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Responding to Children’s Diverse Gender Expression: Validation of a Parent-Report Measure of Gender-Related Conditional Regard

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Abstract

Epidemiological studies suggest that more youth are identifying as gender expansive (e.g., transgender, gender nonconforming) than ever before. However, due to stressors like discrimination, gender minorities remain at significantly higher risk for mental and physical health problems than their cisgender peers. While initial research has shown that parental support of youth’s minority gender identities may be protective, further research is needed regarding specific parenting practices and their impact on children. We propose that parental conditional regard—the selective provision of warmth and esteem when children’s behavior conforms to parental standards or values — may be a critical component of parenting behaviors that predicts maladaptation in gender expansive children. Across three studies involving parents of cisgender and gender expansive children ages 3–15 (Study 1: $N = 601$, community sample; Study 2: $N = 793$, parents of gender expansive and cisgender children; Study 3, same sample as in Study 1), we describe the development of a novel measure of parental conditional regard for gender expression and test its validity and reliability. Finally, we demonstrate that conditional regard for gender expression is distinct from existing conditional regard measures, and is uniquely associated with children’s psychopathology.

Keywords

conditional regard; parenting; gender; transgender; measurement

Estimates of the proportion of population who are gender-diverse in the US suggest that more youth identify as transgender and gender non-conforming (TGNC) than in prior years (Herman et al., 2017), possibly due to recent improved measurement of gender identity

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in some large-scale surveys, as well as increasing awareness and acceptance of TGNC people. This increase warrants our attention because previous research reveals that TGNC individuals often have a higher prevalence of mental health issues (e.g., gender dysphoria, depression; Becerra-Culqui et al., 2018; Connolly et al., 2016; Olson et al., 2015) compared to the cisgender population (i.e., individuals whose gender matches their sex assigned at birth). For example, transgender youth have often been shown to have two to three times increased risk of depression, anxiety disorders, and suicide ideation relative to their matched cisgender counterparts (Reisner et al., 2015; cf. Kivalanka et al., 2017). Thus, not only is there an urgent need for increased access to mental health care for TGNC youth, but it is also essential that new measures assessing support for gender identity are developed and implemented.

Minority Stress and Parental Support for TGNC Youth

Health disparities between TGNC youth and their cisgender peers have been explained by the minority stress model (Brooks, 1981; Hendricks & Testa, 2012; Meyer 2003), which proposes that stress resulting from one's minority identity (e.g., sexual orientation) negatively affects one's mental and physical health. Indeed, due to their minority gender identity and expression in a cis-normative society, TGNC youth could experience constant stigma and discrimination, which, in turn, may lead to worse health outcomes by virtue of chronic wear-and-tear on the stress response system (Bockting et al., 2013). For example, minority stress and related stigmatized experiences among TGNC individuals have been shown to be associated with higher psychological distress (Breslow et al., 2015) and a greater number of suicide attempts (Goldblum et al., 2012). Further, within the lesbian, gay, bisexual, and transgender (LGBT) community, transgender adolescents report less social support and worse health outcomes when compared to cisgender sexual minority youth due in part to higher levels of and different kinds of family rejection towards youth who exhibit gender non-conformity (Abreu et al., 2019; Katz-Wise et al., 2016; Ryan et al., 2010). To address these concerns, researchers and mental health professionals need to develop systems that allow for the timely and comprehensive provision of care and interventions with this underserved population.

Growing research on the wellbeing of TGNC youth suggests that parental support may play a critical role in protecting TGNC youth from poor mental health outcomes like depression and anxiety symptoms (Durwood et al., 2021; Gibson et al., 2021; Puckett et al., 2019), psychological distress, and suicidal thoughts (Wilson et al., 2016). Studies show that social support from parents is positively associated with their TGNC children's higher life satisfaction (Simons et al., 2013) as well as increased resilience (Puckett et al., 2019). Given that both general social support and specific support for identity from parents are beneficial to TGNC children's overall well-being, it is possible that parents might also play a significant role in children's adaptive gender development (Endendijk et al., 2014), especially when their gender-expansive children explore gender identity in a society full of gendered expectations (Sandnabba & Ahlberg, 1999).

Parental Socialization of Gender Development

Childhood gender development has long been of interest to developmental psychologists. A variety of frameworks have been proposed to explain the socialization of gender (see Leaper & Friedman, 2007), with each emphasizing different factors (e.g., social, cognitive) and levels of analysis (e.g., individual, dyadic, structural). One theory that integrates these diverse yet complementary frameworks is Bussey and Bandura's (1999) social cognitive theory of gender development, which posits that gendered behaviors and functioning derive from interpersonal experiences in combination with mechanisms of motivation and self-regulation. Accordingly, children can learn gendered values, attitudes, and behaviors through modeling by their parents and peers. Their gendered conduct and behaviors can also be reinforced by social sanctions, emotional responses, and instructions from significant adults in their lives (e.g., parents and caregivers). Through these processes, children might internalize external sanctions and responses with regard to the appropriateness of their gendered behaviors, which, in turn, necessitates their motivation and self-regulation to "do" gender "correctly."

Among the many agents influencing children's gender development, primary caregivers (most frequently parents) often play an important role (Katz, 1987; Ruble et al., 2007; cf. Harris, 1998). Generally, children are socialized by their parents differentially based on their assigned sex at birth, with children assigned male at birth expected to adopt traditionally masculine behaviors and children assigned female at birth, traditionally feminine behaviors. Parents have been consistently found to engage in these so-called sex-typing behaviors in toy selection (Boe & Woods, 2018), familial interactive play (Lindsey et al., 1997), and parent-child communication (Epstein & Ward, 2011). Importantly, parents' sex-typing behaviors occur throughout children's development from infancy to early adolescence (Lytton & Romney, 1991; McHale et al., 2003) as well as across cultures (e.g., Basu et al., 2017; Raffaelli & Ontai, 2004). Moreover, parents who hold more traditional views of gender are less likely to tolerate children's gender non-conforming behaviors (Kane, 2006; Spivey et al., 2018).

