Initial Validation of the Emotion Expression Scale for Children (EESC)

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The Emotion Expression Scale for Children (EESC) is a new self-report scale designed to examine 2 aspects of deficient emotion expression: lack of emotion awareness and lack of motivation to express negative emotion. Validity was assessed using self-report measures of emotion regulation and self- and peer-report of internalizing and externalizing symptoms. Using a community sample of 208 fourth- and fifth-grade children, reliability analyses revealed high internal consistency and moderate test–retest reliability of the EESC. The results provide initial support for concurrent validity for the EESC factors evidenced by relations with measures of emotion management. Associations were found between the EESC and measures of internalizing symptoms.

Emotion regulation has been defined as “the extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one’s goals” (Thompson, 1994, pp. 27–28). Thompson highlights both intrinsic and extrinsic processes in his definition of emotion regulation that are inherently related to emotion expression. Intrinsic processes include the awareness of internal emotion states, whereas extrinsic processes refer to the expression or communication of emotion. According to the functionalist theory (Campos, Campos, & Barrett, 1989), the development of skills to regulate emotional experience and expression is a prerequisite for adaptive psychological and social development. Weaknesses in these skills, such as deficits in emotion expression, can interfere with healthy psychosocial functioning. This study presents preliminary reliability and validity data on a measure of children’s emotion expression, one of the critical skills related to adaptive emotion regulation.

Developmental and emotion theorists propose that the development of emotion dysregulation patterns in childhood may lead to later development of psychopathology (Cole, Michel, & O’Donnell Teti, 1994). Empirical support for this hypothesis indicates that poor regulation of emotion is positively correlated with symptoms of depression, anxiety, and somatic complaints in children (Garber, Braafladt, & Zeman, 1991; Garber, Zeman, & Walker, 1990). Given that children with emotion regulation deficits may be at risk for later psychopathology, the assessment of children with poor emotion expression may prove beneficial for the prevention of poor psychological outcomes.

Several theorists highlight the importance of adaptive emotion expression in the development of emotion regulation skills. Emotion expression is comprised of a variety of components (Saarni, 1999). This study is concerned with examining two central aspects of emotion expression, namely, emotion awareness and the motivation to express emotion. Emotion awareness is considered a skill necessary for emotional competence and affective social competence (Halberstadt, Denham, & Dunsmore, 2001). It has been presumed that individuals with poor awareness of internal emotion states will have subsequent trouble regulating the experience and expression of that emotion, leading to psychological maladjustment (Lane & Schwartz, 1987).

The functionalist approach to emotion emphasizes the communicative role of emotions within the context of social interaction. Over time, this communication style can lead to maladaptive social functioning and poor peer relations, factors that consistently predict negative psychological outcomes (Eisenberg et al., 1997). Research indicates that some individuals develop a constrained, inhibited, nonexpressive style of emotion expression that results in significantly impaired social relationships (Kry stal & Krystal, 1988).

Despite the role that deficits in emotion awareness and motivation to express emotion may play in the development of psychopathology, to date, no measures exist that assess these aspects of emotion expression in childhood. Other emotion scales examine related aspects of emotion regulation, including range and frequency of experienced emotion (Differential Emotions Scale; Blumberg & Izard, 1986); behavioral management of sadness and anger (Children’s Sadness
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Management Scale (CSMS) and Children’s Anger Management Scale (CAMS; Zeman, Shipman, & Penza-Clyve, 2001); and parent-report of children’s emotion regulation ability and emotion lability (Emotion Regulation Checklist; Shields & Cicchetti, 1997). As such, the child clinical literature continues to lack a measure that assesses problematic aspects of emotion expression such as poor emotion awareness and reluctance to express emotion.

The primary goal of this study was to develop and validate a measure that examines two aspects of emotion expression in children. It was anticipated that the Emotion Expression Scale for Children (EESC) would yield two factors: poor awareness, describing difficulty labeling internal emotional experience, and reluctance to express emotion, describing lack of motivation or willingness to communicate or express negative emotions to others. The EESC is an important addition to the emotion and child clinical literatures as it may assist in the assessment of children with emotion regulation skill deficits, who consequently may be at risk for developing symptoms of psychopathology.

