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Associations Between Gender Nonconformity, School Environments, Family Conflict, and Emotional and Behavioral Health Among Children Ages 10–11

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Abstract

Purpose: In youth, gender nonconformity (GNC; gender expression that differs from stereotypes based on assigned sex at birth) is associated with a higher likelihood of peer and caregiver victimization and rejection. However, few studies have examined the relationship between GNC, overall family conflict, perceptions of school environment, and emotional and behavioral health problems among children ages 10–11.

Methods: The Adolescent Brain Cognitive Development Study data release 3.0 was used (n = 11,068; 47.9% female). A path analysis was used to examine whether school environment and family conflict, mediated the relationship between GNC and behavioral and emotional health outcomes.

Results: We found significant mediation of the relationship between GNC and behavioral and emotional health by school environment a_2b_2 = .20, 95% CI [0.13, 0.27] and family conflict a_1b_1 = 0.34, 95% CI [0.25, 0.42].

Discussion: Our results suggest that youth who present as gender nonconforming experience elevated family conflict, poorer perceptions of their school environment and elevated behavioral and emotional health problems. Further, the relationship between GNC and elevated emotional and behavioral health problems was mediated by perceptions of school environment and family conflict. Clinical and policy suggestions to improve environments and outcomes for youth who present as gender nonconforming are discussed.

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Keywords

Gender nonconformity; ABCD; Preadolescents

Gender nonconformity (GNC) refers to when an individual's gender expression (i.e., expression through clothing, hair, voice, mannerisms, etc.) differs from the cultural expectations of their assigned sex at birth [1]. This is separate from gender identity which can be defined as an individual's internal sense of their gender. While gender identity has historically been seen as categorical (transgender, cisgender, other gender), gender expression is a dimensional construct. That is, an individual can have varying gradients of masculine, feminine, and other expression. Gender identity and expression can be incongruent. For instance, someone may identify as a woman and have a masculine gender expression. GNC in youth is common, even among youth without a minority gender identity (e.g., transgender, nonbinary). In fact, a study conducted within a large, diverse community sample of 10- or 11-year-olds found that when asked "how much have you dressed or acted like a <boy/girl> during play?" 20.1% of youth reported some level of GNC (with responses ranging from rarely to always), while only about 0.5% of the sample reported having a transgender identity [2]. This dimensional GNC was associated with elevated distress such that greater GNC was associated with higher thoughts of death and self-harm. However, the relationship between GNC and distress can be contextualized by examining social factors such has higher rates of peer victimization and parental and peer rejection among youth with a gender nonconforming expression.

Peer rejection and victimization

Toomey and colleagues (2013) [3] conducted a study examining the relationship between peer reported GNC and peer and self-reported overt and relational victimization and aggression among 318 children in grades 7 and 8. Peer-reported GNC was assessed by asking youth to nominate their peers based on the prompts: "these boys act like girls/these girls act like boys." A higher number of peer nominations was associated with higher self- and peer-reports of overt and relational victimization, and aggression among both children assigned male and children assigned female at birth in the sample. The association between peer-reported GNC and peer-reported overt aggression was moderated by participant sex such that the relationship was stronger for children assigned female at birth compared to children assigned male at birth. Similarly, a study conducted with youth in grades 5–9 in the United Kingdom [4] found that a greater proportion of children within the sample with self-reported and peer-reported GNC had experienced victimization. The relationship between victimization and GNC extends into high school as well. For example, a study measuring GNC dimensionally in high school students from four urban school districts found 15% greater odds of bullying for each unit increase in GNC [5].

Peer rejection is associated with negative mental health outcomes among youth that present as gender nonconforming. In a sample of children ages 6–12, researchers found a significant interaction between parent-reported GNC and peer problems on total behavioral and mental

health challenges such that elevated GNC was associated with a greater effect of poor peer relations on behavioral and emotional challenges [6].

