greater difficulty in determining and employing effective regulatory strategies compared to an adolescent with higher emotional awareness. For instance, the adolescent who is unaware of the fact that they are feeling guilty as well as angry may find it hard to select a regulatory strategy to diminish their feelings of guilt. In fact, the two feelings could likely combine into an overall feeling of “badness”, whereby the adolescent is unable to distinguish between them and as a result cannot understand the underlying cause of the “badness”. Without awareness of *what* they are feeling as well as *why* they are feeling that way, the adolescent will have difficulty employing an adaptive regulatory strategy. In the same respect, an adolescent with low emotional awareness may also experience difficulty in selecting regulatory strategies aimed at increasing or maintaining positive emotions. Effective emotion regulation is therefore associated with the ability to identify specific emotions and to understand the reason(s) behind each emotion (Mayer et al. 2001).

Difficulties with emotion regulation underlie many forms of psychopathology (Berenbaum et al. 2003; Cicchetti et al. 1995; Cole et al. 1994; Johnson-Laird et al. 2006; Kring and Bachorowski 1999; Mennin and Farach 2007) and are instrumental to the maintenance of these problems (Barlow et al. 2004). Two regulation strategies that have received a great deal of attention and that are both present during adolescence (Gullone et al. 2010) are emotional reappraisal and emotional suppression (Gross 2007). Emotional reappraisal is an antecedent-focused strategy (Gross 1998a, 2001; Gross and John 2003; Gross and Thompson 2007), in that it occurs early in the emotion generative process and involves cognitively re-framing an emotional situation. Reappraisal emerges during late childhood and by adolescence is comparable to levels of reappraisal found in young adults (Gullone et al. 2010). Reappraisal has been associated with increased positive affect (Watson et al. 1988), closer social relationships, and increased social support (Carver et al. 1989), as well as peer liking and overall well-being (Ryff and Keyes 1995). Suppression, on the other hand, is a response-focused strategy that occurs later in the emotion generative process, once an emotion has already been activated (Gross 2001; Gross and John 2003; Friedman and Miller-Herringer 1991). Suppression involves inhibiting emotion-expressive behaviors (Gross 1998b) and has been associated with less experience and expression of positive emotions, less attention to and clarity of emotions (John and Gross 2004), as well as greater depressive and anxiety symptoms (Gross and John 2003; John and Gross 2004). The use of suppression has been found to be higher during adolescence than adulthood, supporting the claim that emotion regulation efforts become healthier with age (Gullone et al. 2010). While suppression is adaptive in certain situations,

(e.g., hiding one’s disappointment after receiving an undesirable gift), habitual use of this strategy has generally been thought of as maladaptive, resulting in sustained feelings of negativity in combination with decreased positive emotions (Gross and Levenson 1997; Harris 2001). Individuals with internalizing symptoms therefore experience difficulty processing negative affect and as a result experience more severe distress for longer periods of time (Mennin and Farach 2007). Thus, emotion regulation is a proximal mechanism of internalizing problems and a combination of increased suppression and a lack of reappraisal may be particularly problematic for adolescents with low emotional awareness.

The goals of the present study were twofold. First, while the link between emotional awareness and emotion regulation has been established, research is limited as to the association between emotional awareness and specific regulatory strategies in adolescence. Thus, we will further explore the relationship between emotional awareness and emotion regulation by looking at both emotional reappraisal and emotional suppression. Because reappraisal involves changing the potential impact of an emotion-eliciting situation, an awareness of and understanding of one’s own emotions is necessary. Suppression, however, involves “shutting down” one’s emotions in such a way that leads to less attention to and less clarity of the emotion (Gross and John 2003). It was therefore predicted that emotional awareness would be positively related to emotional reappraisal and negatively related to emotional suppression. Second, we wanted to examine whether the association between emotional awareness and depressive and social anxiety symptoms holds in the presence of the more proximal regulatory strategies. It was expected that emotional awareness and internalizing symptoms would be negatively correlated, but that the direct relationship between awareness and internalizing symptoms would be diminished when the indirect effects of emotional reappraisal and suppression were included. We chose to include both of these regulatory strategies in our models simultaneously because emotion regulation strategies do not function in isolation of one another; that is, reappraisal and suppression co-occur at different times throughout the emotion process (Gross et al. 2006; Sheppes and Gross 2011). Thus, we sought to capture the use of these strategies relative to one another in our models. Further, we examined these relationships during adolescence, as this is a developmental period marked by drastic increases in emotional arousal and reactivity (Arnett 1999; Larson and Ham 1993), and females in particular experience higher rates of psychological problems such as depression and anxiety (Costello et al. 2003; Nolen-Hoeksema and Girgus 1994). Analyses were run separately for depressive and social anxiety symptoms because these internalizing