Children between the ages of 9 and 12 years participated in this study, given the notion that patterns of emotion regulation develop and become more stable during middle childhood (Cole & Kaslow, 1988). Two sources of information were used to establish initial validity for this measure: (a) self-report of emotion regulation and internalizing symptoms and (b) peer ratings of aggressive and withdrawn behavior. Internal consistency and test–retest reliability were examined using Cronbach’s α and Pearson product–moment correlations.

To provide preliminary support for the concurrent validity of the poor awareness factor, we expected that deficits in emotional awareness would be positively correlated with (a) difficulties in emotion regulation (i.e., inhibition and dysregulated expression); (b) poor emotion coping; and (c) internalized psychological distress. These hypotheses are based on theory linking emotion awareness with emotionally competent development (Halberstadt et al., 2001; Saarni, 1999) and based on research associating poor emotion awareness with psychological maladjustment (Lane & Schwartz, 1987).

With respect to the expressive reluctance factor, we expected that low motivation to express emotion would be positively correlated with (a) general sadness and anger inhibition; (b) control over sadness, anger, and pain expression in a peer context; (c) internalizing symptoms; and (d) peer ratings of withdrawn behavior. These expectations are based on research demonstrating that deficits in emotion expression can lead to poor psychological and social outcomes (Eisenberg et al., 1997; Krystal & Krystal, 1988). These hypotheses are described further in the Method section.

Method

Participants

Participants were 208 children (109 boys, 99 girls) ranging in age from 9 years, 0 months to 12 years, 9 months (M age = 10 years 9 months; SD = 12 months) recruited from the fourth (N = 68) and fifth (N = 140) grades of a public elementary school system serving a working-class, small urban area. The sample was representative of the racial distribution of children in the geographical area, with 95.2% of children of European American heritage. Peers (N = 208) rated each other on specific behaviors described in the following.

Scale Development

The EESC was initially adapted from the 30-item Toronto Alexithymia Scale for adults (Bagby, Taylor, & Ryan, 1986), a measure of impoverished ability to express emotion. Given the importance of emotion expression to healthy socioemotional functioning in childhood, the Toronto Alexithymia Scale was selected as a starting point for scale development. Items were adapted for children by group consensus of clinical-child graduate students and psychologists. Children responded to items using a 5-point Likert scale with scores of 1 (not at all true), 2 (a little true), 3 (somewhat true), 4 (very true), and 5 (extremely true) to indicate how well each item describes their experience with these expressive difficulties. Higher scores indicate poorer emotion awareness and greater reluctance to express emotion.

Validation Assessment

Emotion Measures

CSMS and CAMS. The CSMS (Zeman et al., 2001) is a 12-item questionnaire that assesses behaviorally oriented management of sadness using a 3-point Likert scale with scores of 1 (hardly ever), 2 (sometimes), and 3 (often). A parallel 11-item version was constructed that examines anger management (CAMS; Zeman et al., 2001). Factor analyses yielded three factors for each emotion, including inhibition, dysregulated expression, and emotion regulation coping. Inhibition is defined as turning emotion inward toward the self (e.g., “I hold my sadness in”). Dysregulated expression reflects the expression of emotion in culturally inappropriate, nonconstructive ways (e.g., “I whine and fuss about what’s making me feel sad”). Emotion regulation coping includes strategies for coping with sadness and anger by controlling specific emotion behaviors (e.g., “I try to calmly deal with what is making me feel mad”). Scores are derived by summing the items comprising each factor and then dividing by the number of items to yield a score that can
range from 1.0 to 3.0 (i.e., inhibition, 4 items; dysregulated expression, 3 items; coping, 5 sad items, 4 anger items).

Based on a community sample of primarily White 9- to 12-year-old children, internal consistency ranged from .62 to .77 with test–retest reliability ranging from .61 to .80 (Zeman et al., 2001). Satisfactory indexes of construct validity were established for each scale (Zeman et al., 2001). Means and standard deviations are presented in Table 2.