Parental rejection

Caregivers also play an important role in the well-being of youth who present as gender nonconforming. In one study, youth at the top decile of childhood GNC (prior to age 11) had higher rates of caregiver physical and psychological abuse and were more likely to endorse sexual abuse perpetrated by an adult or older child compared to youth below median GNC [7]. In a sample of 6- to 12-year-olds [6] there was a significant interaction between parent-reported GNC and both gender-stereotypical attitudes toward child-rearing and parental willingness to serve as a secure base. This suggests that a parent who endorses low-stereotypical gendered attitudes toward parenting and high levels of willingness to serve as a secure base is protective against behavioral and emotional challenges among youth who present as gender nonconforming.

GNC among youth is associated with greater distress. This greater distress can be contextualized by external factors such as higher rates of peer victimization, rejection, and bullying [3,4], as well as higher rates of abuse from caregivers [7].

Summary and conceptualization

Previous studies conducted with adolescents suggest that peer and school-based outcomes are related to degree of GNC [5]. Positive perceptions of school climate are related to greater school satisfaction (e.g., [8]) and well-being (e.g., [9]) among all youth. Higher rates of peer victimization experienced by GNC youth may impact their perceptions of the school environment and be particularly important for their well-being. Although few studies have examined family conflict and adolescent GNC in community populations, childhood GNC has been identified as a risk factor for child abuse [7] and negative parental relationships in adulthood (e.g., [10]). This may be true for younger GNC adolescents as well and may also affect well-being. Understanding the impacts of school and family environments on the well-being of GNC youth ages 10–11 could provide clear support for strategies and policies to support youth with a gender nonconforming presentation.

The current study

The current study assesses GNC in a community sample of 10- and 11- year-olds using a dimensional measure. The aims of the current study are to (1) investigate if dimensional GNC in children ages 10–11 in a large demographically diverse sample is associated with elevated emotional and behavioral health problems, greater family conflict, and poorer perceptions of the school environment and (2) examine if family conflict and perceptions of the school environment mediate the relationship between dimensional GNC and emotional and behavioral problems.

Methods

Study design

Data from the Adolescent Brain Cognitive Development (ABCD) study were obtained from the National Institute of Mental Health data archive (release 3.0). ABCD is a 10-year, longitudinal study of 11,875 youth enrolled at ages 9–10 from 21 sites in the United States. Participants (youth and parents) were recruited through schools, with minimal exclusion criteria [11], and informed consent/assent was obtained by trained research staff. The University of California San Diego's Institutional Review Board approved the study protocol. The racial demographics of the participants in this study roughly match the racial composition of the 2015 American Community Survey. Although ABCD study utilizes a longitudinal design, the analyses conducted for the current study were cross-sectional.

Participants

Participants with available data on (GNC) at the year one follow-up (n = 11,068) were used in analyses (see Table 1 for demographics).

Measures

Gender nonconformity.—The ABCD gender survey assesses felt-gender, contentedness with assigned sex at birth, and gender expression [2]. See Table 2 for full measure. However, the current study specifically focuses on GNC. Expression was assessed using a binary gender framework, such that children assigned female at birth were only asked, "How much have you dressed or acted as a boy during play?" and children assigned male at birth were only asked, "How much have you dressed or acted as a girl during play?" (participants were not asked how much they dressed or acted like their assigned sex at birth during play or like another gender that falls outside the binary girl/boy). To measure GNC dimensionally, a 5-point response scale was used (*always, often, sometimes, rarely,* and *never*) and coded such that higher scores indicated more GNC. "Decline to answer" responses were not included in analyses (see Table 1 for response frequency).

Youth perceptions of school environment.—The School Environment subscale from the PhenX School Risk and Protective Factors protocol originally derived from the Communities That Care Youth Survey [12] examines youth's perceptions of their school climate and school engagement. Statements such as "I get along with my teachers" and "I feel safe at my school" are endorsed on a scale from 1 (*definitely not true*) to 4 (*definitely true*). The total score sums all six items of the School Environment subscale; lower total scores indicate a more stressful school environment. Gonzalez and colleagues (2018 [13];) have reported the reliability and validity of this measure within the ABCD sample. The alpha for the School Environment subscale was moderately high (a = 0.65) and the scale was able to differentiate between high and lower risk youth.

Family conflict.—The Conflict subscale from the Family Environment Scale [14] consists of nine *true* (1) or *false* (0) items assessing the amount of openly expressed conflict among family members. Items are summed and higher scores indicate more family conflict. The conflict subscale has adequate internal consistency (Cronbach's alpha = 0.67) within the

ABCD sample and can differentiate between low- and high-risk youth suggesting criterion validity [13].