Although many parental gender socialization practices are congruent with hegemonic gender expectations in mainstream society, they can come at great cost to the well-being of gender-expansive children and youth. Indeed, many TGNC youth report receiving negative reactions — sometimes even verbal and physical abuse — from their parents in response to their gender identity (D'Augelli et al., 2006; Grossman et al., 2005). In contrast, TGNC children whose parents support their social transition show no elevations of depressive symptoms compared to their cisgender peers (Gibson et al., 2021; Kuvalanka et al., 2017). Although enlightening, these studies did not report the trajectory of parents' support over time or the gender socialization they practiced. Given the important role parents play in gender socialization and the likely protective function of parental support for gender non-conforming children, a more nuanced understanding of how parents react to gender non-conformity and how such reactions might affect children's well-being is needed.

Parental Conditional Regard of Gender Expression

One facet of parental behavior that may help elucidate this link between parental reactions to gender non-conformity and TGNC youth well-being is conditional regard (CR; Assor et al., 2004), which involves the selective provision of warmth and esteem only when children's behavior conforms to parental standards or values. In contrast to Carl Rogers' seminal work on *un*conditional regard as a type of sensitive and supportive caregiving behavior that is foundational to adaptive child development (Rogers, 1957), CR sends a clear message to children — that their parents' regard for them, and by extension their own worth, is contingent on their behavior aligning with their parents' wishes (Assor et al., 2004). Scholars differentiate between negative CR and positive CR: the former involves love withdrawal, while the latter occurs when parents reward children for behavior that meets parents' expectations. Emerging evidence supports the argument that both subtypes of CR may confer risk for maladjustment in youth. In terms of academic adjustment, receiving more positive CR is associated with youth feeling compelled to achieve and exhibiting a higher level of focus on outcomes, while receiving negative CR is linked with parental resentment and academic disengagement (Roth et al., 2009). In terms of mental health outcomes, higher negative CR is both directly associated with depressogenic attributions and indirectly associated with depressive symptoms via greater physiological stress reactivity (Perrone et al., 2016). Thus, emerging evidence supports CR theorists' contention that CR may result in negative outcomes for youth.

While CR in all domains (e.g., academic achievement, emotion expression) can be conceptualized under the more general category of controlling parental behavior, CR scholars contend that parents' use of CR as a parenting practice may differ across domains (Assor et al., 2004) — for instance, parents who highly value academic achievement and link it to self-worth may exert CR in the academic domain while at the same time, use low levels of CR in the emotion expression domain. As such, it is likely that parents who value gender conformity and traditional gendered behaviors in children might exert CR on children's gender nonconformity, but not on other domains of behavior. Specifically, parents might express more warmth if their child assigned female at birth behaves in feminine ways (i.e., positive CR) but more disappointment if their child assigned male at birth did the same (i.e., negative CR). To date, however, no studies have explored CR with respect to gender expression, and thus a valid measure of gender-related parental CR must be developed.

Current Investigation

In this set of studies, we seek to describe the development and validation of a measure of parental CR related to gender expression, as well as to conduct a preliminary assessment of the links between parental CR for children's gender expression and children's psychopathology. In Study 1, we describe the development and initial assessment of the psychometric properties of a scale assessing parent-reported gender CR, including results of an exploratory factor analysis. In Study 2, we conduct a second exploratory factor analysis in a sample selected for high gender diversity in order to replicate the factor structure identified in Study 1. Finally, in Study 3, we assess convergent validity by examining the links between parental CR for gender expression and other forms of parental CR (for

academic achievement, emotion expression), as well as the utility of parental CR for gender expression in predicting children's psychopathology.

Study 1

In Study 1, we sought to develop a novel parent-report measure of both positive and negative CR related to gender nonconformity, called the Conditional Regard for Gender Expression Questionnaire (CR-GEQ). In Study 1, we describe the development of the CR-GEQ and its psychometric properties.

Method

Development of the CR-GEQ

To develop the measure of CR for gender, the principal investigator (PI; J.L.B.) of the project presented two developmental psychologists specializing in CR (P.A.S.; Dr. Avi Assor), her first attempt at modifying items from other CR measures to assess CR for gender conformity. The two CR experts provided input and suggested modifications to the wording of the items. The PI then conducted a pilot study in which she administered these modified items to a sample of youth ($N = 42$) and solicited feedback on the items, following which she adapted the wording of the items again slightly to enhance clarity.

The resulting questionnaire, the Conditional Regard for Gender Expression Questionnaire (Borelli et al., 2015) is an eight-item measure that explores how parents act in response to their child's gender expression, with a particular emphasis on gender expression that is incongruent with the child's assigned sex at birth given the project's focus on elucidating the role of parents in gender minorities' poor health outcomes. For example, a parent of a child assigned female at birth responds to the statement "If my child acts in a masculine way, I ignore her for a while" (negative CR for gender nonconformity) by indicating how true that statement is on a 7-point scale from "almost always not true" to "always true" (all items and their designation [i.e., positive vs. negative CR] are included in Table 2). This measure was adapted from the Conditional Regard for Academic Performance Questionnaire (Roth et al., 2009). In Study 1, male or female pronouns were used depending on the child's assigned sex at birth.

Procedure

Participants were recruited online using Amazon's Mechanical Turk (mTurk), an online service that allows researchers to post tasks, like surveys, for individuals to complete. MTurk has been used by numerous psychology researchers and has been found to yield quality data (e.g., Hauser & Schwarz, 2016). Participants were eligible to complete the study if they 1) were the parent of a child aged 3–15 years and 2) were English-speaking. In total, 624 participants began the study; however, 23 participants did not complete the survey, resulting in a final sample size of 601.¹ See Table 1 for sample demographics.

¹Compared to the participants who completed the survey, those who did not complete the survey were significantly younger than those who did, $t(622) = -3.34, p = .001$, and had significantly fewer children, $t(622) = -3.67, p < .001$. However, the participants did not differ in terms of education, income, or sex.

Participants provided informed consent online via Qualtrics, and then completed demographic questionnaires and the CR-GEQ as part of a broader study examining parent-child relationships. At the end of the study, participants were debriefed and compensated.

Data Analytic Plan

Given the different social pressures exerted on children assigned female at birth and children assigned male at birth, and thus potentially different ways parents might use CR to shape gender-related behaviors in these two groups, we ran separate exploratory factor analyses for each sex group. Using the items that loaded onto the final factor solution, we then ran descriptive statistics to examine mean levels of CR for gender in each group, as well as the distribution of scores in this sample.

Results

Exploratory Factor Analysis

To explore the underlying factor structure of the CR-GEQ, we completed an exploratory factor analysis (EFA) separately for children assigned female at birth and children assigned male at birth in case the factor structure differed by children's assigned sex. In each of these EFAs, we entered all eight CR-GEQ items.