The inhibition and dysregulated expression factors represent nonconstructive behavioral methods for managing emotion. Thus, it was hypothesized that the EESC poor awareness factor would correlate positively with the inhibition and dysregulated expression factors of the CSMS and CAMS and correlate negatively with the emotion regulation coping factor of the CSMS and CAMS, which represent planful and constructive behavioral methods of emotion management. Given that the expressive reluctance factor assesses an unwillingness to express emotion, it was hypothesized that this factor would correlate highly with the inhibition factor for sadness and anger. The expressive reluctance factor was not expected to correlate with the dysregulated expression or the Emotion regulation coping factors of the CSMS and CAMS because there is no empirical evidence that suggests an unwillingness to express emotion is related to inappropriate emotional outbursts or to behavioral methods of coping with emotion.

**Affect Regulation Interview (ARI).** The ARI assesses children’s decisions to express or control expressions of sadness, anger, and pain in the presence of a peer (Zeman & Garber, 1996). The ARI includes nine vignettes that depict three scenarios (i.e., receiving a present, going to a sporting event, attending a party) eliciting feelings of sadness, anger, and pain. See the Appendix for sample vignettes. The child is told to imagine that he or she is the same-sex protagonist in the story and then is asked, using a 4-point scale, whether he or she would express sadness, anger, or pain to a same-sex peer; scores are 1 (definitely would show), 2 (probably would show), 3 (probably would not show), and 4 (definitely would not show). Scores are then summed across each emotion type (range = 3 to 12) with higher scores indicating higher levels of emotion control. The ARI correlates significantly positively with the CSMS and CAMS inhibition scores and negatively with the Regulation Coping scale. See the Appendix for sample vignettes.

No significant associations between the poor awareness factor and the ARI scores were anticipated because lack of emotion awareness does not necessarily indicate increased emotion control. The expressive reluctance factor measures children’s unwillingness to express emotion states; thus it was hypothesized that this factor would be positively correlated with ARI scores.

**Internalizing Symptom Measures**

Relations between both EESC factors and internalizing symptoms were hypothesized. Given developmental theory asserting that emotion awareness is a fundamental skill in emotional and affective social competence (Halberstadt et al., 2001; Saarni, 1999), it was expected that the poor awareness factor would exhibit strong correlations with the internalizing symptom measures. A reluctance to express emotions also plays an important role in disrupting social relationships that, in turn, can lead to psychopathology (Lane & Schwartz, 1987; Saarni, 1999). Willingness to express emotion, however, is not considered to be as essential a building block to emotional competence as is emotion awareness (Saarni, 1999). For this reason, the expressive reluctance factor was expected to demonstrate positive, but less robust, correlations with internalizing symptom measures.

**Child Depression Inventory (CDI).** The CDI is a 27-item self-report questionnaire that assesses depressive symptoms in children (Kovacs, 1992). Each item includes three statements regarding a particular depressive symptom (0 = lack of depression to 2 = indicative of depression) that children respond to by checking one statement per item that best describes their feelings over the past 2 weeks. Test–retest reliability, internal consistency, as well as concurrent and criterion-related validity have been established (Kovacs, 1992). The suicide question was omitted in this study because of an Institutional Review Board decision. For this sample, scores on this 26-item CDI ranged from 0 to 55 (possible range = 0 to 52).

**State–Trait Anxiety Inventory for Children (STAIC).** The Trait scale of the STAIC (Spielberger, 1973) is a 20-item, self-report measure that uses a 3-point Likert format with scores of 1 (rarely) to 3 (a lot) to assess perceptions of tendencies to experience anxiety. Acceptable levels of reliability and validity have been demonstrated (Walker & Kaufman, 1984). For this sample, the scores on the Trait scale ranged from 20 to 53 (possible range = 20 to 60).