Total emotional and behavioral health problems.—The Child Behavioral Checklist (CBCL) is a dimensional parent-report that examines a wide array of emotional and behavioral problems [15]. The Total Problems raw score is a sum of the problem items on the CBCL, with higher scores indicating more problems. The CBCL Total Problems scale has strong internal consistency ($a = 0.97$) and strong content, criterion, and construct validity [15].

Covariates.—Child age, race, assigned sex at birth, and highest household education were collected through a parent-reported demographics survey. In our proposed models, child age in months was included to account for potential developmental differences. Dummy coded race (1 = white, 2 = Black, 3 = Latino/Latine/LatinX, 4 = Asian and 5 = Other) was included to account for potential racial differences related to family conflict and perceptions of the school environment (e.g. [16]). Assigned sex at birth was included in all analyses to account for sex differences on study variables (0 = children assigned male at birth, 1 = children assigned female at birth; e.g., [17]) and highest household education was covaried to account for the impact of income on emotional and behavioral health, family conflict, and perceptions of school environment (e.g., [18]). Education was coded such that 1 = <HS Diploma, 2 = HS Diploma/GED, 3 = Some College, 4 = Bachelors, and 5 = Postgraduate Degree and was treated as a continuous variable. Parent-reported child pubertal status was included as a covariate to adjust for emotional and behavioral health differences associated with puberty (e.g., [17]). Answers to the Pubertal Development Scale [19] yields five categories (1 = prepubertal, 2 = early pubertal, 3 = midpubertal, 4 = late pubertal, and 5 = postpubertal) which were treated as continuous.

Proposed models and statistical approach—Normality was assessed for all study variables. Total emotional and behavioral problems were log transformed due to positive skew. Prior to analyses, we ensured that all relevant variables (independent variable, mediator, and dependent variable) for each analysis were significantly inter-correlated (as required for mediation [20]; Table 1). Percentage of missing data ranged across variables with a mean of 1.25%. The data were treated missing at random and maximum likelihood estimation was used which allowed for the entire sample of 11,068 participants to be analyzed. Data for this study can be found at http://dx.doi.org/10.15154/1528681.

To test if dimensional GNC was associated with family conflict and perceptions of school environment and if family conflict and school environment mediate the relationship between GNC and behavioral and emotional health outcomes, a path analysis with 5,000 bootstraps was conducted in RStudio, version 4.0.0 [21] using the lavaan package [22]. GNC and the covariates were included as exogenous predictors with one-headed paths to each variable in the model. Cluster robust standard errors were reported to account for the statistical dependency of siblings in the study. Due to sex differences in emotional and behavioral health problems (e.g., [17]), we also conducted a multi-group analysis with sex as the grouping variable.

Results

A path analysis was run to determine if school environment and family conflict mediated the relationship between GNC and total emotional and behavioral health problems. The path from interview age to school environment was fixed to zero to produce fit indices. The model did not converge with dummy coded race; thus, race was recoded as a binary variable (0 = white, 1 = non-white). This recoded race variable was used in all further analyses. The overall goodness of fit statistics indicated good model fit. (See Figure 1 for final model and Table 3 for parameter estimates).

There was a significant total effect of GNC on total emotional and behavioral problems (c), significant paths from GNC to both mediators (a_1 and a_2), and from both mediators to total emotional and behavioral problems (b_1 and b_2). The significant direct effect of GNC on total emotional and behavioral problems remained when both school environment and family conflict were included in the model (c'). Specifically, higher GNC predicted higher family conflict and more negative perceptions of school environment. These relationships were seen when the significant relationships between family conflict-total emotional and behavioral problems and school environment-total emotional and behavioral problems relationships were accounted for. We observed significant, indirect effects on GNC and total emotional and behavioral problems through family conflict, $a_1b_1 = 0.34$, 95% CI [0.25, 0.42], and through school environment, $a_2b_2 = 0.20$, 95% CI [0.13, 0.27] individually, as well as a significant total indirect effect of both mediators, $a_1b_{1+}a_2b_2 = 0.53$, 95% CI [0.41, 0.65]. This indicates that perceptions of school environment and family conflict, both together and separately, partially mediate the relationship between GNC and total emotional and behavioral problems when accounting for the other mediator and the covariates. Parameter estimates are also reported separately by sex (Table 4). Due to literature that suggests that there are sex differences in the associations between youth GNC, parental acceptance (e.g., [23]) and peer victimization (e.g., [3]), we ran an exploratory analysis to determine if the differences in structural parameters across sex were statistically significant. All paths were first freely estimated within each sex assigned at birth group (children assigned male at birth, children assigned female at birth) and then constrained to be equal. Nested comparison of these models revealed that the freely estimated and constrained models were not statistically significantly different suggesting that the magnitude of the paths within the model is not significantly different.

