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Psychometric Evaluation of the Affect Regulation Checklist: Clinical and Community Samples, Parent-Reports and Youth Self-Reports

Natalie Goulter, Sherene Balanji, Brooke A. Davis, Tim James, Cassia L. McIntyre, Erica Smith, and Emily M. Thornton
Simon Fraser University

Stephanie G. Craig
Simon Fraser University and York University

Marlene M. Moretti
Simon Fraser University

The Affect Regulation Checklist (ARC) was designed to capture affect dysregulation, suppression, and reflection. Importantly, affect dysregulation has been established as a transdiagnostic mechanism underpinning many forms of psychopathology. We tested the ARC psychometric properties across clinical and community samples and through both parent-report and youth self-report information. Clinical sample: Participants included parents (n = 814; M_{age} = 43.86) and their child (n = 608; M_{age} = 13.98). Community sample: Participants included independent samples of parents (n = 578; M_{age} = 45.12) and youth (n = 809; M_{age} = 15.67). Exploratory structural equation modeling supported a three-factor structure across samples and informants. Dysregulation was positively associated with all forms of psychopathology. In general, suppression was positively associated with many forms of psychopathology, and reflection was negatively associated with externalizing problems and positively associated with internalizing problems.
Key words: adolescents – affect dysregulation – suppression – reflection – psychopathology

Emotion regulation is conceptualized as "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, p. 27). By contrast, emotion dysregulation is a pattern of maladaptive emotion regulation strategies or the absence of adaptive emotion regulation strategies, both of which interfere with an individual's goals (Beauchaine, 2015). These difficulties in adaptive emotion regulation approaches have been conferred as transdiagnostic risk for externalizing and internalizing psychopathology at multiple levels of analysis (Beauchaine & Cicchetti, 2019; Cludius et al., 2020). Given the centrality of emotion regulation to psychopathology, there is a need for reliable and valid measures tapping key dimensions of emotion regulation. Those that provide parallel versions for reporting by parents, youth, or other informants are particularly valuable in ensuring reliability in measurement and differences between informants.

EMOTION REGULATION MEASURES

One of the most widely used measures to date is the Emotion Regulation Questionnaire (ERQ; Gross & John, 2003). The ERQ is grounded in Gross' Process Model of Emotion Regulation (Gross, 2002), and more recently broadened to the Process Model of Affect Regulation (Gross, 2015; Gross et al., 2019). This model conceptualizes emotion regulation as a multifaceted process from generation to expression of a response. The construct of affect regulation (as compared to emotion regulation) is operationalized as superordinate encompassing constructs such as coping, defenses, and mood regulation (Gross, 1998b; Gross et al., 2019). The 10-item ERQ measures cognitive reappraisal (e.g., "I control my emotions by changing the way I think about the situation I'm in") and expressive suppression (e.g., "I control my emotions by not expressing them") in youth (aged 10–18 years) and adult samples. Factor analytic findings do not sup-

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Stephanie G. Craig and Marlene M. Moretti shared last author.

Requests for reprints should be sent to Natalie Goulter, Department of Psychology, Simon Fraser University, 8888 University Drive, Burnaby, BC V5A 1S6, Canada. E-mail: ngoulter@sfu.ca

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port an overarching general latent factor, but rather only two cognitive-reappraisal and expressive suppression factors (Gross & John, 2003; Gullone & Taffe, 2012).

The Affect Regulation Checklist (ARC; Moretti, 2003) differs from other measures of emotion regulation, including the ERQ, by focusing on the dimensions of dysregulation, suppression, and reflection. Dysregulation reflects a deficit in adaptive emotion regulation strategies in response to distressing emotions and includes items such as "I find that my feelings just take over and I can't do anything about it" and "when I get upset, it takes a long time for me to get over it." In contrast, suppression taps avoidance of emotions through attempts to control emotions or avoid them through distraction, with items such as "I try to do other things to keep my mind off how I feel" and "I believe it is best to keep feelings in control." These two dimensions of emotion regulation commonly co-occur and map onto a range of mental health problems. Particularly valuable is the fact that dysregulation and suppression capture defining features of trauma-related mental health problems reflected in posttraumatic stress disorders that are characterized by both intrusive and distressing memories, thoughts, and emotions, coupled with attempts to suppress or avoid these thoughts and associated emotions. The ARC is also unique by introducing a third dimension, which attempts to capture adaptive aspects of regulation, that is, reflection. Reflective functioning is defined as the ability to understand and interpret one's own and others' mental state (Fonagy et al., 1991; Katznelson, 2014), and entails skills in identifying, accepting, and constructively reflecting on emotions to gain insight into oneself and one's behaviors. The reflection subscale of the ARC builds on previous measures of emotion regulation by assessing the extent to which respondents can constructively explore their emotions, using items such as "thinking about why I have different feelings helps me to learn about myself" and "thinking about why I act in certain ways helps me to understand myself." Importantly, while other emotion regulation measures confound the measurement of emotion regulation strategies with specific types of emotions, such as being upset (Gratz & Roemer, 2004), the ARC was created to ensure that items are independent of emotions with no items linked to a specific emotional state. Thus, the scale assesses individual differences in underlying dimensions of emotion regulation processes rather than specific types of emotions.

The ARC was informed by Gross' Process Model of Emotion Regulation (Gross, 2002), in addition to a broader review of the emotion regulation literature and clinical work conducted by the measure's author (Moretti, 2003) in settings serving parents and youth (aged 8–18 years). It provides a set of parallel measures for parents or other caregivers to report on their own affect regulation and their child's affect regulation, as well as a youth self-report version. The ARC is comprised of 12 items scored on a 5-point Likert scale (1 *a lot like me* to 5 *not like me*). Past research has shown that youth-reports on the dysregulation subscale were positively associated with emotional maltreatment, reactive and instrumental aggression, depressive symptoms, and externalizing psychopathology, and youth-reports on the suppression subscale were positively associated with depressive symptoms and externalizing psychopathology (Craig & Moretti, 2019; Goulter et al., 2019; Moretti & Craig, 2013; Penney & Moretti, 2010). These studies have also shown that subscale scores demonstrate adequate to high internal reliability in self-reporting high-risk and clinical adolescent samples (dysregulation, α = .81, .83; suppression, α = .65, .74; and reflection, α = .80; Craig & Moretti, 2019; Penney & Moretti, 2010). Research has also demonstrated good internal consistency of the dysregulation subscale over three 2-year follow-ups among high-risk adolescents (time 1, α = .81; time 2, α = .79; and time 3, α = .86; Goulter et al., 2019; Moretti & Craig, 2013). However, only one study has published information on the factor structure. Using a confirmatory factor analytic (CFA) approach, Penney and Moretti (2010) found support for the aforementioned three-factor solution in a self-reporting high-risk adolescent sample (N = 179; M_{age} = 15.34 years). However, this study did not use an exploratory approach, and the psychometric properties of the ARC across clinical and community adolescent samples and through parent-report of their child and youth self-report information are currently unknown.