domains can have different etiologies and relate differently to specific emotion regulation strategies (Aldao et al. 2010; Clark and Watson 1991; Watson et al. 1995).

## Method

### Participants and Procedure

Participants were 123 female adolescents from a small city in Southern Ontario recruited through public advertisements and local school boards. Participants ranged in age from 13 to 16 years ( $M = 14.51$ ,  $SD = .89$ ). The majority of participants (81 %) identified themselves as White, 1 % as Black, 4 % as Asian, 3 % as Native American, 9 % as Other, and 2 % did not indicate their ethnicity. Families with female adolescents between the ages of 13–16 years were contacted by a recruitment coordinator and asked if they would like to participate in a study examining changes in children's emotions and behaviours as they move into adolescence. If they agreed, adolescents completed an online survey at home. Consent was provided online for both the parent and the adolescent. The adolescents were unable to provide consent until parent consent was granted. Ethical approval was received from both the university and the school board.

### Measures

#### *Difficulties in Emotion Regulation Questionnaire* (Gratz and Roemer 2004)

The 6-item subscale measuring “Emotional Awareness” was used to assess attention to, and awareness of, emotional responses (e.g., “When I'm upset, I take time to figure out what I'm really feeling”). Items are rated on a 5-point-Likert scale ranging from 1 (*Almost Never*) to 5 (*Almost Always*). High scores indicate higher emotional awareness. In the present study the mean of the total score was used. Gratz and Roemer (2004) reported good internal consistency ( $\alpha = .83$ ) in a sample of undergraduate students and Weinberg and Klonsky (2009) reported adequate internal consistency in a sample of younger adolescents ( $\alpha = .77$ ). The alpha coefficient for the sample in the present study was good (Cronbach's  $\alpha = .83$ ).

#### *Emotion Regulation Questionnaire* (Gross and John 2003)

The ERQ is a 10-item self-report questionnaire that assesses two different emotion regulation strategies: a 6-item cognitive reappraisal scale (e.g., “I control my emotions by changing the way I think about the situation I'm in”) and a 4-item expressive suppression scale (“I control my emotions

by not expressing them”). Items are rated on a 7-point-Likert scale ranging from 1 (*Strongly Disagree*) to 7 (*Strongly Agree*) with higher scores indicating greater use of the strategy. In the present study we used the mean of the total score in our analyses. In a large sample of adolescents in grade six, Cronbach's alpha was .79 and .66 respectively for reappraisal and suppression and for adolescents in grade twelve Cronbach's alpha was .86 and .83 respectively for reappraisal and suppression (Watson 2007). In the present study the alpha coefficient was adequate ( $\alpha = .74$ ) for both reappraisal and suppression.

#### *Child Depression Inventory* (Kovacs 1992)

The CDI is a 27-item questionnaire measuring depression in children and adolescents between the ages of 6 and 17 years. Each item consists of three self-evaluative sentences with a score of 0–2 with higher scores indicating greater severity of the symptom. For instance, “I am sad once in awhile,” “I am sad many times,” and “I am sad all the time.” One item regarding suicidal thoughts was excluded. In the present study the mean of the total score was used. The CDI has excellent internal consistency, ranging from .84 to .93 in samples of children and adolescence (Craighead et al. 1995; Kovacs 1992; Saylor et al. 1984; Smucker et al. 1986; Weiss et al. 1991). In the present sample, Cronbach's alpha was good ( $\alpha = .91$ ).