Preliminary tests indicated that the data from parents of children assigned female at birth were suitable for factor analysis, $KMO = .92$, Bartlett's test of sphericity: $\chi^2(28) = 1499.69$, $p < .001$. Examination of the scree plot indicated that a one-factor solution best fit the data, and the EFA using principal axis factoring extracted a single factor onto which all eight items loaded (all factor loadings > 0.65). The CR-GEQ factor for children assigned female at birth (eigenvalue = 5.13) explained 64.14% of the variance.

In the EFA for CR-GEQ for parents of children assigned male at birth, preliminary tests indicated that the data were suitable for factor analysis, $KMO = .92$, Bartlett's test of sphericity: $\chi^2(28) = 1733.10$, $p < .001$. Examination of the scree plot indicated that a one-factor solution best fit the data, and the EFA using principal axis factoring extracted a single factor onto which all eight items loaded (all factor loadings > 0.64). The CR-GEQ factor for children assigned male at birth (eigenvalue = 5.16) explained 64.53% of the variance. See Table 2 for factor loadings for individual items.

Descriptive Statistics

Data on the CR-GEQ from parents of children assigned female at birth ($N = 278$) had strong internal reliability, with a Cronbach's alpha of .91. The mean score was 1.80, $SD = 1.00$, with a distribution that was positively skewed ($M_{skew} = 1.28$, $SE_{skew} = 0.15$) and non-kurtotic ($M_{kurtosis} = 0.65$, $SE_{kurtosis} = 0.29$). The minimum mean item-level score was a 1 (meaning that the parent did not endorse any behaviors on the scale) and the maximum mean item-level score was a 5.25 (out of a possible 7), with 32.4% of the sample receiving a mean score of 2 or more (see Figure 1).

For parents of children assigned male at birth ($N = 323$), the CR-GEQ had strong internal reliability, with a Cronbach's alpha of .92. The mean score was 2.19, $SD = 1.15$, with a

distribution that was positively skewed ($M_{skew} = 0.70$, $SE_{skew} = 0.14$) and kurtotic ($M_{kurtosis} = -4.87$, $SE_{kurtosis} = 0.27$). The minimum mean score was a 1 (meaning that the parent did not endorse any behaviors on the scale) and the maximum mean score was a 5.88 (out of a possible 7), with 48.6% of the sample receiving a mean score of 2 or more (see Figure 1). Of note, parents of children assigned female at birth and children assigned male at birth significantly differed in their mean scores on the CR-GEQ, $t(599) = 4.40$, $p < .001$, Hedges' $g = 0.36$, such that the mean for parents of children assigned male at birth was higher than that for children assigned female at birth.

Conclusions

The aim of Study 1 was to describe the development of the CR-GEQ and its factor structure in an online sample of parents of mostly cisgender children. The EFAs demonstrated that all items loaded on one factor for both children assigned female at birth and children assigned male at birth, which suggests that the valence of the items (i.e., whether parents were providing [positive CR] or withdrawing support [negative CR] from their children) mattered less than whether parents' responses to their child were based on gender expression. That is, all parental behaviors that sought to influence a child's gender expression, regardless of the strategy, loaded onto a common factor. These results contrast with studies examining CR for academic achievement, in which distinct factors for positive and negative CR were established (e.g., Roth et al., 2009). However, in line with the above described literature demonstrating that both positive and negative CR are associated with maladaptive outcomes for youth, along with the all-pervading nature of gender in daily life (in contrast with the academic domain which is likely restricted to children of school age, during the academic year, etc.), perhaps our results reflect a more unitary impact of parenting practices on children who exhibit non-traditional gender expression.

Interestingly, we found that mean scores on the CR-GEQ were significantly higher among parents of children assigned male at birth, compared to those of children assigned female at birth. This finding likely reflects a broader societal pressure for males to conform to gender norms, leading parents to implement any strategy they can think of to increase the likelihood that their child assigned male at birth displays traditionally masculine behaviors.

Importantly, the current sample primarily consists of parents of cisgender children with limited gender diversity. This factor helps explain the skewed data and restricted variance. Despite this lack of variability and parents' generally low scores on CR-GEQ due to their children's more traditional gender expression, parents still reported use of CR related to their children's gender expression, likely reflecting the impact of societal expectations around gender on parenting practices. Given the increased salience of such parenting behaviors to TGNC children, as well as the potential for these behaviors to be linked with maladaptive outcomes, it is critical that we gain an understanding of the prevalence of CR for gender expression in TGNC youth's families.

Study 2

In this study, we sought to replicate the findings of Study 1 in a sample of parents selected for high gender diversity in their children. In particular, we wanted to determine whether

CR for gender expression has a higher prevalence in these families, as well as ascertain if the factor structure of the CR-GEQ remained the same in this more diverse sample. In so doing, we hoped to validate the CR-GEQ across samples, and better understand the role of parenting practices in the lives of gender expansive youth.

Method

Procedure

Parents of children in two ongoing longitudinal studies on gender diversity in children aged 3–15 years were contacted to participate in a longer online survey that included the eight-item CR-GEQ measure.² The samples included parents of gender diverse children ($n = 325$), siblings of gender diverse children ($n = 161$), and a comparison group of gender conforming children ($n = 307$). In total, parents of 793 children completed the current measure. See Table 3 for demographic characteristics of the sample. In 200 of these cases, two parents of the same child completed the measure about that child, but the current analyses include only one parent's responses. This decision was made to be consistent with Study 1 (which includes one parent reporter per child), as well as to avoid differentially influencing scores of some samples over others (all cases that included two parent reporters were in the gender diverse or siblings groups, not the gender conforming group). If two parents completed the survey, the parent selected for the present analyses was (1) whichever parent completed more of the study; if both completed equivalent amounts of the survey, (2) the primary caretaker, or (3) if two same-sex parents, the parent who was the primary contact for the study. The survey was administered using Qualtrics and parents were given \$5 in exchange for participation.

Data Analytic Plan

Given our goal to investigate whether the factor structure of the CR-GEQ holds true in a more gender expansive sample, we repeated the EFAs ran in Study 1, using principal axis factoring.