Associations With Psychopathology

Interest in the roles of emotion regulation and dysregulation in the development of psychopathology has been established in the literature for some time now. Increasing awareness of the limitations of using diagnostic categories to capture different types of mental health conditions (Insel et al., 2010; Kotov et al., 2017) has led many researchers to focus on processes that underlie diverse disorders

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and psychopathology at multiple levels (Goulter et al., 2021). Emotion dysregulation has been particularly prominent in this research and has been identified as a transdiagnostic mechanism for both the development and maintenance of many forms of psychopathology (Beauchaine & Cicchetti, 2019; Cludius et al., 2020). Indeed, much research has shown that emotion dysregulation is a key feature of externalizing problems among children and adolescents, including attention-deficit/hyperactivity disorder (ADHD; Graziano & Garcia, 2016) and oppositional defiant disorder (ODD; Cavanagh et al., 2017). Emotion dysregulation has also been associated with conduct disorder (CD), although to a lesser extent than ADHD and ODD, and more commonly when CD is comorbid with internalizing problems (Fanti, 2018). Emotion dysregulation is an essential feature of anxiety or panic and underpins many internalizing disorders in youth samples (Beauchaine, 2015; Gross et al., 2019). Research has also shown that emotion dysregulation mediates the association between experiences of early life adversity and depression (Moretti & Craig, 2013; O'Mahen et al., 2015), and is associated with nonsuicidal self-injury and suicidality (Hatkevich et al., 2019; Wolff et al., 2019).

Suppression of emotion also plays a role in psychopathology and has been tied to displaced aggressive behavior perpetrated postprovocation to an uninvolved target (Marcus-Newhall et al., 2000; Scott et al., 2015). This may be because youth who attempt to suppress their emotions can experience an increase in emotion dysregulation (Hofmann et al., 2009). Suppression has also been linked to anxious and depressive symptomatology (Flynn et al., 2010; John & Gross, 2004; Schäfer et al., 2017). Conversely, reflection helps to inhibit impulsive behaviors in the context of emotional circumstances (Fonagy & Luyten, 2018). The consequence of lower reflective capacity is greater externalizing problems. For example, lower reflection has been associated with externalizing problems in a clinical sample of children (Bizzi et al., 2019), and greater reflection scores have been shown to reduce externalizing symptoms during adolescence and into young adulthood (Morosan et al., 2020). Research has also demonstrated a link between lower reflective functioning and depression, but this research has predominantly been comprised of adult samples (Taubner et al., 2011). Of the limited studies with adolescents, some research has found that higher reflective functioning is associated with greater self-reported internalizing symptoms (Chow et al., 2017). Further research examining whether affective processes are associated with multiple forms of psychopathology among children and adolescents has important implications for clinical development.

The Present Study

The ARC captures key dimensions of affect regulation including dysregulation, suppression, and reflection. Preliminary evidence has found support for a three-factor solution in line with these dimensions with good-to-excellent internal consistency (Penney & Moretti, 2010). Research to date, however, has yet to fully examine the measure's range of psychometric properties for both parent- and youth self-report versions. In fact, all prior ARC research has been mono-informant from the youth perspective. As previously noted, an important consideration in mental health assessment is the role of the informant. Different patterns of symptom endorsement may emerge from parent-report versus youth self-report information. Meta-analytic research has found that clinical assessments produce low-to-moderate cross-informant correspondence (r = .28), with higher correspondence occurring for observable behaviors (e.g., externalizing vs. internalizing) or when the behaviors are within the same context (De Los Reyes et al., 2015). With regard to emotion regulation, youth may find it difficult to report on complex emotions. Alternatively, youth may be more knowledgeable of their own emotions relative to parents. Thus, we also examined the psychometric properties of the ARC based on both parent-reports and youth self-report information.

Given no research has explored the factor structure and only one study has confirmed hypothesized dimensions (Penney & Moretti, 2010), we thought it was important to analyze the structure through an exploratory structural equation modeling (ESEM) approach. The work by Penney and Moretti (2010) used CFA, which assumes that items load onto only one factor. This assumption can result in model misfit and inflated latent correlation coefficients (Cooke & Sellbom, 2019; Sellbom & Tellegen, 2019). In addition, this study used a small sample of self-report data from a high-risk adolescent sample who may be experiencing particularly high rates of affect dysregulation, and the authors do not provide information on factor loadings (including whether specific items cross-loaded) or factor correlations. To fully understand the factor structure at the item-level and psychometric properties of the ARC across multiple samples

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(i.e., clinical and community) and informants (i.e., parent-report and youth self-report), an exploratory approach is needed. ESEM is an emerging and promising method in psychological assessment combining the strengths of both exploratory (EFA) and CFA (Marsh et al., 2014). This approach is also emphasized by experts as a more suitable factor analytic method (over EFA and CFA; Marsh et al., 2014; Sellbom & Tellegen, 2019). We hypothesized that a three-factor solution reflecting dysregulation, suppression, and reflection dimensions would provide good fit to the data. We calculated internal reliability of established scale scores through Cronbach's alpha (α) and coefficient Omega (ω) and tested configural, metric, and scalar invariance comparing (a) clinical sample: parent-reports versus youth self-reports; (b) community sample: parent-reports versus youth self-reports; (c) parent-reports: clinical versus community sample; and (d) youth self-reports: clinical versus community sample. Finally, given increasing evidence that emotion dysregulation is a transdiagnostic mechanism for many forms of psychopathology, we examined the external validity of the ARC by testing whether dysregulation, suppression, and reflection confer risk for multiple forms of psychopathology, namely ADHD, ODD, CD, generalized anxiety disorder (GAD), separation anxiety disorder (SAD), and major depressive disorder (MDD). This comprehensive examination of the psychometric properties of the ARC across populations (i.e., clinical vs. community) and informants (parent- vs. youth self-reports) provides an in-depth evaluation of the ARC as an instrument for assessing youth emotion regulatory characteristics.

