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CAPTURING THE EXPERIENCES OF GENDER NON-CONFORMING CHILDREN
THROUGH THE MINORITY STRESS MODEL

A Thesis Presented

by

Hannah Loso, BA

to

The Faculty of the Graduate College

of

The University of Vermont

In Partial Fulfillment of the Requirements
for the Degree of Master of Arts
Specializing in Psychology

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ABSTRACT

Gender non-conforming (GNC) adolescents experience staggering rates of peer and family victimization and discrimination. Recent research suggests children who present as GNC are more likely to experience distress regardless of their gender identity (e.g. Wilson et al., 2017). Increased mental health issues experienced by GNC youth can be conceptualized using Ilan Meyer's Minority Stress model (Meyer, 1995; Meyer, 2003). This model posits three major processes related to minority stress: (1) distal - external and objective stressful conditions, (2) proximal - the expectation of victimization or discrimination and (3) internalization of negative societal attitudes related to one's minority status. Although minority stress has been examined in gender diverse adults and adolescents, there have not been studies investigating minority stress in GNC younger children. In this study we tested whether Meyer's Minority Stress Model captures the experience of GNC children ages 10 to 12 in a large representative sample. A secondary aim of the study was to investigate if there were race and sex differences in the GNC minority stress model. We predicted that males and racial minorities would have higher minority stress and subsequently elevated mental health problems.

Data was obtained from the National Institute of Mental Health data archive which includes Adolescent Brain Cognitive Development (ABCD) Study data from 21 sites across the U.S. Data used for this analysis was from the 2.0 release. For this analysis, we used data from a novel gender assessment completed at the year-1-follow-up visit (n=4,951; 48% female; Mage=11.004). MPlus mediation analyses were used to investigate the mediating role of school environment and family conflict on the relationship between gender non-conformity and mental health problems. A similar mediation analysis tested if feelings of worthlessness or inferiority (internal processes) mediated the relationship between gender non-conformity and mental health. Finally, a moderation model was used to test if proximal processes (the expectation others could not be trusted or wished harm) affected the relationship between gender non-conformity and mental health. We predicted distal, internal and proximal minority stress processes would affect mental health outcomes in 10 to 12-year-olds.

In the distal model, school and family environment significantly mediated the relationship between gender presentation and mental health with more positive environments associated with reduced symptoms. In the internal processes model, feelings of worthlessness and inferiority mediated the relationship between GNC and total mental health problems. Expectation of rejection was not a significant predictor of mental health outcomes. There were no racial differences in any of the models. There were sex differences in the expectation of rejection model but not in the distal or internalization of society's negative views models. Specifically, there was a significant interaction between the expectation of rejection variables and gender non-conformity for males but not for females.

Our results indicate partial support for Meyer's Model in GNC youth. This study has important clinical and policy implications suggesting areas for intervention to improve outcomes for GNC youth.

ACKNOWLEDGEMENTS

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CHAPTER 1: INTRODUCTION

Transgender¹(a broad term that can be used to describe people whose gender identity does not or is perceived to not match stereotypical gender norms associated with the person's assigned gender at birth; Marksamer & Wade, n.d.) adolescents experience staggering rates of peer and family rejection, victimization, discrimination and homelessness (e.g. Hatchel et al., 2019; James et al., 2016). Transgender youth are also at an increased risk for mental health issues including eating disorders, mood disorders, attention-deficit/hyperactivity disorder and non-suicidal self-injury (e.g. Becerra-Culqui et al., 2018; Connolly et al., 2016). Further, a representative study of transgender youth found that prevalence of self-reported suicidal ideation was nearly twice as high for transgender youth compared to their cisgender (a person who exclusively identifies with their sex assigned at birth; Trans Student Educational Resources, n.d.) peers (Perez-Brumer et al., 2015). Given these health disparities, efforts to improve health outcomes among transgender youth are a recognized priority (e.g. Johns et al 2019).

While gender identity, one's internal knowledge of their gender (e.g. transgender, nonbinary, cisgender, boy, girl, etc.) is one aspect of gender, there are other gender domains that are important for well-being. One such aspect is gender expression, which is defined as how a person presents their gender externally often through behavior, clothing, hairstyle or voice (National Center for Transgender Equality, 2016). Gender non-conformity is when an individual's expression differs from cultural ideas or stereotypes based on their sex

¹ Transgender, cisgender, non-binary and gender non-conforming are words we are using in this paper, but it is important to note that language is always evolving and there are additional gender identities that have not been listed in this paper. Some of the terms here will not align with everyone's gender identity or gender expression.

assigned at birth (Marksamer & Vade, n.d.). 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 gender(s) expression.

Although the prevalence of transgender youth (ages 13-17) is estimated to be approximately 2% (Johns et al., 2019), the prevalence of adolescents with a gender non-conforming (GNC) presentation is much higher. In fact, a recent study found that 27% of adolescents in the California school system reported that their peers would describe their gender presentation as non-conforming (Wilson et al., 2017). Gender non-conforming (GNC) adolescents are youth who do not adhere to societal or cultural expectations or stereotypes of how they should look or act based on their sex assigned at birth (Marksamer & Vade, n.d.). While gender nonconformity is common, GNC youth are still discriminated against and victimized at a higher rate than their peers in both school and home environments (e.g. Gordon et al., 2018). GNC youth are also at higher risk for elevated psychological distress and experience increased mental health disparities in comparison to their gender conforming peers (e.g. Spivey & Prinstein, 2019).