**Children’s Somatization Inventory (CSI).** The CSI (Garber, Walker, & Zeman, 1991) is a 35-item self-report questionnaire that assesses children’s frequency of somatic complaints (i.e., headaches, stomach aches) in the past 2 weeks. Children respond using a 5-point Likert scale ranging from 0 (not at all) to 4 (a whole lot). Adequate reliability and validity have been demonstrated (Garber, Walker, et al., 1991). Scores on
the CSI ranged from 1 to 103 in this sample (possible range = 0 to 140).

Social Functioning Measure

Given the evidence that social and emotional functioning are highly related (Halberstadt et al., 2001), a measure of social functioning was included in this study to provide further validity. Using a 5-point Likert scale ranging from 1 (not at all true) to 5 (very true), children were provided with a list of participating classmates’ names and were asked to rate each classmate on four aggressive behaviors (e.g., starts fights; is mean; gets mad easily; and hits, pushes, or kicks) and four withdrawn behaviors (i.e., likes to be alone a lot, easy to push around, is afraid to join in a group, is shy). The range for the aggressive behavior ratings in this sample was 4.0 to 15.1 (possible range = 4 to 20), and the range for the ratings of withdrawn behavior was 4.4 to 15.3 (possible range = 4 to 20).

No relation was expected between the EESC factors and peer ratings of aggression because poor emotion awareness and a lack of expressive willingness are not necessarily associated with externalizing types of behavior such as aggression. No relation was expected between poor awareness and peer ratings of withdrawn behavior due to a lack of empirical evidence linking emotion awareness with withdrawal. We speculated that the expressive reluctance factor would correlate positively with peer ratings of withdrawn behavior because a withdrawn style of social interaction may be associated with a lack of motivation to express emotion.

Results

Reliability Analyses

Following data collection from this study, analyses of internal consistency indicated that 14 items were not highly associated with the other items. Thus, these items were deleted, yielding a 16-item scale that assesses cognitively oriented approaches to emotion expression.

Principal components analyses with varimax rotation yielded a two-factor structure that accounted for 46.4% of the variance. Only factors with eigenvalues greater than 1.0 and items that had factor loadings greater than .40 were retained (Browne, 1968; Cattell & Jaspers, 1967; Stevens, 1996). The eigenvalue of the first factor was 6.06, which explained 37.9% of the variance. Eight items loaded on this factor that described a lack of emotion awareness, thus it was labeled “poor awareness.” The eigenvalue for the second factor was 1.36, which accounted for 8.5% of the variance. Eight items loaded on this factor that described an unwillingness to express emotion and thus was labeled “expressive reluctance.” Factor loadings, means, and standard deviations for EESC items and factors and intra-item correlations are presented in Table 1.

High internal consistencies for the poor awareness factor (coefficient α = .83) and the expressive reluctance factor (coefficient α = .81) were found. Using a 2-week interval between administrations, a Pearson product–moment correlation indicated moderate test–retest reliability (poor awareness, r = .59; expressive reluctance, r = .56). There were no significant sex differences on the mean factor scores or the total score.

Validation Assessment

Construct validity was assessed by Pearson product–moment correlations. Convergent validity was analyzed by examining relations between the EESC factors and measures of emotion regulation behavior (CSMS and CAMS, ARI). Associations with internalizing symptoms were examined, including depressive symptoms (CDI), anxious symptoms (STAIC), and symptoms of somatization (CSI). Relations of the

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1The following items were removed from the initial scale to yield the final 16-item EESC: I often daydream; I like to pretend; I would rather be alone than be with a friend; when I cry, I always know why; daydreaming is a waste of time; it is not nice to get angry; it is hard for me to make friends; I am bored a lot; at times I feel like smashing things; I like to let people know what I think about things; when I have nothing else to do, I like to daydream; I do not often feel mad; I often dream at night; it is easy for me to describe how I feel.