METHOD

Participants

Clinical sample. Pretreatment data were used from participants in an implementation evaluation of an evidence-based manualized program that supports parents of youth with serious behavioral and social–emotional problems in Canada ("Connect"; Moretti & Obsuth, 2009; Moretti et al., 2015, 2017). Caregivers were referred by community mental health agencies, schools, or hospitals due to concerns about serious mental health and behavioral problems in their child. Exclusion criteria were the presence of severe mental health disorders (psychosis; schizophrenia) or low intellectual functioning (IQ < 70). The present study included birth parents and other caregivers (n = 814; 86.1% biological; 85.3% maternal figures; age 23–73, M_{age} = 43.86, SD = 8.13) and their children (n = 608; 56.6% female; age 7–19, M_{age} = 13.98, SD = 2.36). Among parents, 75.1% identified as white, 9.6% Indigenous (e.g., First Nations, Métis, Inuit), 6.1% Asian, 3.9% reported infrequent responses, and 5.3% did not report ethnicity. Parent education (reported by n = 753) ranged from partial high school (8.8%), high school completion (17.8%), partial college/university (16.2%), college/university completion (45.9%), and postgraduate education (3.7%). Youth ethnicity reported by parents identified 63.9% as white, 14.4% Indigenous (e.g., First Nations, Métis, Inuit), 5.4% Asian, 8.0% reported infrequent responses, and 8.4% did not report ethnicity. Parents and youth each received a $25 honorarium for completing the questionnaire. Parental consent and youth assent were collected. All research protocols and procedures received approval from Simon Fraser University Office of Research Ethics [#2011 s0284].

Community sample. Participants included independent parent and youth samples from communities located in Canada who were recruited through online advertisements on social media platforms (e.g., Facebook, Twitter, Instagram) from June to July 2020. It is important to note that in contrast to the clinical sample, parent and youth samples in the community samples were unrelated. Exclusion criteria were not currently living in Canada, and youth unable to answer consent questions, which ensure comprehension. To ensure competency, youth were required to answer two questions pertaining to the risks and benefits and two questions regarding the purpose of the outlined study (Friedman et al., 2016). A total of 168 adolescents were unable to answer at least one of the questions correctly and were excluded from the study. The final sample included 578 birth parents and other caregivers (93.6% biological; 94.6% maternal figures; age 30–67, M_{age} = 45.12, SD = 5.83)[1] and 809 youth (56.2% female; age 12–18, M_{age} = 15.67, SD = 1.37). Among parents, 84.6% identified as white, 5.2% Indigenous (e.g., First Nations, Métis, Inuit), 3.5% Asian, 6.5% reported infrequent responses, and 0.2% did not report ethnicity. Parent education (reported by n = 573) ranged from partial high school (1.6%), high school completion (7.1%), partial college/university

[1]The sample of youth community parents were reporting on included 55.2% female aged 12–18 years (M_{age} = 14.63, SD = 1.77).

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(17.8%), college/university completion (45.3%), and postgraduate education (16.8%). Among youth, 73.8% identified as white, 6.7% Indigenous (e.g., First Nations, Métis, Inuit), 8.7% Asian, 10.5% reported infrequent responses, and 0.4% did not report ethnicity. All participants who completed the survey were entered into a draw for a $250 electronic gift certificate to an online store. Parent and youth consent was collected. All research protocols and procedures received approval from York University Office of Research Ethics [#2020–180].

Measures

Affect regulation. Affect dysregulation, suppression, and reflection over the past 6 months were measured with the 12-item ARC (Moretti, 2003), which is scored on a 5-point scale (1 *a lot like me* to 5 *not like me*). Factor analytic studies support a three-factor structure yielding: affect dysregulation (e.g., "child has a hard time controlling their feelings"/"I have a hard time controlling my feelings"), affect suppression (e.g., "child tries hard not to think about their feelings"/"I try hard not to think about my feelings"), and adaptive reflection (e.g., "child finds that thinking about why they have different feelings helps them to learn about themselves"/"thinking about why I have different feelings helps me to learn about myself"; Penney & Moretti, 2010). Emerging evidence has shown that the youth-reported dysregulation and suppression are associated with several forms of externalizing and internalizing psychopathology (Craig & Moretti, 2019; Moretti & Craig, 2013). This measure has also shown good psychometric properties across high-risk and clinical samples (Craig et al., 2020; Goulter et al., 2019; Moretti & Craig, 2013).

Psychopathology. *Clinical sample.* In the clinical sample, psychopathology was assessed with *T*-scores from the Brief Child and Family Phone Interview (BCFPI; Cunningham et al., 2000). The BCFPI is a standardized tool that assesses emotional and behavioral problems among children and adolescents referred for mental health services (Anderson et al., 2018; Cook et al., 2013; Goulter & Moretti, 2021). Factor analytic studies have identified six subscales with six items each, tapping different domains of functioning related to Diagnostic and Statistical Manual-IV (DSM-IV; American Psychiatric Association, 1994) diagnoses, including ADHD (e.g., "easily distracted"), ODD (e.g., "defiant, talks back to people"), CD (e.g., "steals things at home"), GAD (e.g., "worries about past behavior), SAD (e.g., "worries about being separated"), and MDD (e.g., "has no interest in usual activities"; Cunningham et al., 2009). Parents and youth were asked to rate the frequency that their child/they engaged in each behavior during the past 6 months on a 3-point Likert scale (1 *never* to 3 *often*). A *T*-score above 70 is indicative of clinical concern. BCFPI subscales in the present study showed good internal consistency based on parent-report (ADHD, α/ω = .85/.90; ODD, α/ω = .87/.92; CD, α/ω = .71/.80; SAD, α/ω = .85/.90; GAD, α/ω = .87/.91; and MDD, α/ω = .89/.93) and youth self-report (ADHD, α/ω = .82/.85; ODD, α/ω = .81/.87; CD, α/ω = .68/.77; SAD, α/ω = .83/.92; GAD, α/ω = .87/.91; and MDD, α/ω = .92/.94).