Elevated mental health issues and distress reported by gender non-conforming youth can be conceptualized using the minority stress model. The minority stress model was first coined by Ilan Meyer (Meyer, 1995; Meyer & Dean, 1998; Meyer, 2003) to describe the experiences of individuals in the gay, lesbian and bisexual community. Meyer defines minority stress as the stress that arises when the experience of an individual in a minority group is in contradiction to the majority culture. Minority stress operates through three major processes to create negative health outcomes. (1) Distal stressors are larger,

objective, institutionalized discriminations that do not rely on a person's perceptions of their oppression, whereas proximal stressors are subjective, individual stressors that are based on how an individual appraises a stressful event. Meyer proposed two distinct forms of proximal stress: (2) expecting to experience victimization or discrimination and (3) internalizing negative societal attitudes related to one's minority status. Proximal and distal stressors are inextricably linked. For instance, if a gender non-conforming child is bullied at school for the way that they dress and the school does not address the harassment (distal stressors) they may become anxious to go to school due to anticipation (proximal stress) that they will be bullied and victimized by their peers and that school personnel will not protect them. Although the expectation of being bullied is a subjective experience, it is in reaction to a real, external threat and may be an accurate expectation.

There are a myriad of ways in which gender non-conforming youth may experience these three processes (summarized below).

Distal stressors for GNC youth

GNC youth experience a number of distal stressors (external, objective and stressful conditions) in their school, community and home environments. Peer victimization and bullying can be a particularly taxing experience for these youth. Gordon and colleagues (2018) found that GNC youth (ages 13 to 18) are generally at higher risk of electronic and in-school bullying. Victimization varied by type and degree of non-conformity; for example, highly gender non-conforming females assigned at birth were nine times more likely to be victimized by a weapon, compared to moderately gender non-conforming females assigned at birth. The 2015 National School Climate Survey found that 44.6% of Lesbian, Bisexual, Transgender or Questioning/Queer (LGBTQ) students felt unsafe at

school because of their gender expression (Kosciw et al., 2018). One large study found that 77% of adults who were out as or perceived to be transgender or GNC in school had negative experiences including being harassed, physically or sexually assaulted and/or prohibited from dressing in accordance with their gender identity (James et al., 2016). Victimization in school has deleterious educational outcomes, with 17% percent of these individuals reporting they had to leave school due to mistreatment (James et al. 2016). Interestingly, the higher levels of victimization, stress and discrimination occur *regardless* of gender identity (e.g. Toomey et al., 2013; Young & Sweeting, 2004).

Peer discrimination and victimization has lasting effects. In a longitudinal study, Roberts and colleagues (2013) found that gender non-conformity was predictive of future depressive symptoms and that depressive symptoms were largely explained by familial and peer physical and emotional bullying and abuse. One study found that peer victimization towards GNC children negatively impacted their future ratings of overall life satisfaction and was associated with increased depression (Toomey et al., 2013). Additionally, gender non-conformity-based victimization is related to lower grade point averages, less school connectedness, and higher absences (O'Shaughnessy et al., 2004; Poteat & Espelage, 2007), as well as a diminished sense of school belonging (Collier et al., 2013) and school safety (Toomey et al., 2012).

Teachers and school administrators play an important role in the lives and school climate of GNC youth. In a national study of adolescents ages 13 to 21, 71% of students reported that they heard their teachers or other school staff make negative remarks related to students' gender expressions (Kosciw et al., 2018). In contrast, teachers can play a protective role in GNC adolescents' lives. GNC children report higher feelings of safety

at school when teachers and school staff intervene when bias-related harassment occurs (Kosciw et al., 2018; O'Shaughnessy et al., 2004; Toomey et al., 2012). Additionally, school policy impacts students' feelings of safety. One study found that both gender conforming and GNC students were more likely to feel safe at schools where there were anti-bullying policies that provided protections related to sexual orientation, gender identity and expression (Greytak et al., 2016). Students at schools that have an anti-homophobic and transphobic bullying policy are also less likely to perceive bullying or harassment as a problem at their school compared to students that do not have such a policy (Greytak et al., 2016).

School is not the only place that GNC adolescents are impacted by institutional and systemic discrimination. One of the ways in which society discriminates against GNC children and adheres to the gender binary (a concept or belief that there are only two genders, male and female) is through gendered bathrooms. Legislation related to restroom facilities impacts the safety of all GNC people. In a National School Climate Survey, over 40% of LGBTQ students said they avoided gender segregated spaces (e.g. bathrooms and locker rooms) because they felt uncomfortable or unsafe (Kosciw et al., 2018). In a study conducted by Herman, 70% of GNC adults reported being denied access, verbally harassed or physically assaulted in public restrooms (Herman, 2013). This issue gained a highly visible national presence, heightening the public debate about gender identity and amplifying the negative attitudes of a vocal minority in society.

Another way in which GNC adolescents experience systemic discrimination is through the health care system. GNC adults are more likely to postpone getting medical care for fear of being discriminated against (Cruz, 2014). Decreasing barriers to care is

particularly important for GNC adolescents. One study found that adolescents who rate themselves as having a gender non-conforming expression have higher general health and long-term mental health concerns (Bortz & Safer, 2018). By decreasing barriers to health care, GNC youth can receive proper care.