Results

Exploratory Factor Analysis

Preliminary tests indicated that the data from parents of children assigned female at birth were suitable for factor analysis, $KMO = .79$, Bartlett's test of sphericity: $\chi^2(28) = 1183.15$, $p < .001$. Examination of the scree plot indicated that a two-factor solution best fit the data, and the EFA using principle axis factoring extracted two factors. A direct oblimin rotation was used to allow for separate factors to be correlated. The two resultant factors mapped on to the proposed domains of positive CR (eigenvalue = 3.59) and negative CR (eigenvalue = 1.52), and accounted for 44.9% and 19.0% of the variance, respectively. The two factors were moderately correlated, $r = .55$. Rotated factor loadings for the positive CR

²In Study 2, CR-GEQ items were modified slightly to remove pronouns (e.g., "her" was changed to "my child") in order to affirm gender diverse identities and improve item readability.

factor ranged from 0.52 to 0.91, while the loadings for the negative CR factor ranged from -0.30 to -0.86. See Table 4 for factor loadings for individual items.

In the EFA for CR-GEQ for parents of children assigned male at birth, preliminary tests indicated that the data were suitable for factor analysis, $KMO = .87$, Bartlett's test of sphericity: $\chi^2(28) = 2864.22, p < .001$. Examination of the scree plot indicated that a one-factor solution best fit the data, and the EFA using principal axis factoring extracted a single factor onto which all eight items loaded (all factor loadings > 0.50). The CR-GEQ factor for children assigned male at birth (eigenvalue = 5.41) explained 67.58% of the variance. See Table 4 for factor loadings for individual items.

Descriptive Statistics

For parents of children assigned female at birth ($N = 379$), the CR-GEQ had good internal reliability, with a Cronbach's alpha of .79. The mean score was 1.20, $SD = 0.41$, with a distribution that was highly skewed ($M_{skew} = 2.79, SE_{skew} = 0.13$) and kurtotic ($M_{kurtosis} = 8.69, SE_{kurtosis} = 0.25$). The minimum mean item-level score was a 1 (meaning that the parent did not endorse any behaviors on the scale) and the maximum mean item-level score was 3.50 (out of a possible 7), with 7.4% of the sample receiving a mean score of 2 or more (see Figure 1).

For parents of children assigned male at birth ($N = 410$), the CR-GEQ had strong internal reliability, with a Cronbach's alpha of .92. The mean score was 1.15, $SD = 0.50$, with a distribution that was highly skewed ($M_{skew} = 5.00, SE_{skew} = 0.12$) and kurtotic ($M_{kurtosis} = 28.76, SE_{kurtosis} = 0.24$). The minimum mean score was a 1 (meaning that the parent did not endorse any behaviors on the scale) and the maximum mean score was 5.38 (out of a possible 7), with 9.73% of the sample receiving a mean score of 2 or more (see Figure 1).

Conclusions

Results of Study 2 indicated that there may be differences in factor structure on the CR-GEQ in samples with increased gender diversity, compared to primarily cis-gender samples. In Study 2, we repeated the EFAs from Study 1 in a sample of parents of gender diverse children. In comparison to Study 1, in which single factor solutions were found for both children assigned female at birth and those assigned male at birth, Study 2 results revealed two factors for children assigned female at birth, mapping onto positive CR and negative CR. This difference highlights the importance of including diverse participants in measurement development, especially measurement related to gender. With regard to the CR-GEQ, the difference in factor structure across sexes might suggest that parents engage in gender-related CR differently for children assigned female or male at birth. Considering the valorization of masculine behaviors in North American society, one possible explanation could be that parents reward femininity in their children assigned female at birth (i.e., positive CR), but do not punish their masculinity (i.e., negative CR) to the same extent. For children assigned male at birth, on the other hand, parents' engagement in CR might not functionally differ in response to gender expression.

Interestingly, the distribution of mean scores was more restricted across both sex groups during Study 2 compared to Study 1, such that there was a floor effect (see Figure 1). This finding suggests that, at least in this project's samples, parents of gender diverse children and parents of cisgender children may use different parenting strategies with regard to their child's gender expression. Critically, parents of the youth in Study 2 were by and large very supportive of their youth's gender identity and expression agreeing to have their child participate in a long-term study about gender diversity. In fact, many of these participants had socially transitioned and that was possible at these ages only through the support of their parents. Thus, it is unclear whether parents of gender diverse children who are not supportive of that gender diversity would exhibit a similar pattern of results. Perhaps, given that the parents in Study 2 volunteered to participate in a study about gender expansive youth, parents in this sample had greater understanding of gender diversity and thus were less likely to engage in or report gender-related CR than the unselected online sample. Additional research is needed to examine these hypotheses across a broad range of parents.

Importantly, it is unclear based on these results the extent to which CR for gender expression may exert a unique pressure on children's behaviors, above and beyond other types of CR and other parenting practices. Moreover, it is uncertain how maladaptive CR for gender expression may be for the children who receive it.

Study 3

In Study 3, we aimed to investigate the convergent validity of our novel measure of CR for gender expression with existing measures of CR. Specifically, we wanted to demonstrate that the CR-GEQ is both a valid measure of CR, and it adds a new and important dimension to the nascent literature examining CR in parent-child dyads. Moreover, we sought to investigate how CR for gender expression is associated with important clinical outcomes, including parent-reported child symptoms of depression and self-harming behaviors. We predicted that the CR-GEQ would be strongly positively associated with other types of CR, given that parents who use CR in one domain may be more likely to use it in a different domain. Given existing work showing links between other types of CR and psychopathology, and given findings described above showing worse psychopathology outcomes for TGNC youth who do not have supportive home environments, we predicted that psychopathology would be positively associated with CR-GEQ scores.

Method

Procedure

Participants from Study 1 and their data were used for these analyses. See Table 1 for demographic characteristics. In addition to the CR-GEQ, participants completed questionnaires related to their use of CR in domains other than gender expression and their child's symptoms of psychopathology.

Measures

Conditional Regard

CR for Academic Achievement.: The Mother's Responses to School Work questionnaire (Israeli-Haveli et al., 2015; Assor & Tal, 2012) was used to assess parent-reported CR for their children's academic achievement. This eight-item measure includes questions related to positive CR (e.g., "If (or when) I think that my child's grades are not good enough, I'll make her feel that I'll value her very much if she gets good marks") and negative CR (e.g., "If (or when) my child does not apply herself to her studies and gets a low grade, I make her feel that she should be ashamed"). Items are rated on a 1 "Almost always not true" to 6 "Almost always true" scale. This scale demonstrated strong internal consistency for children assigned female at birth and children assigned male at birth in this sample ($\alpha_{\text{females}} = 0.84$, $\alpha_{\text{males}} = 0.81$).