Community sample. In the community sample, psychopathology was assessed with *T*-scores from the Ontario Child Health Study Scales (OCHS; Duncan et al., 2019). The OCHS is an informant and self-report measure of emotional and behavioral problems among children and adolescents. Furthermore, the OCHS was developed from the Child Behavior Checklist (Achenbach, 1991) with permission and prior to copyright. Factor analytic studies have identified seven subscales, including ADHD (8 items; e.g., "can't concentrate, can't pay attention for long"), ODD (6 items; e.g., "angry and resentful"), CD (11 items; e.g., "cruelty, bullying, or meanness to others"), SAD (7 items; e.g., "avoids school because of fear of separation from loved ones"), GAD (6 items; e.g., "anxious or on edge"), MDD (9 items; e.g., "deliberately harms self or attempts suicide"), and social phobia (5 items; e.g., "afraid of doing things in front of others"). Reliability and validity have been established in community populations (Duncan et al., 2019). To align with the BCFPI, social phobia was not used in the present study. Parents and adolescents were asked to rate the frequency that their child/themselves engaged in each behavior during the past 4 months on a 3-point Likert scale (0 *never or not true* to 2 *often or very true*). *T*-scores were calculated based on previously established norms (Boyle et al., 2019). Similar to the BCFPI, a *T*-score above 70 is representative of clinical concern. OCHS subscales in the present study showed good internal consistency based on parent-report (ADHD, α/ω = .87/.89; ODD, α/ω = .84/.86; CD, α/ω = .76/.83; SAD, α/ω = .85/.88; GAD, α/ω = .86/.90; MDD, α/ω = .85/.89) and youth self-report (ADHD, α/ω = .81/.87; ODD, α/ω = .72/.79; CD, α/ω = .68/.74; SAD, α/ω = .83/.86; GAD, α/ω = .86/.92; MDD, α/ω = .88/.91).

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Analytic Approach

To examine factor structure, we conducted ESEM with oblique Geomin rotation in Mplus 8 (Muthén & Muthén, 2017). Like CFA, ESEM tests an a priori factor structure; like EFA, ESEM estimates factor loadings for all indicators on all factors using rotation to simple structure (Marsh et al., 2014; Sellbom & Tellegen, 2019). Several scholars have suggested that ESEM may be a more suitable factor analytic method, particularly in clinical and personality research contexts (Marsh et al., 2014; Sellbom & Tellegen, 2019). With regard to factor loadings, we relied on recommendations of removing items if the loading is higher than .32 on two or more factors (Costello & Osborne, 2005). We used the weighted least squares mean and variance adjusted (WLSMV) estimator, which handles data as categorical. This estimator is recommended when examining a scale with items rated on a Likert scale, as per the ARC (Sellbom & Tellegen, 2019). Relative fit indices (e.g., the Akaike information criterion and the Bayesian information criterion) are not available for models using the WLSMV, and thus, we relied on absolute model fit indices, including the Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), and Tucker–Lewis Index (TLI) to determine the model fit. Models with RMSEA values <.05 are typically considered excellent and values <.08 as acceptable (Brown, 2014; Little, 2013); models with CFI and TLI values >.95 are considered excellent and values >.90 as acceptable (Brown, 2014; Little, 2013).

To determine whether model fit was invariant across clinical and community samples and parent-reports and youth self-reports, we conducted multigroup CFA. We examined configural invariance, which refers to identical factor loading patterns (i.e., structure) but no equality constraints imposed across groups; metric invariance, which refers to factor loadings constrained to be the same across groups; and scalar invariance model, which refers to both the factor loadings and the intercepts constrained to be the same across groups. Given that results of chi-squared tests are highly dependent on model complexity and sample size, we used the change in CFI (ΔCFI). ΔCFI values <.01 suggest measurement invariance (Cheung & Rensvold, 2002).

To examine internal consistency, we calculated Cronbach's alpha (α) and coefficient Omega (ω). Compared to Cronbach's alpha, coefficient Omega does not rely on tau equivalence (i.e., that each item on a scale contributes equally to the total scale score); and does not assume that items are continuous with normal distributions, that errors are uncorrelated, and that the measure is unidimensional (Dunn et al., 2014; McNeish, 2018). For coefficient Omega, .70 is the recommended cutoff score.

To test for external validity, we conducted multiple regression models by regressing BCFPI (for the clinical sample) and OCHS (for the community sample) scores on all three established ARC scale scores. In this way, we are capturing unique correlates of each ARC dimension. ARC subscales were mean-scored for these analyses. Because the clinical and community samples used different measures of psychopathology, we focused on relative, rather than absolute, differences in findings to make conclusions with regard to replicability across sample and informant. In these models, youth age and gender were included as covariates.[2]

RESULTS

Exploratory Structural Equation Modeling

Clinical sample. Fit indices from the ESEM testing-correlated three-factor models are shown in Table 1. In the clinical sample, parent-report was found to provide adequate fit to the data. Factor loadings are shown in Table 2, and the three factors were representative of dysregulation, suppression, and reflection. In addition, latent correlation coefficients indicated that dysregulation was positively associated with suppression (.31; $p < .001$), whereas these factors were negatively associated with reflection (dysregulation: −.18; $p < .001$; suppression: −.36; $p < .001$). We note that there was high cross-loading for item 11 ("my child finds that thinking about their feelings just makes everything worse"). Similarly, for youth-report, this model provided adequate fit to the data and the three factors were representative of dysregulation, suppression, and reflection. Importantly, dysregulation was positively correlated with suppression (.52; $p < .001$), and these factors were also positively correlated with reflection (dysregulation: .15; $p = .017$; suppression: .21; $p = .003$). There was also

[2]We also repeated analyses with the clinical sample of caregivers ($n = 578$; 84.6% biological; 86.7% female; age 27–73, $M_{age} = 45.06$, $SD = 7.94$) and their children ($n = 466$; 59.7% female; age 12–18, $M_{age} = 14.77$, $SD = 1.49$) restricted to samples of youth aged 12–18 years to closely align with the unrelated community sample. All findings remained predominantly consistent (see Tables S4–S7).

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TABLE 1
Fit Indices From the Exploratory Structural Equation Models for the Clinical and Independent Community Samples

	χ^2	df	p	*CFI*	*TLI*	*RMSEA [90% CI]*
Clinical sample						
Parent-report	161.92	33	<.001	.98	.96	.07 [.06, .08]
Youth-report	95.18	33	<.001	.99	.98	.06 [.04, .07]
Community sample						
Parent-report	71.75	33	<.001	1.00	.99	.05 [.03, .06]
Youth-report	99.14	33	<.001	.99	.98	.05 [.04, .06]

Note. CFI = Comparative Fit Index; CI = confidence interval; RMSEA = root mean square error or approximation; TLI = Tucker–Lewis Index.