The home environment may also expose GNC children to stigma and discrimination (Gartner & Sterzing, 2018). This may be in the form of micro-aggressions (intentional or unintentional brief behavioral, verbal or environmental indignities that communicate hostile or prejudicial attitudes) such as a family member saying, “It’s just a phase,” in regard to a GNC child. Additionally, GNC children are more likely to experience elevated parental rejection (Landolt et al., 2004) and are at an increased risk for experiencing childhood abuse (Roberts, et al., 2012) and homelessness (Begun & Kattari, 2016). Rejection and victimization of GNC children has long lasting effects including attachment anxiety and/or avoidance in adulthood (Landolt et al., 2004). Insecure attachment in all parent-adolescent relationships has detrimental outcomes, including increased suicidality (Boyda et al., 2018; Lessard & Moretti, 1998), aggressive and delinquent behaviors (e.g. Allen et al., 2007; Moretti et al., 2004; Obsuth et al., 2002) and an increased likelihood of developing depressive and anxious symptomology (Allen et al., 2007). Thus, GNC children experience distal stress through societal stigma and discrimination, school victimization and family rejection that negatively impacts their physical and mental health outcomes.

Proximal Stressors for GNC Youth

Proximal stressors are subjective, individual stressors that are based on how an individual appraises an event. The minority stress model describes two proximal stress

processes: (1) the expectation of and hypervigilance about discrimination and victimization and (2) the internalization of society's negative attitudes.

Proximal Stressor – Expectation of Rejection and Victimization in GNC Youth

An important aspect of Meyer's model is the psychological stress that is produced by hypervigilance or the constant anticipation of discrimination or victimization. To our knowledge, there have not been studies examining the relationship between expectation of negative outcomes, hypervigilance and mental health in GNC children. However, literature examining the experience of hypervigilance among transgender adults may help inform the experience of GNC children. Expectations of rejection and stigma have been associated with increased psychological distress (Timmins et al., 2017) and depressive symptoms (Brennan et al., 2017) among transgender adults. A key feature of post-traumatic stress disorder is hypervigilance (the feeling of needing to be "on guard" or alert to prepare for potential threat). A recent community-based study of 452 transgender adults found that transgender adults who have had higher experiences of discrimination display symptoms that mirror post-traumatic stress responses, including elevated hypervigilance, even after adjusting for past trauma (Reisner et al., 2016). Within this sample, individuals who had high observable gender non-conformity had more PTSD symptoms and experienced more everyday discrimination. In a small qualitative sample of transgender adults (n=30), 96% of participants endorsed experiencing heightened vigilance and expectation of rejection (Rood et al., 2016). From this research, we expect to see similar processes of expectation of rejection and hypervigilance among GNC children.

Proximal Stressor - Internalization of Negative Societal Attitudes by GNC Youth

Another proximal process of minority stress is the internalization of society's negative and prejudicial attitudes. As a response to constant societal discrimination, exclusion and victimization, GNC individuals may internalize society's negative attitudes towards GNC people (e.g. Kuper et al., 2018). The internalization of these discriminatory attitudes is referred to as internalized transphobia. Although gender non-conforming children do not necessarily have a transgender identity, individuals who are perceived as GNC, regardless of identity, have higher incidences of bullying and victimization (Gower et al., 2018). Thus, we expect that GNC youth are also more likely to internalize society's negative and discriminatory attitudes. A recent study by Chodzen and colleagues (2019) investigated the relationship between mental health symptoms and internalized transphobia in transgender and GNC adolescents (ages 12 to 18 years old). The researchers first found that 33% of transgender and GNC participants met diagnostic criteria for Major Depressive Disorder and 48% met diagnostic criteria for Generalized Anxiety Disorder. For comparison, the prevalence of Major Depressive Disorder and Generalized Anxiety Disorder in the overall population is approximately 7% and 2.9%, respectively (American Psychiatric Association, 2013). Importantly, individuals with high levels of internalized transphobia were more likely to meet criteria for both Major Depressive Disorder and Generalized Anxiety Disorder (Chodzen et al., 2019). Additionally, internalized transphobia is associated with decreased self-esteem (Austin & Goodman, 2017) and lifetime suicidality (Perez-Brummer et al., 2015; Testa et al., 2017) among adults. However, there is a dearth of research on the impact of internalization of negative societal attitudes on GNC children's mental health.

The current study

The minority stress model has been used to describe factors that contribute to minority stress among older adolescent (ages 12 to 18) and adult gender minorities (e.g. Testa et al., 2017). However, to our knowledge, there are no studies that have examined the minority stress model in GNC children. Although school-aged children are less likely to formally identify as transgender (Herman et al., 2017) we expect that, as seen in adolescents (Wilson et al., 2017), many likely have a gender non-conforming presentation. We predict that the minority stress model will extend to GNC children ages 10 to 12. Thus, the current study aims to examine this model in a large, representative sample of 10 to 12-year-old children from the Adolescent Brain Cognitive Development (ABCD) Study (Jernigan et al., 2018). We predict that gender non-conformity will be associated with mental health symptoms and that this relationship will be partially explained by proximal and distal stressors.