CR for Emotional Expression.: The Mother's Responses to Emotions questionnaire (Israeli-Haveli et al., 2015; Assor & Tal, 2012) was used to assess parent-reported CR for their children's fear and anger. This measure includes eight items related to fear, and eight related to anger. Items span positive CR (e.g., "When my son or daughter is anxious or fearful but doesn't show it, I make them feel that this is something I really appreciate") and negative CR (e.g., "When my son or daughter expresses anger, I make them feel that I am disappointed in them"). Items are rated on a 1 "Almost always not true" to 6 "Almost always true" scale. This scale demonstrated strong internal consistency on the anger items ($\alpha_{\text{assigned female at birth}} = 0.84$, $\alpha_{\text{assigned male at birth}} = 0.83$) as well as the fear items ($\alpha_{\text{assigned female at birth}} = 0.86$, $\alpha_{\text{assigned male at birth}} = 0.86$) in this sample.

Psychopathology—The 17-item Pediatric Symptom Checklist (PSC-17) was used to screen for clinical levels of psychopathology in the children of our parent participants. Three subscales assess internalizing symptoms, externalizing symptoms, and attention-related symptoms. Parents completed the checklist by indicating how often their child displays a given symptom on a three-point scale (0 = never, 1 = sometimes, 2 = often). Items include behaviors such as "feels sad, unhappy" and "teases others." The PSC-17 has been shown to have predictive validity comparable to that of alternate screening assessments, such as the Child Depression Inventory (Gardner et al., 2007). It has also been shown to exhibit high levels of reliability in other samples ($\alpha = 0.72$ – 0.85 ; Wagner et al., 2015), and it showed good reliability in the present sample ($\alpha = 0.88$).

In addition to the PSC-17, we asked parents a single yes/no question about their child's need for psychosocial support (i.e., "Does your child have any emotional or behavioral problems for which she/he needs help?").

Data Analytic Plan

Pearson-moment correlations were used to examine associations between CR- GEQ and other forms of CR (convergent validity). To assess associations between the CR-GEQ and psychopathology, we first ran linear regressions predicting psychopathology variables from CR-GEQ, controlling for child age, race, and family income. Separate regressions were conducted for children assigned female and male at birth, in order to be consistent with

the rest of the analyses. Finally, in order to determine whether CR-GEQ contributes to the variance in parenting and psychopathology above and beyond other forms of CR, regression analyses were repeated including CR for academic achievement and CR for emotional expression as co-variates. Given the interpretability challenges associated with covarying out other kinds of CR (e.g., Miller & Chapman, 2001), we did not interpret the direction of detected effects for this final set of regressions and instead focused on determining if CR-GEQ remained a significant predictor of our outcome variables of interest in these conservative models.

Results

Conditional Regard

CR for gender expression was significantly positively associated with all other metrics of CR, including subscales for academic achievement, anger, and fear, both NCR and PCR, and among both children assigned female at birth and children assigned male at birth (see Table 5 for values). The strongest associations were found between negative CR for fear and gender expression, r 's = 0.70 (children assigned female at birth), 0.68 (children assigned male at birth), p 's < .001, while the weakest associations were between positive CR for academic achievement and gender expression, r 's = 0.25 (children assigned female at birth), 0.29 (children assigned male at birth), p 's < .001.

Psychopathology

Linear regressions predicting psychopathology variables from CR-GEQ and demographic covariates (child age, race, family income) were run. Among parents of children assigned female at birth, the model was not significant when predicting overall psychopathology symptoms, $R^2 = .03$, $F(4,273) = 1.85$, $p = .120$, or attention problems, $R^2 = .01$, $F(4,273) = .68$, $p = .61$, on the PSC-17. The model was significant when predicting internalizing symptoms (PSC-17), $R^2 = .08$, $F(4,273) = 6.21$, $p < .001$, although child age, $\beta = .15$, $SE = .03$, $p < .001$, and not the CR-GEQ ($p = .23$) predicted symptoms. The model was marginally significant when predicting externalizing symptoms (PSC-17), $R^2 = .03$, $F(4,273) = 2.21$, $p = .068$, and CR-GEQ was a significant positive predictor of externalizing symptoms, $\beta = .404$, $SE = .154$, $p = .009$. When including other CR variables in the model as covariates for parents of children assigned female at birth, CR-GEQ was a significant predictor of overall psychopathology symptoms ($p = .020$), and internalizing symptoms ($p = 0.013$), but was not a significant predictor of attention problems ($p = .141$) or externalizing symptoms ($p = .169$).

Among parents of children assigned male at birth, the model was significant when predicting overall psychopathology symptoms on the PSC-17, $R^2 = .196$, $F(4,317) = 3.15$, $p = .015$. CR-GEQ was a significant positive predictor of overall psychopathology, $\beta = .66$, $SE = .31$, $p = .033$, whereas family income was a significant negative predictor, $\beta = -.46$, $SE = .22$, $p = .038$. The model was significant when predicting internalizing symptoms (PSC-17), $R^2 = .05$, $F(4,317) = 4.24$, $p = .002$, and again, CR-GEQ was a significant positive predictor of internalizing symptoms, $\beta = .25$, $SE = .10$, $p = .013$, while family income was a negative predictor, $\beta = -.18$, $SE = .07$, $p = .011$). The model was also significant when predicting

externalizing symptoms on the PSC-17, $R^2 = .06$, $F(4,317) = 5.29$, $p < .001$. CR-GEQ positively predicted externalizing symptoms, $\beta = .42$, $SE = .14$, $p = .003$, while child age, $\beta = -.10$, $SE = .05$, $p = .027$, and family income, $\beta = -.22$, $SE = .10$, $p = .028$, were negative predictors. The model was not significant when predicting attention problems, $R^2 = .01$, $F(4,317) = 1.10$, $p = .355$. When including other CR variables in the model as covariates for parents of children assigned male at birth, CR-GEQ was a significant predictor of overall psychopathology symptoms ($p < .001$), internalizing symptoms ($p = 0.004$), attention problems ($p = .008$), and externalizing symptoms ($p = .001$).