2There was only one significant sex difference with girls endorsing the item “I often do not know how I am feeling” significantly more than boys, t(207) = 2.67, p < .01 (girls, M = 1.89, SD = 1.13; boys, M = 1.52, SD = 0.88). There were no other sex differences on the other items, the factor scores, or the total score.
Table 1. Factor Loadings of EESC Items and Means and Standard Deviations for Each Item

<table>
<thead>
<tr>
<th>Factor/Item</th>
<th>PA</th>
<th>ER</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor awareness factor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. When I feel upset, I do not know how to talk about it.</td>
<td>.70</td>
<td>.43</td>
<td>1.85</td>
<td>1.14</td>
</tr>
<tr>
<td>15. I often do not know why I am angry.</td>
<td>.65</td>
<td>.03</td>
<td>1.71</td>
<td>1.03</td>
</tr>
<tr>
<td>11. Sometimes I just don’t have words to describe how I feel.</td>
<td>.65</td>
<td>.21</td>
<td>2.30</td>
<td>1.25</td>
</tr>
<tr>
<td>9. I often do not know how I am feeling.</td>
<td>.65</td>
<td>.08</td>
<td>2.10</td>
<td>1.43</td>
</tr>
<tr>
<td>10. People tell me I should talk about my feelings more often.</td>
<td>.54</td>
<td>.26</td>
<td>2.01</td>
<td>1.31</td>
</tr>
<tr>
<td>3. When something bad happens, I feel like exploding.</td>
<td>.57</td>
<td>.50</td>
<td>2.00</td>
<td>1.32</td>
</tr>
<tr>
<td>14. I know I should show my feelings, but it is too hard.</td>
<td>.58</td>
<td>.31</td>
<td>1.93</td>
<td>1.10</td>
</tr>
<tr>
<td>5. I have feelings that I can’t figure out.</td>
<td>15.61</td>
<td>6.40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Summary score</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Expressive reluctance factor

<table>
<thead>
<tr>
<th>Factor/Item</th>
<th>PA</th>
<th>ER</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I prefer to keep my feelings to myself.</td>
<td>.16</td>
<td>.77</td>
<td>2.51</td>
<td>1.27</td>
</tr>
<tr>
<td>4. I don’t show how I really feel in order not to hurt others’ feelings.</td>
<td>.04</td>
<td>.71</td>
<td>2.36</td>
<td>1.33</td>
</tr>
<tr>
<td>2. I do not like to talk about how I feel.</td>
<td>.31</td>
<td>.71</td>
<td>2.30</td>
<td>1.27</td>
</tr>
<tr>
<td>12. When I’m sad, I try not to show it.</td>
<td>.17</td>
<td>.65</td>
<td>2.34</td>
<td>1.38</td>
</tr>
<tr>
<td>7. When I get upset, I am afraid to show it.</td>
<td>.33</td>
<td>.56</td>
<td>1.80</td>
<td>1.15</td>
</tr>
<tr>
<td>6. I usually do not talk to people until they talk to me first.</td>
<td>.21</td>
<td>.55</td>
<td>1.87</td>
<td>1.20</td>
</tr>
<tr>
<td>16. It is hard for me to show how I feel about somebody.</td>
<td>.44</td>
<td>.50</td>
<td>2.36</td>
<td>1.35</td>
</tr>
<tr>
<td>13. Other people don’t like it when you show how you really feel.</td>
<td>.20</td>
<td>.48</td>
<td>1.79</td>
<td>1.04</td>
</tr>
<tr>
<td>Summary score</td>
<td>17.33</td>
<td>6.46</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: N = 208. EESC = Emotion Expression Scale for Children; PA = poor awareness factor; ER = expressive reluctance factor.

EESC to social functioning were assessed using peer ratings of aggressive and withdrawn behavior. Correlation matrices are presented in Table 2. Fisher’s r to Z transformations were calculated to compare the pattern of correlations.

Emotion Measures

The poor awareness factor, as expected, was positively correlated with the CSMS and CAMS Inhibition and Dysregulation scales and negatively correlated with the Regulation Coping scales. Thus, the more children viewed themselves as lacking emotion awareness, the more they were likely to report inhibiting emotional expressivity, expressing emotions in nonconstructive ways, and coping in maladaptive ways when experiencing sadness and anger.