TABLE 2
Factor Loadings for the 3-Factor Model in the Clinical Sample

	Parent-Report			*Youth-Report*		
Items	*DYS*	*SUP*	*REF*	*DYS*	*SUP*	*REF*
1. Hard time controlling my/their feelings	**.80**	−.00	.09	**.77**	.05	.08
2. Thinking about why I/they have different feelings helps me/them to learn about myself/themselves	.03	−.00	**.82**	.09	−.01	**.81**
3. Tries hard not to think about my/their feelings	.00	**.67**	−.15	.15	**.67**	−.02
4. Very hard to calm down when upset	**.83**	−.02	−.01	**.91**	−.13	−.00
5. Thinking about why I/they act in certain ways helps me/them to understand myself/themselves	.00	.09	**.90**	.01	.10	**.80**
6. Believes it is best to keep feelings in control and not to think about them	−.20	**.83**	−.01	−.19	**.81**	.04
7. Finds that my/their feelings just take over and I/they cannot do anything about it	**.78**	.01	−.03	**.86**	−.04	.05
8. Finds that thinking about what's happened to me/them in my/their life helps me/them to understand myself/themselves	−.09	−.06	**.68**	−.02	.15	**.73**
9. Keeps feelings to myself/themselves	−.10	**.68**	.06	−.00	**.53**	−.14
10. Takes a long time to get over it when I/they get upset	**.58**	.23	.02	**.77**	.02	.05
11. Finds that thinking about my/their feelings just makes everything worse	**.39**	**.56**	−.09	**.52**	**.44**	−.22
12. Tries to do other things to keep my/their mind off how I/they feel	.13	**.65**	.08	.07	**.54**	.08

Note. DYS = dysregulation; REF = reflection; SUP = suppression.
All bolded values were significant at the $p < .001$ level.

high cross-loading for item 11 ("thinking about my feelings just makes everything worse").

Community sample. In the independent community samples, parent-report was found to provide adequate fit to the data. Factor loadings are shown in Table 3, and the three factors were representative of dysregulation, suppression, and reflection. Dysregulation was positively correlated with suppression (.37; $p < .001$), whereas these factors were negatively correlated with reflection (dysregulation: −.13, $p = .036$; suppression: −.20, $p = .004$). Item 11 had high cross-loading. Similarly, for youth self-report, this model provided adequate fit to the data and the three factors were representative of dysregulation, suppression, and reflection. Dysregulation was positively correlated with suppression (.25; $p < .001$) and reflection (.16; $p = .010$), but suppression and reflection were negatively correlated (−.14; $p = .009$). Again, item 11 had high cross-loading.

Because item 11 had high cross-loading above recommended cutoffs for both clinical and community parent-reports and youth self-reports, this item was removed in all further analyses. As shown in Table 2 (clinical sample), item 11 loaded more highly on suppression (.56) than dysregulation (.39) for parent-reports, whereas this item loaded more highly on dysregulation (.52) than suppression (.44) for youth-reports. Given the highest loading was distinct for parents versus youth in the clinical sample, it perhaps suggests that this item is interpreted differently across these informants. In addition, as shown in Table 3 (independent community

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TABLE 3
Factor Loadings for the 3-Factor Model in the Independent Community Sample

	Parent-Report			*Youth-Report*		
Items	*DYS*	*SUP*	*REF*	*DYS*	*SUP*	*REF*
1. Hard time controlling my/their feelings	**.81**	−.01	.05	**.80**	−.01	.15
2. Thinking about why I/they have different feelings helps me/them to learn about myself/themselves	.03	−.05	**.81**	.05	.02	**.78**
3. Tries hard not to think about my/their feelings	.14	**.66**	−.06	.32	**.64**	.01
4. Very hard to calm down when upset	**.91**	.02	.01	**.88**	.01	.00
5. Thinking about why I/they act in certain ways helps me/them to understand myself/themselves	−.02	−.01	**.89**	−.05	−.02	**.88**
6. Believes it is best to keep feelings in control and not to think about them	−.20	**.91**	.04	−.01	**.76**	.08
7. Finds that my/their feelings just take over and I/they cannot do anything about it	**.91**	−.01	.11	**.85**	−.02	−.00
8. Finds that thinking about what's happened to me/them in my/their life helps me/them to understand myself/themselves	−.06	.03	**.81**	.01	.01	**.70**
9. Keeps feelings to myself/themselves	−.09	**.75**	−.06	−.05	**.60**	−.03
10. Takes a long time to get over it when I/they get upset	**.81**	.09	−.00	**.70**	.09	.03
11. Finds that thinking about my/their feelings just makes everything worse	**.50**	**.45**	−.01	**.53**	**.51**	−.05
12. Tries to do other things to keep my/their mind off how I/they feel	.03	**.68**	.20	.25	**.53**	.13

Note. DYS = dysregulation; REF = reflection; SUP = suppression.
All bolded values were significant at the $p < .001$ level.

samples), item 11 loaded highly for both parent- and youth-reports on dysregulation (.50 and .53, respectively) and suppression (.45 and .51, respectively). Taken together, this information supports removing item 11 from further analyses.

Internal Consistency

Clinical sample. Cronbach's alphas and Omega coefficient were examined for the three-factor structures for both parent-report and youth self-report. In the clinical sample, for parent-report, dysregulation (α/ω = .84/.86), suppression (α/ω = .69/.71), and reflection (α/ω = .84/.84) demonstrated good internal consistency. For youth self-report, dysregulation (α/ω = .86/.88), suppression (α/ω = .68/.71), and reflection (α/ω = .80/.80) demonstrated good internal consistency.

Community sample. In the independent community samples, for parent-report, dysregulation (α/ω = .90/.91), suppression (α/ω = .78/.79), and reflection (α/ω = .85/.85) demonstrated good internal consistency. For youth self-report, dysregulation (α/ω = .86/.88), suppression (α/ω = .71/.75), and reflection (α/ω = .80/.80) demonstrated good internal consistency.

Measurement Invariance

Parent-reports versus Youth self-reports. Fit indices from the multigroup CFA are shown in Table 4. For the clinical sample comparing parent-reports versus youth self-reports, configural invariance demonstrated acceptable model fit with a CFI value above .95 and RMSEA value below .10. However, TLI values did not exceed .95 across any invariance model and ΔCFI values were not below .01 in the metric and scalar models, suggesting that in the clinical sample, parent-reports and youth self-reports had a similar factor structure but distinct loadings and intercepts.

Similarly, for the independent community samples comparing parent-reports versus youth self-reports, configural invariance demonstrated acceptable model fit with CFI and TLI values above .95 and RMSEA value below .10. RMSEA values were not below .10, and ΔCFI values were not below .01 in the metric and scalar models, suggesting that in the community sample, parent-reports and youth self-reports also had a similar factor structure but distinct loadings and intercepts.

Clinical versus community samples. For parent-reports comparing clinical versus independent community samples, configural and metric invariance demonstrated acceptable model fit with CFI and TLI values above .95 and RMSEA value below .10. However, ΔCFI value was not below .01 in the scalar model, suggesting that parent-reports across clinical versus community samples had similar factor structure and loadings, but distinct intercepts.