Logistic regression was used to predict whether or not the parent indicated that their child had an emotional or behavioral problem for which they needed help, using the CR-GEQ and demographic variables. The model was not significant for children assigned female at birth $\chi^2(4) = 8.63$, $p = .071$, nor for children assigned male at birth, $\chi^2(4) = 8.17$, $p = .086$. When including other CR variables in the model as covariates, the models remained non-significant for children assigned female at birth ($p = .407$) and children assigned male at birth ($p = .215$).

Conclusions

In Study 3, we examined convergent validity of our novel gender-related CR measure with other existing CR measures (i.e., academic achievement, anger, fear), as well as its associations with children's psychopathology. As can be seen in Table 5, gender-related CR was significantly and positively correlated with all other forms of CR. This suggests that parents who were more likely to use CR in academic and emotion domains were also more likely to engage in gender-related CR, or vice versa, which supports our hypothesis that parents' use of CR not only appears in academic and emotion domains but also extends to children's gender expression. This is an important finding that challenges the existing notion that CR is domain specific (Assor et al., 2004) and highlights the need for more research examining the broad impact of CR on child wellbeing. Moreover, among these correlations, the relation between negative CR for fear and negative CR for gender was the strongest, followed by the correlations for positive CR for fear and positive CR for gender, pinpointing the unique common variance between parents' use of these two forms of CR that might not be present in other forms of CR. Perhaps gender non-conforming children tend to express fear more often because of concerns about negative responses to their gender expression, thus resulting in parents' use of CR for both fear and gender. Alternatively, this finding might suggest that expressing emotions was seen as a gendered behavior in this sample (e.g., children assigned male at birth were encouraged not to express their fear).

In terms of associations with psychopathology, we found much weaker effects that differed between parents of children assigned female and male at birth. Most effects were found in parents of children assigned male at birth, with CR for gender expression serving as a significant positive predictor of overall psychopathology, internalizing symptoms, and externalizing symptoms. Critically, these findings remained even when controlling for other forms of CR (including academic achievement- and emotion expression-related CR), indicating that CR for gender expression contributes unique variance to the prediction of psychopathology in children assigned male at birth above and beyond other CR constructs.

In parents of children assigned female at birth, however, CR for gender expression was only a significant predictor of externalizing symptoms (although importantly, the overall model was only marginally significant).

The reason for these gender differences is not immediately apparent. Perhaps these findings reflect differences in parenting strategies for children assigned female and male at birth. It might be that parents of children assigned male at birth, or parents who have children with externalizing concerns, are more used to using behavioral contingencies to modify their behavior, and thus generalize this strategy to domains beyond psychopathology (e.g., gender expression). In line with this hypothesis, we found that the second highest correlations for parents of both children assigned female at birth and children assigned male at birth were those between negative CR for anger, and negative CR for gender expression. Thus, it is possible that children who have externalizing symptoms may be angrier, and thus elicit suppressive pressure from their parents. Their parents might in turn view gender nonconforming behaviors as another type of externalizing behavior, and treat it in a similar, suppressive manner. Alternatively, maybe these findings reflect an overlap between anxiety (an internalizing symptom) and externalizing behaviors in youth, particularly in young males (Marmorstein, 2007), that leads parents to more easily detect problems in children assigned male at birth, compared to those assigned female at birth. Such a hypothesis is supported by the significant association between CR for gender expression and externalizing symptoms in parents of children assigned female at birth, perhaps suggesting it might be easier for parents to perceive oppositional behaviors than sadness or anxiety in this group. Additional research that includes a more comprehensive evaluation of psychopathology symptoms using both child-report and clinician administered diagnostic interviews would help elucidate these results.

General Discussion

In the current paper, we sought to develop and validate a novel parent-report measure of gender-related CR. Our investigation demonstrated that the CR-GEQ measure assesses parents' use of CR regarding children's gender expression with good reliability and validity. Moreover, our findings show that parent-reported CR for gender expression appears to be associated with but distinct from other aspects of CR (academic achievement, emotion expression) and might be associated with select negative mental health consequences, particularly for children assigned male at birth. Study 1 provided support for the factor structure of the CR-GEQ among parents of cisgender children. Study 2 further substantiated the factor structure of this measure among parents of both cisgender and gender diverse children assigned male at birth. However, the gender difference in the factor structure between parents of children assigned female at birth and children assigned male at birth in Study 2 suggests that parents might reinforce femininity and masculinity differently for children assigned female vs. male at birth. Study 3 confirmed the convergent validity of our measure, showing that gender-related CR was significantly associated with, but distinct from, existing measures of CR (i.e., academics, anger, fear) and with children's psychopathology (e.g., externalizing symptoms). Taken together, our gender-related CR measure contributes uniquely to knowledge of parental use of CR and its consequences for

children's mental health outcomes beyond traditional domains of CR, such as academic achievement and emotion expression.

We hope our innovative measure can serve as a starting point for psychologists, family scholars, and mental health professionals to investigate parenting and caregiving behaviors towards TGNC children and youth. Research examining the development of TGNC children and youth should consider measuring parents' use of gender-related CR. Whereas emerging evidence shows that social support from parents promotes better mental health for TGNC individuals in various developmental stages (Simons et al., 2013; Wilson et al., 2016), far less is understood about how parental support and stigma for gender identity and expression are associated with psychological adjustment and the underlying mechanisms whereby unsupportive caregiving behaviors may be related to maladjustment among TGNC youth. One possibility is that parental CR for gender expression mediates the association between more global parental rejection and psychological adjustment of TGNC children. It also could be that whether certain more general classes of parental behavior (e.g., support vs lack of support) towards gender non-conformity is associated with mental health outcomes depends on the extent to which parents use and engage in gender-related CR. Further, considering that CR most closely parallels psychological control (Smiley et al., 2016), we would anticipate that the outcomes of CR for gender expression would be similar to the outcomes that are linked to psychological control — for instance, anxiety (Ballash et al., 2006), and/or rebellious/disruptive behaviors (Miller et al., 2018) — and indeed, we found in Study 3 that CR for gender expression is related to both of these problem domains.

The current studies represent preliminary work in this area and, as such, they have limitations. First, our data were reports from parents (rather than reports from children directly about their experiences of their parents' behaviors), the majority of whom have cisgender children in early or middle childhood. Future research should include child reports of parental CR behaviors. Given this investigation's questions about the relationship between CR for gender expression and psychopathology, it may also be helpful for future studies to incorporate clinical samples.