Consistent with hypotheses, the expressive reluctance factor correlated positively with the CSMS and CAMS Inhibition scales. That is, the more children perceived themselves as being unwilling to express negative emotions, the more they reported inhibiting their behavioral expressions of sadness and anger. Contrary to prediction, the expressive reluctance factor also was correlated with the Dysregulated Expression scales, indicating that the less willing children were to express emotion, the more they reported expressing these emotions in exaggerated, dysregulated ways. As expected, the expressive reluctance factor was not correlated with the sadness and anger Emotion Regulation Coping scales.

As predicted, the poor awareness factor was not correlated with the ARI scores. The expressive reluctance factor was positively correlated with the ARI emotion regulation questions for anger, sadness, and pain. Thus, greater reluctance to express emotion was associated with self-reports of decisions to not express sadness, anger, and pain to peers. No significant sex differences emerged on the emotion measures.

Internalizing Symptom Measures

Consistent with hypotheses, both EESC factors correlated positively with the CDI, the STAIC, and the CSI, indicating associations between children’s self-reported difficulties with emotion awareness and willingness to express negative emotion and their experience of internalizing symptoms. Of note, the relations between the poor awareness factor and the internalizing symptom measures were significantly stronger than those found with the expressive reluctance factor (see Table 2). No significant sex differences were found on the CDI, STAIC, or CSI.

Social Functioning Measure

As predicted, no significant correlations were found between the EESC factors and peer ratings of aggression. Also as predicted, the poor awareness factor was not found to correlate with peer-report of withdrawn behavior. Contrary to hypotheses, however, the expressive reluctance factor was not associated with peer-report of withdrawn behavior. A significant sex difference was noted on the aggressive ratings, with peers rating boys as more aggressive (M = 7.68, SD = 2.67)
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Table 2. Measures of Convergent Validity: Means, Standard Deviations, Correlations With the EESC Factors, and Fisher z Tests

<table>
<thead>
<tr>
<th>Measures</th>
<th>M</th>
<th>SD</th>
<th>PA</th>
<th>ER</th>
<th>r-Zr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotion</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSMS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inhibition</td>
<td>1.77</td>
<td>.59</td>
<td>.41**</td>
<td>.53**</td>
<td>1.54</td>
</tr>
<tr>
<td>Dysregulated Expression</td>
<td>1.53</td>
<td>.50</td>
<td>.37**</td>
<td>.27**</td>
<td>1.12</td>
</tr>
<tr>
<td>Regulation Coping</td>
<td>2.13</td>
<td>.46</td>
<td>-.23**</td>
<td>-.01</td>
<td>2.24*</td>
</tr>
<tr>
<td>CAMS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inhibition</td>
<td>1.64</td>
<td>.51</td>
<td>.18**</td>
<td>.40**</td>
<td>2.43*</td>
</tr>
<tr>
<td>Dysregulated Expression</td>
<td>1.73</td>
<td>.58</td>
<td>.36**</td>
<td>.18**</td>
<td>1.96*</td>
</tr>
<tr>
<td>Regulation Coping</td>
<td>2.22</td>
<td>.53</td>
<td>-.32**</td>
<td>-.10</td>
<td>-2.32*</td>
</tr>
<tr>
<td>ARI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sadness</td>
<td>8.18</td>
<td>1.88</td>
<td>.03</td>
<td>.25**</td>
<td>2.26*</td>
</tr>
<tr>
<td>Anger</td>
<td>7.35</td>
<td>1.83</td>
<td>.06</td>
<td>.21**</td>
<td>1.54</td>
</tr>
<tr>
<td>Pain</td>
<td>6.65</td>
<td>2.09</td>
<td>.14</td>
<td>.30**</td>
<td>1.68</td>
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<td>Internalizing Symptom</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>CDI</td>
<td>7.67</td>
<td>7.01</td>
<td>.48**</td>
<td>.28**</td>
<td>2.35*</td>
</tr>
<tr>
<td>STAIC</td>
<td>32.96</td>
<td>6.89</td>
<td>.61**</td>
<td>.45**</td>
<td>2.24*</td>
</tr>
<tr>
<td>CSI</td>
<td>18.93</td>
<td>17.55</td>
<td>.42**</td>
<td>.20**</td>
<td>2.45*</td>
</tr>
<tr>
<td>Social Functioning</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Aggressive Behavior</td>
<td>6.94</td>
<td>2.42</td>
<td>.02</td>
<td>-.02</td>
<td>0.40</td>
</tr>
<tr>
<td>Withdrawn Behavior</td>
<td>6.64</td>
<td>1.64</td>
<td>.04</td>
<td>.01</td>
<td>0.30</td>
</tr>
</tbody>
</table>