Discussion

The present study found that dimensional GNC is associated with elevated emotional and behavioral problems, a finding previously reported in the literature (e.g., [6]) and within the ABCD cohort [2]. Additionally, there is a significant relationship between dimensional GNC, family conflict, and perceptions of the school environment. Family conflict and perceptions of the school environment partially mediated the relationship between GNC and total emotional and behavioral problems. Inconsistent with extant literature (e.g., [3]), a multigroup analysis revealed that there were no significant differences in parameters by sex assigned at birth. However, we may not have been able to detect group differences because fewer children assigned male at birth participants endorsed some level of GNC (13.5%

compared to 29.2% children assigned females at birth). Our findings highlight the important roles of the school and family environment on the well-being of youth who present as gender nonconforming.

Our findings have important policy and funding implications for helping children with gender nonconforming presentations thrive both in their home and school settings. Policy suggestions are outlined below.

Policy implications

The finding that school environment mediates the relationship between GNC and emotional and behavioral health symptoms has important implications that may guide policies and allocation of funds to protect children with a gender nonconforming presentation. Our study suggests the importance of comprehensive anti-discrimination policies that explicitly include gender expression. Training teachers on gender affirming practices and interventions for gender-based bullying would likely improve school environments for youth with gender nonconforming presentations. Research conducted with older Lesbian, Gay, Bisexual and Transgender + adolescents demonstrates lower rates of victimization with strong antidiscrimination policies that explicitly protect gender expression [24]. In addition, comprehensive school policies increase teacher intervention when bias remarks are made and increase feelings of school belongingness among LGBT + students [24]. Although this research was conducted with LGBT older adolescents, our study demonstrates that children ages 10–11 are experiencing school stressors. Thus, we imagine that similar antidiscrimination policies would also benefit younger children who endorse some level of GNC. Implementing school interventions earlier in children's education may help prevent negative mental health outcomes associated with discrimination and victimization.

Clinical implications

Our finding that family conflict mediated the association between GNC and total emotional and behavioral health problems indicates a potential point for family intervention. It is important to note that family conflict in this study was not specific to the youth's gender expression. However, the association between GNC and emotional and behavioral health being partially explained by general family conflict highlights the importance of decreasing conflict in the families of youth who present as gender nonconforming. Children who present as gender nonconforming are more likely to experience parental rejection [25] and are at an increased risk for childhood abuse [7]. It is important to improve families' access to resources so that parents can be educated on diversity in gender expression, informed of the negative consequences of family rejection, and empowered to support their children who present as gender nonconforming (see Malpas (2011; [26]) for an example of such an intervention).

Limitations and future directions

Intersectionality.—Our study did not examine intersecting identities such as race, income, or ability [27]. Race was recoded to white/non-white in the path model for statistical reasons (to allow the model to converge). Therefore, the available data is not sufficient to examine

the intersection of race and GNC. This highlights the need for funding studies of special populations in addition to community samples such as the ABCD study.

Measurement considerations.—Notably, the measures used to assess family conflict and perceptions of the school environment were not specifically assessing the experience of discrimination and victimization based on or due to GNC. While our results demonstrate relationships between family conflict, school environment, feelings of worthlessness, GNC, and total emotional and behavioral health problems, they do not indicate that family or school stress was caused by GNC.