Second, across all studies, parents reported low mean scores of CR for gender expression, such that there was a floor effect. The reasons for this pattern are unclear — perhaps parents were simply highly supportive of their child's gender expression and thus did not engage in CR behaviors. Alternatively, social desirability or a lack of awareness might have affected how parents reported their engagement in gender-related CR, such that they did not want to appear to be unsupportive of TGNC children and/or were not aware of the ways in which they use CR. Additional research with families who show more variability in their support of TGNC children is needed to tease apart these nuances.

Third, as this is a concern in most self-report studies, it will be important for additional research to include a multi-modal assessment of CR for gender expression, drawing upon parent and child report, as well as an in-lab interaction between parent and child (including both gender-specific and more general topics of conversation) that investigators could code for CR. Fourth, Studies 1 and 3 utilized the same sample; thus, replication of the hypotheses

tested in Study 3 is necessary. Study 3 used parent-reported psychopathology; future studies could include child reports of psychopathology.

Despite these limitations, we have presented strong empirical support for a measure of gender-related CR and its associations with children's mental health outcomes. Future research on TGNC children and youth should consider utilizing this measure to attempt to understand how parents play a role in reinforcing or punishing youths' gender expression. For example, longitudinal designs are needed to examine how gender CR predicts change in child psychopathology and/or gender expression over time. With appropriate informed consent, experimental manipulations of parents' use of CR for gender expression could be used in the laboratory to understand state changes in children's affect and cognitions, which, in combination with experience sampling methods, could examine whether gender-related CR impacts children's experience and behaviors in the following days and weeks. Such designs could also be used to elucidate how minority stress may interact with gender CR to shape the mental health of TGNC youth. Further, programs that promote resilience in TGNC youth and their families could be adapted to prevent and address consequences of using CR for gender expression. It could be equally important to incorporate these concepts into work with parents of cisgender children, given links between CR and maladaptive health outcomes generally. Through investigations like these, we hope that our novel measure of parental CR for gender expression will prompt new discoveries and innovations (including both prevention and intervention efforts) among scholars and professionals working with parents and families.

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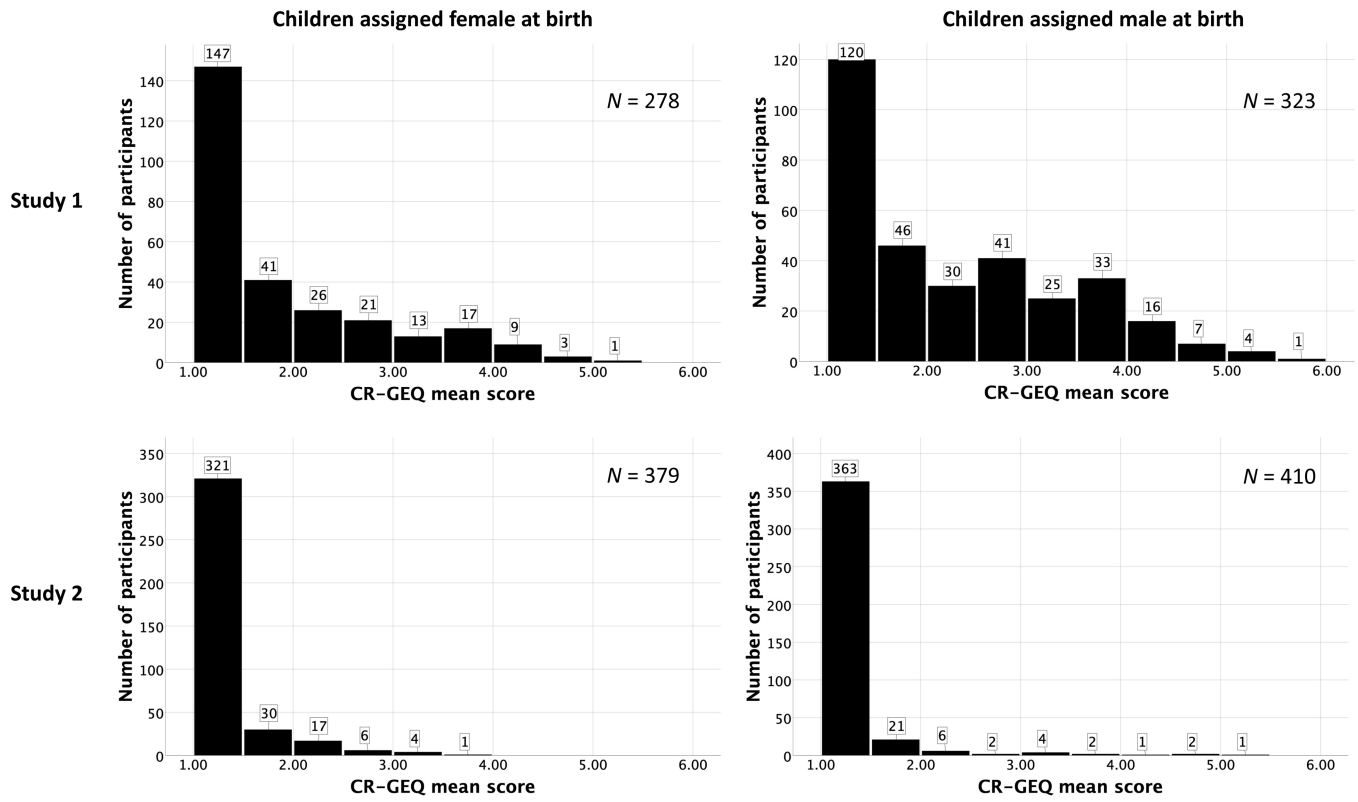


Figure 1:
 Distribution of CR-GEQ mean scores by assigned sex at birth in Studies 1 and 2.
 Note: CR-GEQ = Conditional Regard for Gender Expression Questionnaire.

Table 1.

Sample demographics for Study 1.

N	601 parents
Child age	3–15 years ($M = 7.40$, $SD = 3.78$)
Child sex assigned at birth	53.7% assigned male at birth
Child gender	47.6% boy; 43% girl; 9.4% other
Parent age	20–61 years ($M = 35.22$, $SD = 7.59$)
Parent sex	38.4% male
Race	79.7% White (Non-Hispanic) 7.8% African American 6.0% Asian 3.5% Hispanic 3.0% Other
Marital status	73.2% Married/Domestic partners 25.8% Single 1.0% Widowed
Number of children in the family	58.4% more than 1 child (2–10)
Household income	7.8% Less than \$40,000 26.3% \$41,000 to \$60,000 22.0% \$61,000 to \$80,000 19.5% \$81,000 to \$100,000 17.7% \$101,000 to \$120,000 6.8% Greater than \$120,000

Note: Child gender was determined by parent response to the following question: “My child identifies as a: 1) boy or 2) girl”

Table 2.