#### *Social Anxiety Scale for Adolescents Revised Short Form* (Myers et al. 2002)

The SAS-A Revised is a 13-item questionnaire that measures symptoms of social anxiety in adolescents. Items are rated on a 5-point Likert scale according to how true the item is of the participant (e.g., “I feel shy even with peers I know well”). Responses range from 1 (*Not At All*) to 5 (*All the time*) and higher scores indicate higher levels of social anxiety. The SAS-A Revised has three subscales measuring Fear of Negative Evaluation (6 items), General Social Avoidance and Distress (3 items) and Social Avoidance and Distress in New Situations (4 items) all of which have been found to have good internal reliability (.89, .86, and .76 respectively) in adolescent samples (Myers et al. 2002). The total of the three scales are added together to give a total social anxiety score. In the present study the mean of the total score was used and Cronbach's alpha was good ( $\alpha = .93$ ).

### Statistical Analyses

The data analytic plan for the current study included running two multiple indirect effect models including both

**Table 1** Means, standard deviations and correlations between all variables

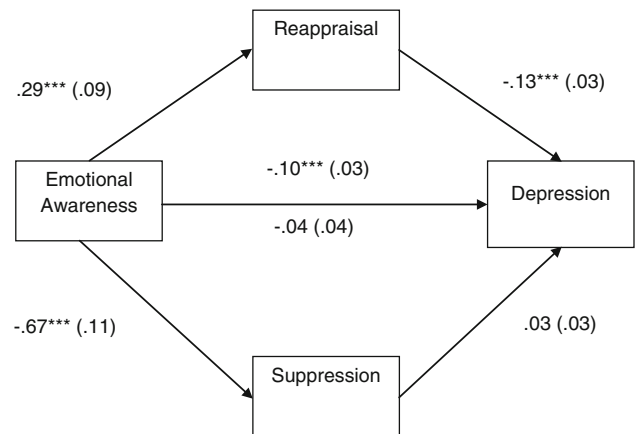
Variables	M	SD	1	2	3	4	5	6
(1) Emotional awareness	2.70	.83	–					
(2) Reappraisal	4.83	.81	.31**					
(3) Suppression	3.46	1.15	-.48**	-.19*	–			
(4) Age	14.51	.89	.18*	.11	.02	–		
(5) Depressive symptoms	.35	.31	-.28**	-.40**	.26**	.01	–	
(6) Social anxiety symptoms	2.18	.74	-.31**	-.24*	.37**	.06	.69**	–

\*\*  $p < .01$ ; \*  $p < .05$

reappraisal and suppression (one for each of the dependent variables, depression and social anxiety) via the bootstrapping method recommended by Preacher and Hayes (2008). Age was included as a covariate because it was positively associated with emotional awareness. This approach has a number of advantages compared to single indirect effect models. This includes the ability to determine the total indirect effect of a set of variables (e.g., reappraisal and suppression simultaneously) and the specific indirect effect of each variable on its' own, as well as the ability to reduce parameter bias due to omitted variables (Preacher and Hayes 2008). Bootstrapping is a non-parametric approach to effect-size estimation that generates an empirical approximation of the sampling distribution by repeatedly resampling the data set (Preacher and Hayes 2008). It is recommended for multiple indirect effects models because it does not assume normality of the sampling distribution (Hayes 2009). A number of simulation studies have also found bootstrapping to be more powerful as well as more effective at controlling Type I error than other available methods (Fritz and MacKinnon 2007; MacKinnon et al. 2004; Williams and MacKinnon 2008). To determine the significance of indirect effects, 95 % confidence intervals are used. If the lower and upper bounds do not include zero, then the indirect effect can be considered significant at the .05 level (Hayes 2009).

**Results**

Table 1 presents the means, standard deviations, and correlations for all variables. The hypothesized model was significant for depression and accounted for 17 % of the variance in symptoms. The total direct effect of emotional awareness on depressive symptoms was significant but after controlling for the two indirect effects of reappraisal and suppression, the direct effect of emotional awareness on depressive symptoms no longer reached significance (Fig. 1). The total indirect effect of emotional awareness through suppression and reappraisal was significant ( $b = .13$ ,  $CI = .04-.24$ ). An examination of the specific indirect