Measurement of gender expression.—Another limitation is that we were only able to investigate one aspect of GNC: children's report of their GNC behavior during play. At this age, self-determined gender expression is greatly limited as parents still exert a large influence over a child's clothing, hair style, etc. Future research including other facets of GNC in this age group (e.g., friend group, mannerisms) will be needed to assess the extent to which children with GNC presentations feel their GNC has initiated or affected family conflict and school experiences and the impact of intersecting identities on emotional and behavioral problems.

While this was a cross-sectional study, it is noteworthy that the data used are part of an ongoing study that will allow for longitudinal assessment of this and other dimensions of GNC such as peer and parent/guardian perception of GNC and additional physical and behavioral presentations of GNC throughout adolescence and into young adulthood. A significant limitation of the current study is the use of mediation in a cross-sectional design. Some research suggests that the use of cross-sectional data in a mediation analysis can lead to biased estimates of longitudinal parameters (e.g., [28,29]). Further, GNC within this study is assessed only in reference to the participant's sex not assigned at birth. Participants are not also asked how much they act like their assigned sex at birth or another gender during play, dimensions that would enrich the GNC construct, and possibly further elucidate the relationship with well-being as well as family and school risk factors.

Another potential limitation is that this study chose to focus on GNC due to the outward/detectable nature of gender expression (as opposed to the inner experience of felt gender). ABCD also assessed felt gender by asking children how much they felt like their assigned sex at birth versus how much they felt like the gender society associates with their sex not assigned at birth. Future research will focus on processes of family conflict and perceptions of school environment as it relates to dimensional felt gender.

This study revealed an association between GNC, family conflict, perceptions of school environment, and behavior and emotional health problems among children ages 10–11. Further, perceptions of school environment and family conflict mediated the relationship between dimensional GNC and total emotional and behavioral health problems. This finding has important implications for early intervention at the school and family levels. Future research should be devoted to examining the unique needs of school-aged children across levels of GNC in their home and school contexts. Supporting children who present as gender nonconforming should include early interventions in these contexts which may prevent,

ameliorate, and build resilience against the number of stressors children who present as GNC face through adolescence and into adulthood. Longitudinal research investigating the ways in which GNC, family conflict, and perceptions of school environment change over time will be imperative to the continued work of advocating for and protecting children with a gender nonconforming presentation.

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IMPLICATIONS AND CONTRIBUTION

The association between gender non-conformity and elevated emotional and behavioral health problems in children ages 10 to 11 is mediated by perceptions of school environment and family conflict. These results highlight the importance of policies to protect and celebrate youth who present as gender nonconforming.

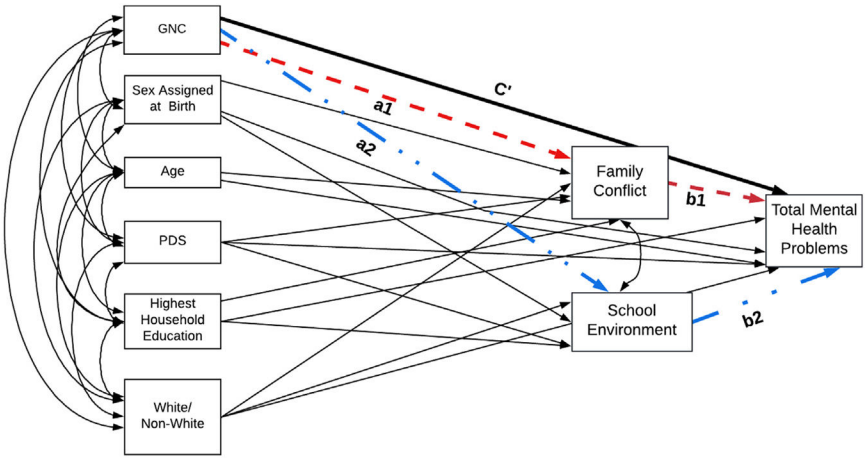

Figure 1.

Path Model, Model Fit: $\chi^2(1) = 0.452$, $p = .501$, RMSEA = 0.000 (90% CI = 0.000–0.022), SRMR = 0.001, TLI = 1.006, CFI = 1.000, PDS = Pubertal Development Scale, GNC = Gender Non-Conformity.