The secondary aim of this study is to investigate sex assigned at birth and racial differences in GNC youth within the minority stress model. Prior research suggests that gender non-conforming males assigned at birth are more highly stigmatized and rejected in comparison to females assigned at birth (e.g. Spivey et al., 2018; Van Beusekom et al., 2019). Similarly, research suggests that GNC racial minorities, particularly youth from Black/African American or Hispanic/LatinX communities, experience higher levels of victimization and rejection in comparison to their white peers (e.g. Kattari et al., 2015). We predict that males assigned at birth and racial minorities who are more gender non-conforming will have increased minority stress and total mental health problems.

CHAPTER 2: METHODS

Participants

Data from the ABCD study was obtained from the National Institute of Mental Health data archive (release 2.0.1). ABCD is a large longitudinal study of adolescents recruited at ages 9 and 10. Parent and child participants were recruited through schools and exclusion criteria were minimal (Garavan et al., 2018). All participants completed a formal consent/assent process and the study protocol was approved by the University of California San Diego's Institutional Review Board. The current study used maximum likelihood estimation in order to include the data of all 4,951 participants included in the NIH data release 2.0.1 even if they had missing data. (48% Female Assigned at Birth; $M_{age}=11.001$;) The racial demographics of the participants in this study roughly match the most recent United States census (table 1).

Measures

Gender Non-conformity

In accordance with recent recommendations in the literature (e.g. Conron et al., 2014; Westbrook & Saperstein, 2015), gender non-conformity was measured with a quantitative scale. Gender is measured using a novel, 4 item scale developed for ABCD. This assessment measures a number of dimensions of gender (felt-gender, contentedness with sex assigned at birth and gender expression; see table 2 for the measure). Parent-reported sex determined the version of the questionnaire that the participant received (items were identical but with opposite-gendered language). The independent variable for the analyses was the gender expression question. Females assigned at birth were asked, "How much have you dressed or acted as a boy during play?" and males assigned at birth were

asked, “How much have you dressed or acted as a girl during play?”. Response options for this question were rated 1 to 5 (*Always, Often, Sometimes, Rarely and Never*) with lower scores indicating more gender nonconformity.

School Environment

The School Environment Subscale from the PhenX School Risk and Protective Factors (SRPF) protocol originally derived from the Communities That Care (CTC) Youth Survey (Arthur et al., 2007) was used. The SRPF examines youth’s perceptions of their school climate and school engagement. The School Environment subscale includes questions like, “I get along with my teachers” and “I feel safe at my school”. Each question is on a scale from 1 to 4 with a score of 1 meaning the statement is *definitely not true* for the participant and a score of 4 meaning the statement is *definitely true* for the participant. The total score for the School Environment Subscale is derived from adding the scores from six of the items on the SRPF scale (possible scores from 6-24); lower total scores indicate a more stressful school environment.

Family Conflict

The Conflict subscale from the Family Environment Scale (Moos & Moos, 1994) consists of 9 items assessing the amount of openly expressed conflict among family members. We used youth report for the current analysis. Responses to each question are *true* (1) or *false* (0) and a summary score is derived from adding the participant’s score for each question; higher scores indicate more family conflict.

Internalization of society’s negative views

The Brief Problem Monitor (BPM) Scale – Youth report (Achenbach, 2009; Achenbach et al., 2011) is a self-report instrument used to measure children’s emotional

and behavioral function including internalizing, externalizing and attention problems. One internalizing item, “I feel worthless or inferior”, was used as a proxy for internalization of society’s negative views. Response options range from 0 – 2 (*not true, somewhat true or very true*); higher scores were used as an indicator of greater internalization of society’s negative views.

Expectation of Victimization or Discrimination

The Prodromal Psychosis Scale is a 21-item measure of prodromal psychosis level (Karcher et al., 2018; Loewy et al., 2011). Although, this is a questionnaire originally designed to measure psychosis, two items on the scale are also relevant to the expectation of rejection or victimization. Specifically, we used the following single items in our analysis: “Did you suddenly feel that you could not trust other people because they seemed to be watching you or talking about you in an unfriendly way?” and “Did you feel that other people might want something bad to happen to you or that you could not trust other people?”.

Total Mental Health Problems

The Child Behavioral Checklist (CBCL) is an empirically driven, standardized measure that has been validated for use in a number of cultures (Achenbach, 2009; Achenbach & Rescorla, 2001). The CBCL is a dimensional parent-report measure that examines a large array of mental health symptoms including thought problems, attention problems, withdrawn/depressed symptoms and aggressive behaviors. In the current study, we used the total problems score as our outcome variable in each analysis. The total problems score is a sum of the eight problems scales with higher scores indicating more problems.

Puberty

Although we did not examine the effect of puberty directly, we included pubertal status as a covariate in the models. A self and parent report measure of puberty status was administered to all participants (Petersen et al., 1998). We averaged the puberty status scores derived from the parent and child report.