Similarly, for youth self-reports comparing clinical versus independent community samples, configural and metric invariance demonstrated

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TABLE 4
Multigroup Confirmatory Factor Analyses Comparing Clinical Versus Independent Community Samples and Parent-Report Versus Youth-Report

	χ^2	df	p	*CFI*	*ΔCFI*	*TLI*	*RMSEA [90% CI]*
Clinical sample: Parent-report vs. Youth-report							
Configural invariance	459.69	82	<.001	.97	–	.95	.08 [.08, .09]
Metric invariance	518.41	90	<.001	.96	.01	.95	.08 [.08, .09]
Scalar invariance	676.13	120	<.001	.95	.02	.95	.08 [.08, .09]
Community sample: Parent-report vs. Youth-report							
Configural invariance	479.63	82	<.001	.97	–	.96	.09 [.08, .10]
Metric invariance	612.41	90	<.001	.96	.01	.95	.10 [.09, .10]
Scalar invariance	844.06	120	<.001	.94	.03	.95	.10 [.09, .10]
Parent-report: Clinical sample vs. Community sample							
Configural invariance	522.60	82	<.001	.97	–	.96	.09 [.08, .10]
Metric invariance	529.49	90	<.001	.97	.00	.96	.09 [.08, .09]
Scalar invariance	626.57	120	<.001	.96	.01	.97	.08 [.08, .09]
Youth-report: Clinical sample vs. Community sample							
Configural invariance	417.43	82	<.001	.97	–	.96	.08 [.07, .09]
Metric invariance	432.09	90	<.001	.97	.00	.96	.08 [.07, .08]
Scalar invariance	539.24	120	<.001	.96	.01	.96	.07 [.07, .08]

Note. CFI = Comparative Fit Index; RMSEA = root mean square error or approximation; TLI = Tucker–Lewis Index.

acceptable model fit with CFI and TLI values above .95 and RMSEA value below .10. The ΔCFI value was not below .01 in the scalar model, suggesting that youth self-reports across clinical versus community samples had similar factor structure and loadings, but distinct intercepts.

External Validity

Descriptive statistics for all study measures across clinical and independent community samples and parent-reports and youth-reports are shown in Table S1. Correlations of main study variables for the clinical and independent community samples are shown in Tables S2 and S3, respectively.

Clinical sample. Results of external validity are shown in Table 5. In the clinical sample, parent-reports of dysregulation were positively associated with all forms of psychopathology. Suppression was positively associated with GAD and MDD; there were no other significant associations with suppression. Reflection was negatively associated with ADHD, ODD, and CD, and positively associated with SAD and GAD. Similarly, youth self-reports dysregulation was positively associated with all forms of psychopathology. Suppression was positively associated with ADHD, GAD, and MDD. Reflection was negatively associated with ADHD and ODD, and positively associated with SAD and GAD.

Community sample. Results of external validity are shown in Table 6. In the independent community samples, parent-reports of dysregulation were positively associated with all forms of psychopathology. Suppression was positively associated with ADHD, CD, GAD, and MDD. Reflection was negatively associated with ODD and CD, and positively associated with SAD and GAD. Youth self-reports of dysregulation were positively associated with all forms of psychopathology. Suppression was positively associated with all forms of psychopathology, with the exception of SAD. Reflection was positively associated with GAD and MDD.

DISCUSSION

Emotion dysregulation has been established as a transdiagnostic indicator of many forms of psychopathology; thus, there is an important need for reliable and valid measures. The purpose of the present study was to test the factor structure and internal reliability of the ARC across clinical and independent community samples using parent-report and youth self-report information to determine whether these psychometric properties generalized across samples and informants, and to examine whether ARC dimensions were associated with several forms of psychopathology related to DSM disorders. With 11 items, three correlated factors comprising dysregulation, suppression, and

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TABLE 5
External Validity With Psychopathology for the Clinical Sample

	Parent-Report			*Youth-Report*		
	B (SE)	β	p	B (SE)	β	p
ADHD						
Dysregulation	4.81 (.42)	.38	<.001	5.46 (.43)	.51	<.001
Suppression	0.00 (.48)	.00	.993	1.11 (.52)	.09	.032
Reflection	−1.81 (.47)	−.13	<.001	−1.10 (.45)	−.09	.015
ODD						
Dysregulation	6.14 (.38)	.50	<.001	5.74 (.40)	.56	<.001
Suppression	0.01 (.42)	.00	.984	0.64 (.49)	.05	.188
Reflection	−2.59 (.42)	−.19	<.001	−1.38 (.42)	−.12	.001
CD						
Dysregulation	5.52 (.86)	.23	<.001	3.26 (.61)	.24	<.001
Suppression	0.56 (.97)	.02	.565	1.24 (.75)	.08	.097
Reflection	−4.09 (.95)	−.15	<.001	−1.22 (.64)	−.08	.058
SAD						
Dysregulation	2.92 (.54)	.20	<.001	3.96 (.40)	.42	<.001
Suppression	0.65 (.61)	.04	.287	0.01 (.49)	.00	.989
Reflection	2.91 (.60)	.17	<.001	1.48 (.42)	.14	<.001
GAD						
Dysregulation	3.19 (.52)	.22	<.001	4.02 (.39)	.40	<.001
Suppression	1.74 (.58)	.11	.003	1.76 (.47)	.14	<.001
Reflection	4.28 (.58)	.26	<.001	2.07 (.41)	.18	<.001
MDD						
Dysregulation	6.05 (.57)	.35	<.001	6.94 (.47)	.54	<.001
Suppression	3.54 (.64)	.18	<.001	2.16 (.57)	.14	<.001
Reflection	−1.18 (.63)	−.06	.062	−0.40 (.49)	−.03	.419

Note. Controlling for youth age and gender. ADHD = attention-deficit/hyperactivity disorder; CD = conduct disorder; GAD = generalized anxiety disorder; MDD = major depressive disorder; ODD = oppositional defiant disorder; SAD = separation anxiety disorder.

reflection were identified across samples and informants, and these dimensions showed acceptable-to-good internal reliability. Measurement invariance statistics indicated that within both clinical and independent community samples, parent-reports versus youth self-reports showed similar factor structure but distinct loadings and intercepts. In addition, parent-reports from clinical and community samples showed similar factor structures and item loadings but distinct intercepts, as did youth-reports from clinical and community samples. With regard to external validity, dysregulation was positively associated with all forms of psychopathology across samples and informants. In general, suppression was positively associated with many forms of psychopathology, and reflection was negatively associated with externalizing problems and positively associated with internalizing problems.