Table 1

Demographics (N = 11,068), descriptive statistics of untransformed variables and zero-order correlations

	Frequency	Percentage
Sex assigned at birth		
Female	5,300	47.9
Male	5,768	52.1
Race		
White	5,922	53.5
Black/African American	1,558	14.1
LatinX/Hispanic	2,190	19.8
Asian	240	2.2
Other	1,156	10.4
Unknown	2	0.0
Highest household education		
<HS Diploma	513	4.6
HS Diploma/GED	983	8.9
Some college	2793	25.2
Bachelors or More	6,767	61.2
Not answered	12	0.1
GNC		
Always	86	0.8
Often	204	1.8
Sometimes	651	5.9
Rarely	1,382	12.5
Never	8,745	79

Variable	Mean	SD	Range
GNC	1.33	0.74	1–5
Total problems	17.4	17.5	0–128
Family conflict	1.9	1.9	0–9
School environment	20.4	2.7	6–24

Zero-order correlations	1	2	3	4	5	6	7	8	9
1. Total problems	1.00								
2. Highest household education	−0.08**	1.00							
3. Family conflict	0.17**	−0.12**	1.00						
4. GNC	0.045**	0.00	0.10**	1.00					
5. Interview age	−0.02**	0.02*	−0.02**	−0.03**	1.00				
6. Race/Ethnicity	0.02**	−0.39**	0.06**	−0.02**	−0.04**	1.00			
7. Sex assigned at birth	−0.09**	−0.01	−0.07**	0.20**	−0.02*	0.02**	1.00		
8. School environment	−0.16**	0.04**	−0.25**	−0.05**	0.00	−0.04**	0.10**	1.00	
9. Pubertal status	0.01**	−0.15**	−0.02**	0.13**	0.23**	0.17**	0.57**	0.02**	1.00

HS = Highschool; GED = General Educational Development Test; SD = Standard Deviation; GNC = Gender nonconfirmity.

** $p < .001$

* $p = <.05$.

Table 2

Items from the youth multi-dimensional gender survey

Item	Construct
1. How much do you feel like a <boy/girl>?	Sex-congruent feltgender
2. How much do you feel like a <girl/boy>?	Sex-incongruent feltgender
3. How much have you had the wish to be a <girl/boy>?	Gender noncontentedness
4. How much have you dressed or acted as a <girl/boy> during play?	Gender nonconformity

Table 3

Decomposition of effects from path analysis[a]

	Unstandardized coefficient	SE	95% lower C.I., upper C.I.	Standardized coefficient
Indirect Effect of Family Conflict (a_1*b_1)	0.34**	0.05	0.25, 0.42	0.01
Indirect effect of school environment (a_2*b_2)	0.20**	0.04	0.13, 0.27	0.01
GNC (c′) on total problems	0.84**	0.25	0.36, 1.33	0.04
Total effect of GNC on total problems $c = (c' + (a_1*b_1) + (a_2*b_2))$	1.38**	0.25	0.88, 1.87	0.06
Effect on total problems	**Unstandardized coefficient**	**SE**	**95% lower C.I., upper C.I.**	**Standardized coefficient**
Interview age	−0.09**	0.02	−0.14, −0.05	−0.04
Binary race variable (0 = White; 1 = Non-White)	−2.51*	0.40	−1.78, −0.22	−0.03
Puberty	1.52**	0.23	1.08, 1.97	0.09
Sex assigned at birth	−4.36**	0.43	−5.21, −3.51	−0.13
Highest education	−0.94**	0.18	−1.28, −0.59	−0.06
Family conflict	1.14**	0.11	0.93, 1.35	0.12
School environment	−0.75	0.07	−0.90, −0.60	−0.12
Effect on family conflict				
GNC	0.29**	0.03	0.24, 0.35	0.12
Interview age	−0.004	0.002	−0.01, 0.00	−0.02
Binary race Variable (0 = White; 1 = Non-White)	0.06	0.04	−0.02, 0.14	0.02
Puberty	0.02	0.02	−0.03, 0.07	0.01
Sex assigned at Birth	−0.39**	0.05	−0.48, −0.29	−0.10
Highest education	−0.20**	0.02	−0.23, −0.16	−0.12
Effect on school environment				
Binary race variable (0 = White; 1 = Non-White)	−0.15*	0.06	−0.27, −0.04	−0.03
Puberty	−0.11**	0.03	−0.18, −0.05	−0.04
Sex	0.74**	0.06	0.62, 0.87	0.14
GNC	−0.26**	0.04	−0.34, −0.19	−0.07
Highest education	0.05	0.03	0.00, 0.10	0.02

Covariance family conflict & school environment	−1.14	0.06	−1.24, −1.03	−0.23

GNC = Gender nonconfirmity.