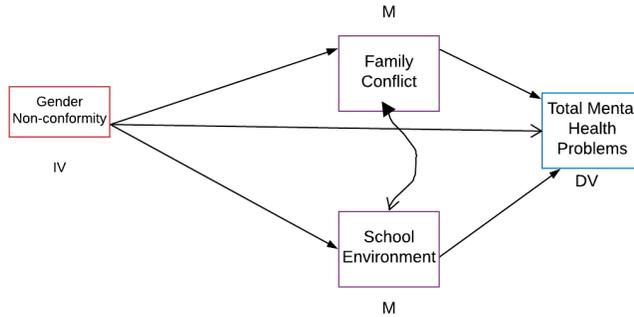
Proposed Models and Statistical Approach

Aim 1 Data Analytic Approach – Examining if the Minority Stress Model Extends to Children Ages 10 to 12

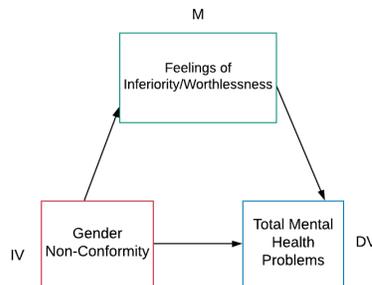
Mediation analyses in MPlus were used to test the distal and proximal models that use ordinal scales and included age, income, puberty, race and sex assigned at birth as covariates (see figure below). The first model tested the effects of distal stressors (school environment and family conflict) on the relationship between gender non-conformity and mental health problems. The second model tested whether the proximal stressor of feelings of inferiority or worthlessness mediate the relationship between gender non-conformity and total mental health problems. Finally, we investigated the moderating effect of the proximal stressor, expectation of rejection on the relationship between gender non-conformity and total mental health problems including the same covariates. Moderation was used for the expectation of rejection model because the variables are dichotomous. We examined the expectation of rejection by using two moderating variables: The expectation that others could not be trusted and the expectation that others wanted something bad to happen. We tested a two-way interaction between gender non-conformity and each

moderator, and a three-way interaction between gender presentation and both moderators.

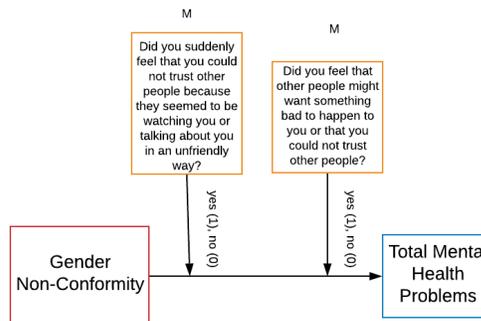
Model for testing if distal stressors mediate the relationship between GNC and mental health problems



Model to test if internalized negative attitudes (a proximal stressor) mediate the relationship between GNC and mental health problems.



Model to test if negative expectations (a proximal stressor) moderate the relationship between GNC and mental health problems.



Aim 2 Data Analytic Approach – Examining Race and Sex Assigned at Birth Differences in the Minority Stress Model

To examine possible sex differences in the relationships between the variables, we employed multi-group path analysis and compared males and females assigned at birth. Finally, we ran a multi-group path analysis comparing processes of minority stress for Black/African American, LatinX/Hispanic and white youth to determine if there were racial differences in minority stress.

Power Analyses

An a priori power analysis was conducted using G* Power (Faul et al., 2007; Faul et al., 2009) to estimate the number of participants needed to have sufficient power for the analysis (n=194). Our sample size was well above the sample size necessary to detect relationships between our independent and outcome variable and the mediating and moderating variables. However, the large sample size may bias significance testing (Jones & Sommerlund, 2007). Therefore, we report effect sizes with confidence intervals and encourage caution when interpreting *p*-values.

Descriptive Statistics and Model Fit

Table 3 presents descriptive statistics for the untransformed variables. CBCL total problems and family environment variables were positively skewed and kurtotic, indicating a violation of normality. Thus, these variables were log transformed. After transformation, total problems and family environment variables were considerably more normal and were used in all subsequent analyses. Prior to analyses, we ensured that all relevant variables (IV, mediator and DV) for each analysis were significantly inter-correlated (as required for mediation; Baron & Kenney, 1986). The assumption that

variables were significantly intercorrelated was met. Table 4 displays the non-zero order correlations between all variables. Fit statistics for each model are displayed in table 5. Evaluation of model fit was based on recommendations from Hu & Bentler, 1999 (Chi-square (χ^2 : $p > .05$ good), Comparative Fit Index (CFI; $> .90$ acceptable, $> .95$ good), Tucker Lewis Index (TLI; $> .90$ acceptable, $> .95$ good), Root Mean Square Error of Approximation (RMSEA; $< .08$ acceptable, $< .05$ good), Standardized Root Mean Square Residual (SRMR; $< .08$ good).

Sexual Orientation as a Covariate

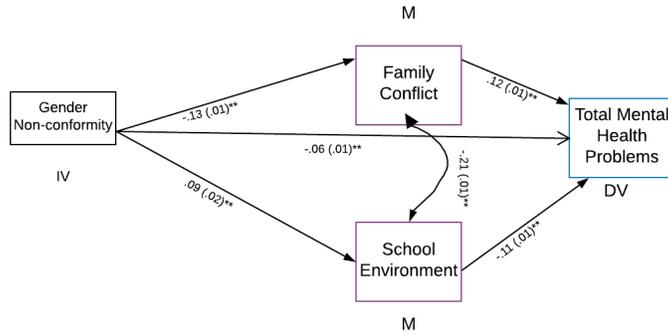
Prior to analyses we considered including the minority stress associated with being a sexual minority in our analyses. Children who have a non-heterosexual orientation experience some of the same minority stressors as we would expect GNC children to experience (e.g. Beams et al., 2015). Further, in a national study of transgender adults, researchers found that only 15% identified as heterosexual (James et al., 2016). Therefore, it was important that we examined if there was an overlap among gender non-conformity and sexual minority status within the sample to determine if sexual orientation needed to be included as a covariate. A chi square test ($\chi^2(12) = 284.99, p < .001$) revealed that the Cramér's V effect size between gender non-conformity and sexual orientation was fairly small ($V = .14, p < .001$), and therefore sexual orientation was not included as a covariate in the models (see table 6 and 7 for sexual orientation descriptives).