ARC Factor Structure

Current findings add to the literature by supporting the utility of a brief measure of emotion regulation tapping three important regulatory processes. This study represents the first effort to test the factor structure of the ARC through an exploratory approach, providing support for the only other study that examined the ARC using a confirmatory approach (Penney & Moretti, 2010). Penney and Moretti (2010) found support for a three-factor solution using CFA based on self-reports from a high-risk adolescent sample; however, the authors did not provide factor loadings and factor correlations or tested a full range of psychometric properties. We extend these findings by conducting a comprehensive examination of the psychometric properties of the ARC across multiple samples and informants. Results from ESEM identified three dimensions representative of dysregulation, suppression, and reflection in clinical and community samples and using parent-report and youth self-report information. In addition, across samples and informants, all factors were significantly associated with each other suggesting that these constructs are related but distinct. However, the directions of these associations were distinct across parent versus youth, which we discuss further in the section

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TABLE 6
External Validity with Psychopathology for the Independent Community Samples

	Parent-Report			*Youth-Report*		
	B (SE)	β	p	B (SE)	β	p
ADHD						
Dysregulation	6.02 (.42)	.54	<.001	4.73 (.33)	.50	<.001
Suppression	1.37 (.53)	.10	.010	1.78 (.37)	.16	<.001
Reflection	0.06 (.48)	.00	.904	0.55 (.31)	.05	.079
ODD						
Dysregulation	7.43 (.37)	.66	<.001	5.15 (.33)	.55	<.001
Suppression	0.67 (.47)	.05	.150	0.77 (.36)	.07	.036
Reflection	−1.58 (.42)	−.12	<.001	0.49 (.31)	.05	.115
CD						
Dysregulation	6.23 (.47)	.50	<.001	3.89 (.43)	.35	<.001
Suppression	1.58 (.60)	.10	.008	1.87 (.48)	.14	<.001
Reflection	−1.15 (.54)	−.08	.032	0.72 (.41)	.06	.080
SAD						
Dysregulation	4.61 (60)	.33	<.001	4.10 (.40)	.39	<.001
Suppression	0.28 (.75)	.02	.711	0.68 (.45)	.05	.128
Reflection	2.00 (.68)	.12	.003	0.74 (.38)	.07	.053
GAD						
Dysregulation	6.46 (.38)	.59	<.001	6.02 (.26)	.65	<.001
Suppression	1.18 (.48)	.09	.014	1.40 (.29)	.13	<.001
Reflection	1.75 (.43)	.14	<.001	0.90 (.25)	.09	<.001
MDD						
Dysregulation	6.11 (.44)	.51	<.001	6.71 (.34)	.56	<.001
Suppression	2.69 (.55)	.18	<.001	3.88 (.39)	.27	<.001
Reflection	−0.14 (.50)	−.01	.782	0.89 (.33)	.07	<.001

Note. Controlling for youth age and gender. ADHD = attention-deficit/hyperactivity disorder; CD = conduct disorder; GAD = generalized anxiety disorder; MDD = major depressive disorder; ODD = oppositional defiant disorder; SAD = separation anxiety disorder.

below. The same item on the parent-report ("my child finds that thinking about their feelings just makes everything worse") and youth self-report ("thinking about my feelings just makes everything worse") consistently showed high cross-loadings across dysregulation and suppression factors in all samples and, thus, was removed from all further analyses. This item showed poor distinctiveness in tapping unique variance associated with dysregulation or suppression. All other items, however, demonstrated high factor loadings and low cross-loadings across samples and informants. In addition, established subscales demonstrated adequate-to-good internal reliability. Taken together, these findings support the ARC as a multidimensional measure.

ARC Measurement Invariance

Measurement invariance statistics indicated equivalent ARC factor structure across samples and informants. However, within each sample, parent-reports versus youth self-reports showed distinct loadings and intercepts. In addition, across both samples, among parents, dysregulation was positively correlated with suppression and these factors were both negatively correlated with reflection. However, among youth, all factors were positively correlated with each other (with the exception of suppression and reflection in the community sample, which were negatively correlated). The positive association between dysregulation and suppression may be reflecting posttraumatic stress symptoms, such that youth are experiencing intrusive thoughts coupled with attempts to suppress or limit rumination of distressing events. These findings also suggest that although dysregulation, suppression, and reflection are related constructs, they may have distinct interpretations for parents versus youth. Our findings may reflect a form of evaluative consistency bias (i.e., the tendency to consistently endorse a range of characteristics positively or negatively), such that parents concerned about behavioral and mental health problems of their child may assume that their child is doing poorly across a range of domains (i.e., high dysregulation and suppression, and low reflection). The consistency of these findings with previous research on

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informant discrepancies (De Los Reyes et al., 2015) further points to the importance of weighing youth-reports of emotion regulation problems as highly as parent-reports as they have privileged information in this regard (particularly for these unobservable characteristics). In addition, contextual variation may also inform differences, given parents observe their child only in certain contexts, whereas youth "observe" themselves in all contexts. Although there was some informant disagreement, differences may reflect certain biases with each providing unique and valid variance. From these findings, we conclude that the ARC should be completed by both caregivers and youth.

When comparing across clinical versus community samples, for parent-reports, results showed similar factor structure and loadings, but distinct intercepts. Similarly, for youth self-reports, results showed similar factor structure and loadings, but distinct intercepts. These findings suggest that the ARC may be sensitive to differences in affect regulation across samples distinguished by level of risk.

It is important to note that our study collected data from independent community samples early in the COVID-19 pandemic. Several studies have indicated that children and adolescents have experienced heightened mental health difficulties during the pandemic (Craig et al., 2022; Racine et al., 2020). In addition, parent pathology, such as depression and stress, is one of the best predictors of their estimates of their child's symptoms, and maternal depression and anxiety have also increased during the COVID-19 pandemic (Racine et al., 2021). Given this time has been marked by great uncertainty, mental health difficulties may be underpinned by feelings of dysregulation. In order to cope in this situation, typically developing youth may attempt to suppress emotions and the resulting impact is dysregulation as outward behaviors. They may also be more "in tune" with their own suppression and dysregulation processes relative to parents. However, it is important to reiterate here that the community sample is comprised of two independent parent and youth samples, so we state comparisons between parent-reports and youth-reports with caution. Also, importantly, equivalent ARC factor structure was established across samples, even though our independent community samples were drawn during COVID-19. This demonstrates that a further strength of the ARC is the stability of the factor structure across samples and stressors. Further research post-COVID-19 with typically developing samples is needed to confirm these findings. Overall, current findings support the ARC as a measure of affect regulation across multiple samples and informants.