[a]Significant at **<.001, *<.05.

Table 4

Decomposition of effects from path analysis by sex assigned at birth

	Unstandardized coefficient		SE		95% lower C.I., Upper C.I.		Standardized coefficient	
	AMAB	**AFAB**	**AMAB**	**AFAB**	**AMAB**	**AFAB**	**AMAB**	**AFAB**
Indirect effect of family conflict (a_1*b_1)	0.27**	0.38**	0.07	0.06	0.13, 0.40	0.26, 0.50	0.01	0.02
Indirect effect of school environment (a_2*b_2)	0.17**	0.19**	0.06	0.04	0.05, 0.29	0.10, 0.27	0.01	0.01
GNC (c′) on total Problems	0.65	0.91**	0.47	0.29	−0.28, 1.57	0.35, 1.47	0.02	0.05
Total effect of GNC on total problems $c = (c' + (a_1*b_1) + (a_2*b_2))$	1.08*	1.48**	0.49	0.29	0.12, 2.04	0.91, 2.05	0.03	0.08
Effect on total problems	**Unstandardized coefficient**		**SE**		**95% lower C.I., upper C.I.**		**Standardized coefficient**	
	AMAB	**AFAB**	**AMAB**	**AFAB**	**AMAB**	**AFAB**	**AMAB**	**AFAB**
Interview age	−0.09*	−0.10*	0.03	0.03	−0.15, −0.02	−0.16, −0.03	−0.04	−0.05
Binary race variable (0 = White; 1 = Non-White)	−1.39*	−0.60	0.57	0.53	−2.51, −0.28	−1.63, 0.44	−0.04	−0.02
Puberty	1.70**	1.44**	0.39	0.27	0.93, 2.47	0.92, 1.96	0.07	0.08
Highest education	−1.21**	−0.63*	0.25	0.23	−1.70, −0.72	−1.09, −0.18	−0.08	−0.05
Family conflict	1.07**	1.22**	0.14	0.16	0.79, 1.35	0.91, 1.52	0.11	0.14
School environment	−0.81**	−0.67**	0.11	0.10	−1.02, −0.60	−0.87, −0.47	−0.12	−0.11
Effect on family conflict								
GNC	0.25**	0.31**	0.06	0.03	0.14, 0.36	0.25, 0.37	0.07	0.15
Interview age	−0.001	−0.01*	0.003	0.003	−0.01, 0.01	−0.02, 0.00	−0.003	−0.04
Binary race variable (0 = White; 1 = Non-White)	0.02	0.11	0.06	0.06	−0.09, 0.14	−0.01, 0.22	0.01	0.03
Puberty	−0.01	0.04	0.04	0.03	−0.09, 0.07	−0.02, 0.10	−0.003	0.02
Highest education	−0.19**	−0.20**	0.04	0.02	−0.24, −0.14	−0.25, −0.15	−0.11	−0.13
Effect on school Environment								
Binary race variable (0 = White; 1 = Non-White)	−0.13	−0.19*	0.08	0.08	−0.30, 0.03	−0.35, −0.03	−0.02	−0.04
Puberty	0.00	−0.19**	0.06	0.04	−0.11, 0.11	−0.27, −0.11	0.00	−0.07
GNC	−0.21**	0.91**	0.07	0.05	−0.35, −0.07	−0.37, −0.19	−0.04	−0.10

Highest education	0.05	0.05	0.04	0.04	−0.02, 0.12	−0.25, −0.15	0.02	0.02
Covariance family conflict & school environment	−1.08**	−1.19**	0.08	0.08	−1.23, −0.93	−1.34, −1.04	−0.21	−0.26

AFAB = Assigned Female at Birth; AMAB = Assigned Male at Birth.

* $p < .05$

** $p < .001$.