Study 1 factor loadings for the Conditional Regard for Gender Expression Questionnaire.

Items	Factor loading
<i>Children assigned female at birth</i>	
If my child acts in a masculine way, I make my child feel that this behavior is very immature (NCR)	0.87
If I think that my child is not acting in a feminine enough way, I make my child feel that I'll value my child very much if my child behaves more femininely (PCR)	0.82
If my child acts in a masculine way, I may react very angrily, even at the risk of hurting my child's feelings (NCR)	0.81
If my child makes little effort to act in a feminine way, I make my child feel that I'll be much prouder if my child makes a greater effort (PCR)	0.81
If my child acts in a masculine way, I make my child feel that I am disappointed (NCR)	0.80
If my child makes efforts to act in a feminine way, even if it means giving up certain things that my child likes to do, I show my child that this is something I really appreciate (PCR)	0.70
When my child acts in a feminine way, I express more warmth and affection for my child (PCR)	0.69
If my child acts in a masculine way, I ignore my child for a while (NCR)	0.65
<i>Children assigned male at birth</i>	
If my child makes little effort to act in a masculine way, I make my child feel that I'll be much prouder if my child makes a greater effort (PCR)	0.84
If my child acts in a feminine way, I make my child feel that I am disappointed (NCR)	0.84
If my child acts in a feminine way, I may react very angrily, even at the risk of hurting my child's feelings (NCR)	0.83
If my child acts in a feminine way, I make my child feel that this behavior is very immature (NCR)	0.80
If I think that my child is not acting in a masculine enough way, I make my child feel that I'll value my child very much if my child behaves more masculinely (PCR)	0.80
When my child acts in a masculine way, I express more warmth and affection for my child (PCR)	0.72
If my child acts in a feminine way, I ignore my child for a while (NCR)	0.68
If my child makes efforts to act in a masculine way, even if it means giving up certain things that my child likes to do, I show my child that this is something I really appreciate (PCR)	0.64

Note. NCR = Negative conditional regard. PCR = Positive conditional regard.

Table 3.

Sample demographics for Study 2.

N	793
Child age	3–15 years ($M = 9.21, SD = 2.58$)
Child assigned sex at birth	51.7% assigned male at birth
Child race	72.6% White / European 1.1% Hispanic/Latino 1.0% Black / African American 2.3% Asian 0.0% Pacific Islander 0.4% Native American 0.4% Other/Unknown 22.2% Multiracial
Parent race	84.7% White / European 3.2% Hispanic/Latino 0.8% Black / African American 3.0% Asian 0.1% Pacific Islander 0.3% Native American 1.9% Other/Unknown 6.1% Multiracial
Household income	2.1% Less than \$25,000 11.6% \$25,000 to \$50,000 14.6% \$50,000 to \$75,000 30.8% \$75,000 to \$125,000 44.3% Greater than \$125,000 1.0% Missing

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Table 4.

Study 2 factor loadings for the Conditional Regard for Gender Expression Questionnaire.

Item	Factor 1	Factor 2
<i>Children assigned female at birth</i>		
When my child acts in a feminine way, I express more warmth and affection for my child (PCR)	0.91	0.12
If my child makes little effort to act in a feminine way, I make my child feel that I'll be much prouder if my child makes a greater effort (PCR)	0.79	0.03
If my child makes efforts to act in a feminine way, even if it means giving up certain things that my child likes to do, I show my child that this is something I really appreciate (PCR)	0.61	-0.05
If I think that my child is not acting in a feminine enough way, I make my child feel that I'll value my child very much if my child behaves more femininely (PCR)	0.52	-0.10
If my child acts in a masculine way, I make my child feel that this behavior is very immature (NCR)	-0.06	-0.86
If my child acts in a masculine way, I make my child feel that I am disappointed (NCR)	0.05	-0.82
If my child acts in a masculine way, I may react very angrily, even at the risk of hurting my child's feelings (NCR)	-0.02	-0.80
*If my child acts in a masculine way, I ignore my child for a while (NCR)	0.25	-0.30
<i>Children assigned male at birth</i>		
If my child makes little effort to act in a masculine way, I make my child feel that I'll be much prouder if my child makes a greater effort (PCR)	0.90	
If I think my child is not acting in a masculine enough way, I make my child feel that I'll value my child very much if my child behaves more masculinely (PCR)	0.90	
If my child acts in a feminine way, I make my child feel that I am disappointed (NCR)	0.88	
When my child acts in a masculine way, I express more warmth and affection for my child (PCR)	0.85	
If my child acts in a feminine way, I make my child feel that his behavior is very immature (NCR)	0.78	
If my child makes efforts to act in a masculine way, even if it means giving up certain things that my child likes to do, I show my child that this is something I really appreciate (PCR)	0.75	
If my child acts in a feminine way, I may react angrily, even at the risk of hurting my child's feelings (NCR)	0.75	
If my child acts in a feminine way, I ignore my child for a while (NCR)	0.50	

Note. NCR = Negative conditional regard. PCR = Positive conditional regard.

* This item cross-loaded on both Factors 1 and 2, suggesting it may not be the most robust contributor to these factors. Thus, it should be included with caution in future research with gender diverse youth who were assigned female at birth.

Table 5.

Study 3 associations between the Conditional Regard for Gender Expression Questionnaire and other measures of conditional regard.

		CR for gender expression	
		Assigned females	Assigned males
CR Academics	NCR	0.324 ^{***}	0.446 ^{***}
	PCR	0.248 ^{***}	0.292 ^{***}
CR Anger	NCR	0.523 ^{***}	0.580 ^{***}
	PCR	0.488 ^{***}	0.473 ^{***}
CR Fear	NCR	0.704 ^{***}	0.679 ^{***}
	PCR	0.573 ^{***}	0.619 ^{***}

Note.

^{***}
 $p < .001$.

CR = conditional regard. NCR = negative conditional regard. PCR = positive conditional regard. In all analyses except for those with CR for academic achievement, n for children assigned female at birth = 278, n for children assigned male at birth = 323. For academic analyses, n for children assigned female at birth = 180, n for children assigned male at birth = 166.