Note: N = 208. EESC = Emotion Expression Scale for Children; PA = poor awareness factor; ER = expressive reluctance factor; CSMS = Children’s Sadness Management Scale; CAMS = Children’s Anger Management Scale; ARI = Affect Regulation Interview; CDI = Child Depression Inventory; STAIC = State-Trait Anxiety Inventory for Children; CSI = Children’s Somatization Inventory.

*p < .05. **p < .01.

than girls (M = 6.15, SD = 1.80), t(206) = 4.77, p < .001. No significant sex difference emerged for peer ratings of withdrawn behavior.

Discussion

In sum, the findings from this study lend partial support to the EESC as providing a reliable and valid measure of poor emotion awareness and reluctance to express negative emotion states in elementary school age children. The EESC has high internal consistency with adequate test–retest reliability. With respect to convergent validity, the EESC emotion awareness factor was positively related to the inhibition and dysregulated expression of sadness and anger, and negatively related to constructive coping with sadness and anger. There were no associations between the emotion awareness factor and the ARI questions or the social functioning measures.

These findings lend support to the theoretical notion (Campos et al., 1989; Halberstadt et al., 2001; Saarni, 1999) that emotion awareness is fundamentally related to children’s ability to regulate negative affect. In this study, the more children reported having poor emotion awareness skills, the more they adopted an emotion management style characterized by inhibition or inappropriate, nonconstructive expressivity or both. This seemingly contradictory expressive style may indicate the level of emotional confusion that accompanies a deficit in emotion awareness. Without being able to define and label one’s emotional experiences, it is likely that the expression of this state of arousal will be displayed in a variety of maladaptive ways. Further, emotion awareness was inversely related to adaptive coping with sadness and anger experience. This demonstrates that the emotion awareness factor is able to discriminate between maladaptive and adaptive behaviorally oriented emotion management coping strategies.

With respect to the expressive reluctance factor, children’s report of their unwillingness to express emotion was associated with both the inhibition and dysregulated expression of sadness and anger and the ARI questions for sadness, anger, and pain. The correlations between the expressive reluctance factor and the CSMS and CAMS Inhibition scales and the ARI questions provide convincing evidence for convergent validity, because all of these items assess different methods of controlling emotion expression. The unexpected, moderate association between the expressive reluctance factor and the Dysregulated Expression scales indicates that the more children perceived themselves as unwilling to express emotion, the more they endorsed managing sadness and anger in culturally inappropriate outbursts. It is possible that cognitively children believe that they do not express negative emotion but endure behavioral expressions of sadness and anger (“I do things like mope around when I’m sad”) without realizing the expressive quality of that behavior. It also may be that children who are primarily emotionally unexpressive have little experience and practice controlling their emotions under intensely arousing situations and, as a result, respond to these
types of emotional events in an undercontrolled, nonconstructive manner.

Evidence for the utility of the EESC was provided from the significant correlations of the emotion awareness and expressive reluctance factors with all measures of internalizing symptoms, including anxiety, depression, and somatization. This is consistent with the developmental psychopathology approach that proposes that deficits in emotion regulation skills (including deficits in awareness and expression) contribute to the development and maintenance of psychopathology (Cole et al., 1994). For example, patterns of poor emotion expression have been found in anxious and depressed children (Garber, Braalht, et al., 1991) and children with somatic complaints (Garber et al., 1990). As such, the EESC may prove useful in conjunction with other assessment tools in identifying school-age children at risk for developing internalizing types of symptoms.