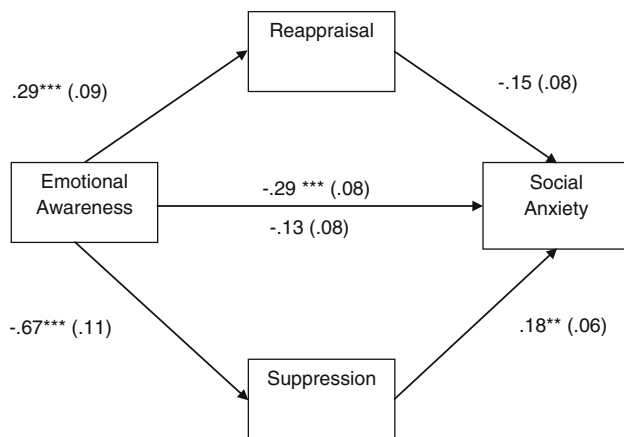


**Fig. 1** Multiple indirect effects model of emotional awareness on depressive symptoms by reappraisal and suppression. Values represent unstandardized regression coefficients; values in the parentheses represent standard error. The coefficient from emotional awareness to depression above the center horizontal path represents the total (direct) effect. The coefficient from emotional awareness to depression below the center horizontal path represents the indirect effect (controlling for reappraisal and suppression). \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

effects indicates that reappraisal was significant ( $b = .07$ ,  $CI = .02-.16$ ), but not suppression ( $b = .06$ ,  $CI = -.02 to .16$ ). The partial effect of age was not significant. Thus, low reappraisal but not high suppression was associated with depressive symptoms.

The hypothesized model was significant for social anxiety and accounted for 16 % of the variance in symptoms. The total direct effect of emotional awareness on social anxiety was significant but after controlling for reappraisal and suppression, the direct effect of emotional awareness on social anxiety no longer reached significance (Fig. 2). The total indirect effect of emotional awareness through reappraisal and suppression was significant ( $b = .16$ ,  $CI = .05-.30$ ). An examination of the specific indirect effects indicates that suppression was significant ( $b = .12$ ,  $CI = .03-.26$ ) but not reappraisal ( $b = .04$ ,  $CI = -.00 to .12$ ). The partial effect of age was not significant. Thus, high suppression but not low reappraisal was associated with anxiety symptoms.





**Fig. 2** Multiple indirect effects model of emotional awareness on social anxiety symptoms by reappraisal and suppression. Values represent unstandardized regression coefficients; values in the *parentheses* represent standard error. The coefficient from emotional awareness to social anxiety *above* the *center horizontal* path represents the total (direct) effect. The coefficient from emotional awareness to social anxiety *below* the *center horizontal* path represents the indirect effect (controlling for reappraisal and suppression). \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

## Discussion

The goal of the present study was to test the indirect effects of emotional reappraisal and suppression on the association between emotional awareness and internalizing symptoms. Results supported the hypothesized relationships. As predicted, emotional awareness was positively associated with emotional reappraisal and negatively to emotional suppression. Moreover, emotional awareness was negatively associated to both depressive and social anxiety symptoms. When emotional reappraisal and suppression were added to the models, the direct effect of emotional awareness on internalizing symptoms was indistinguishable from zero. Emotional reappraisal, but not suppression, emerged as a significant indirect effect between emotional awareness and depressive symptoms, while emotional suppression, but not reappraisal, emerged as a significant indirect effect between emotional awareness and social anxiety symptoms. These results suggest a differential effect of emotion regulation strategies, suggesting that individual differences in emotional reappraisal may be more salient for depressive symptoms while emotional suppression may be more salient for the development of social anxiety symptoms.

Because reappraisal involves cognitive re-framing of an emotional situation, it requires the understanding of specific emotional elicitors and corresponding emotions (Chen et al. 2011; Swart et al. 2009). Adolescents with high emotional awareness may therefore be more likely to use emotional reappraisal. Moreover, the ability to reappraise emotionally charged situations may lessen the chance that

the adolescent will ruminate, a mechanism commonly associated with depression (Nolen-Hoeksema 1991; Nolen-Hoeksema et al. 2008). Past research has found that women are more likely to ruminate than men, a gender difference that has also been confirmed in adolescents (Broderick 1998; Mezulis et al. 2002; Nolen-Hoeksema et al. 1993; Nolen-Hoeksema et al. 1994; Peled and Moretti 2007). During adolescence females become extremely sensitive to negative social evaluations (Westenberg et al. 2004). In particular, adolescent females experience an increase in social comparisons (Rankin et al. 2004) as well as higher fear of social evaluation (Mallet and Rodriguez-Tome 1999) compared to male adolescents. The increase in negative social evaluations among females may be one pathway leading to increased rumination and negative affect. Because rumination inhibits adaptive strategies or actions that may decrease focus on the individual's current mood (Joormann and D'Avanzato 2010) emotional reappraisal may be an important emotion regulation strategy employed by adolescents with high emotional awareness that buffers against the development of depressive symptoms.