ARC External Validity

Across both samples and informants, dysregulation was positively associated with all forms of psychopathology. Many researchers recognize that affect or emotion dysregulation represents a transdiagnostic marker underpinning a diverse range of adjustment problems in childhood and adolescence (Beauchaine & Cicchetti, 2019; Cludius et al., 2020). Our findings add to this literature by demonstrating that the ARC dysregulation dimension has high external validity, and supports the use of the ARC in research and clinical settings focused on psychopathology in youth.

With regard to suppression, in the clinical sample, parent-reports were positively associated with symptoms of GAD and MDD. These associations were also established in youth self-reports, in addition to ADHD symptoms. In the independent community samples, parent-reports and youth self-reports of suppression were positively associated with almost all forms of psychopathology. Gross (2002) discusses expressive suppression as a response modulation strategy (i.e., approaches taken once the response is already generated) whereby an individual inhibits their outward emotional expression. These types of strategies frequently increase the intensity or duration of the response, and thus, are often considered as maladaptive in approach (Gross & John, 2003; John & Gross, 2004). Specifically, expressive suppression is confined to expression of emotion, and both the physiological and subjective experience of emotion may be heightened (Gross, 1998a, 2002). Our findings add to this research demonstrating that suppression is associated with both greater externalizing and internalizing problems (Flynn et al., 2010; Scott et al., 2015). Future research should continue to examine the use of suppression in clinical versus community youth samples.

In general, reflection was negatively associated with externalizing problems and positively associated with internalizing problems. Our findings support past research showing that greater reflective capacity may be protective against externalizing problems among children and adolescents (Bizzi et al., 2019). With regard to internalizing problems, some research with adolescent samples has shown greater reflection is associated with higher internalizing symptoms (Chow et al., 2017). The authors suggest that this counterintuitive

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finding may be due to enhanced abstract thinking during adolescence, and this enriched reflective capacity can increase adolescents' sensitivity to their own emotional state (Chow et al., 2017). Given the lack of research examining reflective functioning in youth samples, future research should further examine whether reflection is a mechanism underlying youth psychopathology.

Strengths and Limitations

The present study represents the first comprehensive assessment of the ARC psychometric properties. Methodological strengths of the study include the examination of the ARC factor structure across clinical and independent community samples and parent-reports and youth self-reports. We also performed multiple tests of internal reliability and measurement invariance, and we examined associations between established dimensions and several forms of psychopathology. However, interpretation of our findings must be considered within the context of some methodological limitations. First, compared to our clinical sample, our community sample was comprised of independent samples of parents and youth; thus, comparisons between parent-reports and youth self-reports in the community sample should be interpreted with caution. Second, although our independent community samples were convenience samples predominantly recruited via online media, data were collected during the COVID-19 pandemic. As shown in Table S1, the youth samples scored similarly across the range of psychopathologies perhaps suggesting our clinical and community samples of youth were more similar than initially expected. These findings suggest the ARC should also be validated across levels of youth risk (e.g., lower-risk community sample, justice-involved). In addition, the parents across both samples were mostly comprised of female and white identifying participants, and youth also largely identified as white. Although our samples included modest representation of diverse populations, more research is needed to examine the ARC factor structure and associations particularly in fathers and gender and culturally diverse youth. Replication and generalizability in developmental science have been emphasized in recent calls by the scientific community (Duncan et al., 2014). Third, while our findings point to the importance of considering how different informants may contribute distinct information on adolescent mental health, shared method variance cannot be ruled out as a source of the associations between constructs. Future research might also consider determining whether findings are similar among other informants (e.g., teacher-report) and across additional contexts (e.g., school) (De Los Reyes et al., 2013, 2015). Finally, the present study uses cross-sectional data and so we are unable to test the predictive validity of the ARC. Given the role of affect regulation as a transdiagnostic marker of psychopathology, determining whether the ARC has predictive utility has important implications for treatment.

Implications and Conclusions

Our findings provide strong preliminary support for the ARC as a promising instrument to assess youth affect regulatory processes across clinical and community samples and parent-reports and youth self-reports. We tested multiple indicators of psychometric properties finding sound support for internal reliability and external validity with relevant criterion constructs. Although the three-factor model replicated across samples and informants, we identified differences in loadings and intercepts. Given the present study was the first effort to conduct a comprehensive assessment of the ARC, we emphasize the importance of further research examining these properties in diverse samples. In addition, the present study focused on youth affect regulation and psychopathology; however, the ARC provides a set of parallel measures that can be used to assess caregiver's perception of their child's affect regulation, child and adolescent self-reports of affect regulation, and also caregiver's own affect regulation. Given well-documented findings on the effect of parents' emotions and psychopathology on child outcomes (Lynch et al., 2021), future research should examine the psychometric properties of caregiver's own affect regulation, completing a set of brief psychometrically sound affect regulation measures that will be useful in research and clinical contexts.

Current findings also have important clinical implications. There is now a large body of evidence suggesting that affect or emotion dysregulation represents an important transdiagnostic mechanism underpinning many forms of psychopathology. In addition, there have also been recent calls from the scientific community outlining the limitations of the categorical disorder approach and emphasizing the importance of research identifying processes that underlie psychopathology (Insel et al., 2010; Kotov et al., 2017). Our findings identifying links between ARC dysregulation and all forms of

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psychopathology add to this literature, and we extend research by demonstrating that other related affect processes, that is, suppression and reflection, may also be associated with several forms of psychopathology. We argue that affect regulation is a complex construct with several mutually interacting systems, and research should examine multiple affect processes together for a comprehensive understanding of risk and resilience. Our findings suggest that with further research, the ARC could be used as a screening measure in clinical and nonclinical populations alike. Greater accuracy in measuring and screening affect regulatory processes can help identify those children and adolescents at heightened risk for a range of psychopathologies.

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CONFLICTS OF INTEREST

The authors report no conflicts of interest.

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Supporting Information

Additional supporting information may be found online in the Supporting Information section at the end of the article.

Table S1. Descriptive statistics for ARC and measures of psychopathology.

Table S2. Bivariate correlations between study variables for the clinical sample for parent-reports (below) and youth-reports (above).

Table S3. Bivariate correlations between study variables for the independent community samples for parent-reports (below) and youth-reports (above).

Table S4. Fit indices from the exploratory structural equation models for the clinical sample aged 12–18 years.

Table S5. Factor loadings for the 3 factor model in the clinical sample aged 12–18 years.

Table S6. Multi-group confirmatory factor analyses comparing clinical versus independent community samples and parent-report versus youth-report aged 12–18 years.

Table S7. External validity with psychopathology for the clinical sample aged 12–18 years.

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