It is interesting to note that the emotion awareness factor, in contrast to the expressive reluctance factor, had a stronger pattern of correlations with the internalizing symptom measures. This finding is consistent with literature that indicates that children’s awareness of their emotions may moderate their vulnerability to developing psychopathology by providing them with vital information from which to develop effective problem-solving strategies (Southam-Gerow & Kendall, 2000).

Regarding social functioning, the EESC factors did not correlate significantly with peer ratings of aggression and withdrawn behavior. It may be that the underlying deficit associated with aggressive and withdrawn social behavior is not related to difficulties in awareness and willingness to express emotion. For example, children who are aggressive clearly are willing to express their negative emotions and may also be aware of what types of contexts elicit specific emotional responses. It is possible, however, that significant relations were not obtained due to measurement issues. Both the aggression and withdrawn behavior peer ratings include items of observable behavior (e.g., “hits, pushes, kicks,” “likes to be alone”), whereas the EESC items involve perceptions of internal emotional processes (e.g., “I often do not know how I am feeling”).

This study represents an important step in addressing the gap in the emotion and child clinical literature; namely, the lack of reliable and valid measures to assess children’s emotion expression deficits. The findings, however, should be interpreted within the context of several conceptual and methodological limitations. From a conceptual standpoint, this study demonstrated an association between poor emotion awareness and lack of motivation for emotion expression with concurrent internalizing symptoms. Given the correlational nature of this research, however, it cannot be determined whether children identified as deficient in emotion expression are at risk for developing psychopathology or if the psychopathology itself resulted in concomitant levels of emotion expression deficits.

It is interesting to consider why children with poorer levels of emotion awareness would endorse higher levels of symptoms of anxiety and depression. It is possible that when an individual is unable to determine how he or she feels, it is difficult to resolve the negative emotional experience, and, consequently, increasing levels of distress may result. When such children are asked whether they experience symptoms of anxiety and depression, they report affirmatively, not because they know precisely how they feel, but rather because they know they are experiencing general emotional distress. Future research should elucidate this finding by including measures of both positive and negative affect as well as giving children the opportunity to describe their emotional well-being in an open-ended manner to examine the nature of the correlation with the measures of internalizing symptoms included in this study.

In terms of methodological limitations, this study relied primarily on self-report with one measure based on peer-report. Children’s responses may have been affected by social desirability effects or pleas for attention. This seems unlikely, however, given the clear pattern of findings that emerged and normal distribution of scores on the internalizing symptom measures. Given the heavy reliance on self-report, method variance may have inflated these findings. In addition, the data from this study were collected from a small, urban area that represents a demographic region of limited diversity with respect to ethnicity and socioeconomic status, thereby placing limits on generalizability. Further, only children ages 9 to 12 years were included, thus the norming process does not encompass the full range of development. To address these limitations, future research should further validate this measure using a more diversified sample with observational methodology, measures of social desirability, and additional informants, including caregivers and teachers.

The EESC represents an important first step in developing a more comprehensive protocol of emotion regulation measures. On further validation, the EESC may be clinically useful when incorporated into a psychological assessment to lend more specific information regarding emotional functioning of school-age children. The EESC will add to the emotion literature by allowing researchers to assess children’s perceptions of their functioning within two important domains of emotion regulation.

References

EMOTION EXPRESSION SCALE FOR CHILDREN


**APPENDIX**

Sample Vignettes From the ARI

**Sports Scenario—Sad Condition**

Sam really wants to be on the softball team. He tries out for the team. The next day, Sam goes with his friend to the bulletin board that has the list of all the children who made the team. Sam sees that he did not make the team and that lots of his friends did. It makes Sam feel sad.

**Party Scenario—Mad Condition**

Eli goes to a birthday party where he has a good time. Eli is about to go home but he can’t find his favorite jacket. Then, while Eli is with his friend, he sees another boy wearing his jacket and getting into his car. It makes Eli feel mad.

**Present Scenario—Pain Condition**

One day Megan gets a present in the mail from her grandma while her friend is visiting. While she is opening the package in front of her friend, her friend bumps into her and as a result, Megan cuts herself on a big staple that was in the package. Her finger starts to bleed a little. Megan feels some pain.

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