Emotional suppression, on the other hand, may be a common regulatory technique used by adolescents with low emotional awareness. Over the last decade researchers have come to agree that an emotional response can be activated without awareness (Dolan and Vuilleumier 2003; LeDoux 2000; Ruys et al. 2011; Zajonc 1980). For instance, there is a large body of research indicating that people are able to recognize and react to masked facial stimuli without any conscious experience or awareness of the specific elicitor (e.g., Dimberg et al. 2000; Esteves et al. 1994). While this level of automatic processing may have functional significance (e.g., from an evolutionary perspective), social interactions inevitably become more complex resulting in the need for a much more sophisticated level of emotional awareness. Thus, while an individual with poor emotional awareness no doubt still experiences emotion, they may have difficulty understanding the causes, contexts, and consequences of their emotions. Emotional suppression may therefore act as a way of regulating emotions that individuals with low emotional awareness do not completely understand. In support of this, Gross and John (2003) found that adults who reported higher levels of suppression also reported less attention to and clarity of their emotions. This type of regulatory strategy is particularly costly in social contexts where the quality of relationships is affected by emotional expressivity (Riggio and Friedman 1986), emotional responsiveness (Reis and Shaver 1988), and emotional self-disclosure (Laurenceau et al. 1998). Indeed, individuals who suppress share fewer negative as well as positive emotions with others, experience greater discomfort with

closeness and sharing in relationships, have less social support from social networks, and have fewer close relationships (Gross and John 2003). This social aspect of emotional suppression may result in discomfort in social situations and in close relationships. Because of these social aspects of suppression, it may be a particularly maladaptive regulatory strategy used by adolescents with low emotional awareness that co-varies with social anxiety symptoms. Results therefore suggest that reappraisal is an emotion regulation strategy used by adolescents with high emotional awareness and is associated with depressive symptoms, while suppression is used more so by adolescents with poor emotional awareness and is related to social anxiety symptoms.

The present study was preliminary with some notable limitations. Though we would hypothesize that emotion regulation strategies such as emotional reappraisal and suppression mediate the relationship between emotional awareness and internalizing symptoms, our cross-sectional sample did not allow for a causal interpretation. A longitudinal sample would be necessary to demonstrate temporal causality of the hypothesized relationships. Moreover, the present study focused on female adolescents, therefore further research addressing different ages and including males will be necessary to reveal the generalizability of these findings. Furthermore, the present sample was composed largely of Caucasian adolescents who may differ significantly in their reporting of and experiences of emotion. Thus, future research is necessary to examine the generalizability of these findings in different racial and ethnic groups. Lastly, our study was based solely on self-report measures. Future studies employing more ecologically valid measures of emotion regulation are necessary.

The present study suggests that emotion regulation strategies play an important role in determining depressive and social anxiety symptoms and are associated with an adolescent's level of emotional awareness. While not all adolescents experience increased depressive and anxiety symptoms, the developmentally typical changes in emotionality (Arnett 1999; Brooks-Gunn and Warren 1989; Larson and Ham 1993) may be an important contributing factor for those adolescents who do (Steinberg 2008; Yap et al. 2007). Adolescents with both depression and anxiety, for instance, have been found to have fewer regulatory strategies at their disposal and those that they do employ are less effective (Carthy et al. 2010; Garber et al. 1995). Therefore, teaching adolescents effective regulatory strategies to cope with increased emotional arousal would be an important factor to help decrease the risk for internalizing symptoms. However, the present study suggests that increasing adolescents' emotional awareness and ability to identify specific emotions might be a good first step to

diminish the risk of internalizing symptoms during adolescence through better emotion regulation.

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