CHAPTER 3: RESULTS

Results Aim 1

Distal Stress Processes

To test distal stress processes, we conducted a mediation analysis in MPlus. Age, income, puberty, race and sex assigned at birth were included as covariates (see figure below for direct effects of the key variables and the table for effects of covariates; see appendix a for full model with covariates). The direct path showed that gender non-conformity was significantly associated with poorer mental health outcomes such that as gender non-conformity increased, mental health symptoms increased ($\beta = -.06, p < .001$). Both distal stressors were related to GNC with increased gender non-conformity associated with increased family conflict and a more negatively perceived school environment ($\beta = -.13, p < .001$; $\beta = .09, p < .001$, respectively). Positive school environment was associated with decreased mental health symptoms ($\beta = -.11, p < .001$) and elevated family conflict was associated with greater total mental health problems ($\beta = .12, p < .001$). Finally, consistent with the minority stress model, bootstrap analyses showed that school environment and family conflict significantly mediated the relationship between gender non-conformity and mental health problems ($\beta = -.01, p < .001, 95\% \text{ CI} = [-.01, -.004]$; $\beta = -.02, p < .001, 95\% \text{ CI} = [-.013, -.005]$, respectively). The total effect was $\beta = -.05, p < .001$. The total indirect effect in the model was significant ($\beta = -.02, p < .001$), demonstrating that the combined influence of perceived school environment and family conflict mediates the relationship between gender non-conformity and mental health problems.



Standard estimate (standard error)

Independent Variable	Family Conflict	School Environment	Total Mental Health Problems
Sex assigned at birth	-.11 (.02)**	-.14 (.02)**	-.12 (.02)**
Age	-.02 (.02)	.02 (.02)	-.05 (.02)**
Puberty	.02 (.02)	-.05 (.02)*	.06 (.02)*
Income	-.14 (.02)**	.06 (.02)*	-.07 (.02)**
White	-.04 (.02)	.09 (.03)**	-.01 (.02)
Black	.01 (.02)	.04 (.02)*	-.06 (.02)*
LatinX	-.06 (.02)*	.08 (.02)**	-.04 (.02)
Asian	-.01 (.02)	.03 (.01)*	-.06(.02)**

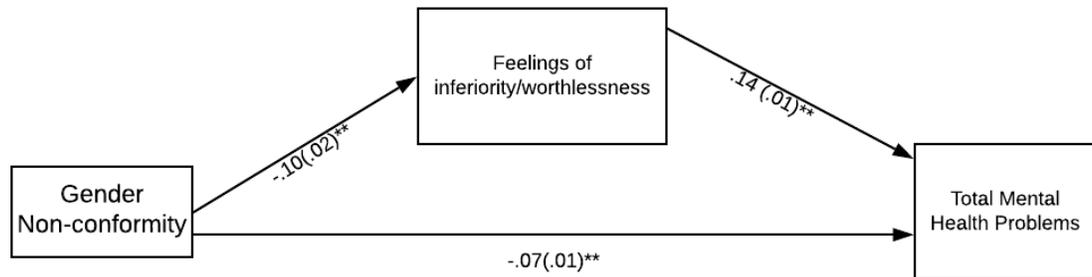
Significant at ** <.001, * <.05

Proximal Stress Processes

Internalization of Society’s Negative Attitudes

To test the internalization of societal negative attitudes, we conducted a mediation analysis in MPlus (see figure below for direct effects and table for covariate effects; see appendix b for full model with covariates). Higher GNC was associated with increased feelings of inferiority/worthlessness and elevated mental health problems ($\beta = -.10, p < .001$; $\beta = -.07, p < .001$, respectively). Increased feelings of inferiority/worthlessness was associated with elevated mental health problems ($\beta = .14, p < .001$). Feelings of

inferiority/worthlessness mediated the relationship between gender non-conformity and total mental health problems ($\beta = -.01, p < .001$). The total effect was $\beta = -0.05, p = .01$.



Independent variable	Feelings of inferiority/worthlessness	Total Mental Health Problems
Sex assigned at birth	-.02 (.02)	-.15(.02)**
Age	-.05(.02)*	-.05(.02)*
Puberty	-.02 (.02)	.06(.02)*
Income	-.03 (.02)	-.09(.02)**
White	-.05 (.03)	-.02 (.02)
Black	-.05 (.02)*	-.06(.02)*
LatinX	-.02 (.03)	-.05(.02)*
Asian	-.02 (.01)	-.06 (.02)**

Expectation of rejection and victimization

There was a main effect of gender non-conformity on total mental health problems ($\beta = -.07, p < .001$) with higher gender non-conformity associated with increased mental health problems. In addition, main effects of the expectation that others could not be trusted ($\beta = .07, p < .001$) and that others wanted bad things to happen ($\beta = .08, p < .001$) were seen on total mental health problems. However, none of the interaction effects were significant, showing that expectation of rejection and victimization do not moderate the

relationship between gender non-conformity and mental health problems. See below for covariate effects.

Independent Variable	Total Mental Health Problems
Sex assigned at birth	-.15(.02)**
Age	-.05(.02)*
Puberty	.06(.02)*
Income	-.08(.02)**
White	-.02(.02)
Black	-.07(.02)**
LatinX	-.06(.02)*
Asian	-.07(.02)**

Significant at ** <.001, * <.05

Results Aim 2 – Racial Differences

To examine race differences in the minority stress model, we first investigated frequencies by race to the question, “In the past 12 months, have you felt discriminated against: because of your race, ethnicity, or color?” (figure 1). 1.8% of white children, 11% of Black children, 4.6% of LatinX children and 5.1% of children who identity as a race other than White, Black, LatinX or Asian in the sample endorsed the item. In the current analysis we compared the minority stress processes of a subsample of 4,290 Black, LatinX and White children. We specifically compared these groups of children because we wanted to understand the ways in which minority stress processes may be different for Black and LatinX children, who experience institutional racism, in comparison to white children, who do not experience institutional racism (Pew Research Center, 2016; Tenenbaum & Ruck, 2007). Descriptive statistics by race are provided in table 8.

Racial Differences in the Distal Model

In order to test racial differences in minority stress we conducted a multiple-group path analysis comparing Black, LatinX and White participants with gender non-conformity as the independent variable, total mental health problems as the dependent variable and family conflict and school environment as the mediators. Income, age, sex assigned at birth and pubertal status were included as covariates in the model. The constrained model had excellent fit. The unconstrained model was saturated and therefore did not produce fit indices. A comparison of the constrained and unconstrained multi-group distal model yielded a non-significant chi-square [$\chi^2 = 37.54$, $df = 30$, $p = .16$], demonstrating no difference between the constrained and unconstrained model and therefore no significant racial differences in the effects of distal stressors.

Racial Differences in Internalization of Society's Negative Views

We then compared racial differences in the internalization of society's negative views by conducting a multi-group path analysis with race as the grouping variable. Age, sex assigned at birth and pubertal status were included as covariates in the model. The constrained model had excellent fit. The unconstrained model was saturated and therefore did not produce fit indices. A comparison of the constrained and unconstrained multi-group internal models yielded a chi-square of $\chi^2 = 15.28$, $df = 18$, $p = .64$, suggesting that there are no racial differences in how internalization of society's negative attitudes impacts the relationship between GNC and mental health problems.

Racial Differences in Expectation of Rejection

Next, we compared racial differences in the expectation of rejection model. The constrained and unconstrained models had relatively poor fit. A comparison of the

constrained and unconstrained multi-group internal models yielded a chi-square of $\chi^2=53.86$, $df=20$, $p < .001$, suggesting that there are racial differences in the model. However, the racial differences are only in the main effects and not in the interactions (see table below for standardized coefficients from the baseline model).

	White			Black			LatinX		
	Estimate	S.E.	<i>p</i> -value	Estimate	S.E.	<i>p</i> -value	Estimate	S.E.	<i>p</i> -value
Gender non-conformity	-.06	.02	.002	-.12	.06	.05	-.06	.04	.12
Expectation that others could not be trusted	.07	.02	.001	.06	.05	.24	.07	.03	.04
Expectation that others wanted bad things to happen	.05	.02	.03	.11	.05	.03	.04	.04	.21
Gender non-conformity X Expectation others could not be trusted	.02	.03	.35	-.09	.07	.20	-.02	.05	.61
Gender non-conformity X Expectation others wanted bad things to happen	-.02	.03	.43	-.02	.09	.84	-.01	.05	.85
Gender non-conformity X Expectation that others could not be trusted X Expectation others wanted bad things to happen	-.02	.03	.62	.13	.10	.20	.10	.06	.10

Results Aim 2 – Sex Differences

Descriptive statistics for all variables by sex are provided in table 9.

Sex Differences in Distal Processes

We conducted a multi-group analysis in MPlus by sex assigned at birth with race, income, puberty and age as covariates. The constrained model had excellent fit. The unconstrained model was saturated and therefore did not produce fit indices. A comparison of the constrained and unconstrained models yielded a chi square of $\chi^2 = 22.03$, $df = 27$, $p = .74$, indicating no sex differences in distal processes.

Sex Differences in Internalization of Society’s Negative Attitudes Processes

We then conducted a multi-group analysis in MPlus with sex assigned at birth as a grouping variable and race, income, puberty status and age as covariates. The constrained model had excellent fit. The unconstrained model was saturated and therefore did not produce fit indices. A comparison of the unconstrained and constrained internal models yielded a chi-square of $\chi^2 = 11.39$, $df = 17$, $p = .84$, indicating that there are no sex differences in the internal model.

Sex Differences in Expectation of Rejection

Next, we compared sex differences in the expectation of rejection model. The unconstrained model had excellent fit and the constrained model had relatively poor fit. A comparison of the constrained and unconstrained model yielded a chi square of $\chi^2 = 81.59$, $df = 13$, $p < .001$, suggesting that there are sex differences in proximal processes (see table below for a comparison of each model). Closer examination of the estimates suggests that the interaction between the expectation of rejection moderators and gender non-conformity was significant for males but not for females. To decompose this significant interaction,

we computed and plotted the simple slopes for males (see figure 2). Gender non-conformity and total mental health problems was significantly moderated by expectation of rejection.

	Male			Female		
	Estimate	S.E.	<i>p</i> -value	Estimate	S.E.	<i>p</i> -value
Gender non-conformity	-.02	.02	.50	-.11	.02	<.001
Expectation that others could not be trusted	.06	.02	.01	.08	.02	<.001
Expectation that others wanted bad things to happen	.10	.02	<.001	.03	.02	.16
Gender non-conformity X Expectation others could not be trusted	-.07	.03	.01	.01	.03	.72
Gender non-conformity X Expectation others wanted bad things to happen	-.04	.03	.13	.003	.04	.94
Gender non-conformity X Expectation that others could not be trusted X Expectation others wanted bad things to happen	.08	.03	.01	.02	.04	.57

Suppression effects

Mediation models with suppressor effects are models where at least one of the mediated effects and direct effects have different signs (MacKinnon, Krull & Lockwood, 2000). All of our models have mediated effects and direct effects with different signs. In order to ensure that the effect of *x* on *y* was not increased when the mediators were added to the models, we accounted for the variance of each variable by accounting for all other variables (table 10). Based on partial correlations, it does not appear that suppression is occurring in the models.

CHAPTER 4: DISCUSSION

The present study found that higher gender non-conformity is associated with increased proximal and distal stressors in middle childhood. This finding is of great importance as it suggests that prejudice towards gender non-conforming (GNC) children occurs as early as elementary school and that this prejudice has negative mental health consequences. The present study aimed to (1) investigate if the minority stress model captured the experience of GNC children ages 10 to 12 and (2) examine differences in the minority stress model by race and by sex assigned at birth. Our results supported our hypothesis in that gender non-conformity was associated with higher mental health symptoms, with the relationship partially explained by distal stressors (family conflict and negative perceptions of school environment) and one of the proximal stressors (internalization of society's negative views). To our knowledge, this is the first study to examine the minority stress model as it relates to GNC children ages 10 to 12. The proximal process of expectation of rejection was not found in the overall sample in the current study. It is possible that expectation of rejection is a developmental process that does not emerge as a stressor until after children have experienced a few years of rejection due to gender non-conformity.

Policy Implications

Our findings have important implications for the creation of government policies to protect GNC children in public, school and home environments. The finding that school environment mediates the relationship between gender non-conformity and mental health outcomes underscores the importance of federal policies that require schools to protect GNC children. To our knowledge, there have not been studies conducted on the impact of

school-wide gender affirming policies on the mental health and wellbeing of GNC students ages 10 to 12. However, findings from the 2017 National School Climate Survey (Kosciw et al., 2018), demonstrate that anti-GNC discrimination and bullying policies have a considerable impact on LGBTQ+ students' (ages 13 to 21) safety and well-being. Notably, harassment and bullying policies were far more likely to protect GNC adolescents when schools included specific language prohibiting harassment or bullying based on gender expression. A policy that explicitly included gender expression was associated with lower rates of harassment about gender presentation (51%) compared to those with only generic anti-bullying policies (63.7%) or no policy at all (63.3%). The study also found increased teacher intervention when bias remarks were made and increased feelings of school belongingness among LGBTQ+ students in schools with explicit policies protecting gender expression (Kosciw et al., 2018). This study suggests that having a comprehensive policy has a direct impact on the frequency of harassment and whether teachers and personnel intervene when gender expression-related bullying occurs.

The National Discrimination Survey Report on Health and Health Care (Grant et al., 2010), a retrospective study, found that GNC adults who were bullied, harassed, assaulted or expelled in school due to being GNC reported significantly elevated levels of suicide attempts (51% compared to 41%). Notably, GNC adults that were targeted by their teachers were far more likely to attempt suicide. In fact, 59% of those harassed or bullied by teachers, 76% of those who were physically assaulted and 69% of those who were assaulted by teachers had attempted suicide at some point in their lives. Hostile school climates and peer and teacher victimization towards GNC youth are an important public health concern and it is imperative that federal policies are created to prevent the long-term

effects of peer and teacher victimization on GNC youth. Our finding that school environment mediates the relationship between gender presentation and mental health extends this literature by showing its importance as early as 4th grade. Not only is it important that schools create policies with specific language that protects GNC children, but these policies should be made and enforced early in children's school careers.

Our findings highlight the importance of federal funds being allocated to elementary and middle schools in order to improve teacher and school personnel education on gender expression, how to best support GNC youth and how to effectively intervene when bias incidents occur. It is essential to not only create policies to protect GNC children but to also build school communities that celebrate and affirm all gender expressions. Teachers and school personnel play a crucial role in creating a positive school environment. Schools have a safer overall climate, lower rates of harassment and stronger student-teacher relationships when teachers are trained on how to intervene when hearing slurs or negative comments based on gender expression, have organizations like Gay-Straight Alliances and have LGBT inclusive curricula (O'Shaughnessy et al., 2004). Our findings suggest that creating school environments that are affirming of all gender expressions is not only important for mental health outcomes in older students but also for younger students.

Although our study was not able to specifically examine the impact of state non-discrimination laws on mental health outcomes and safety of GNC children, our finding that gender non-conformity was associated with a more negative perception of school environment highlights the importance of creating greater federal protections against discrimination and harassment based on gender expression. We strongly urge the federal government to create laws that specifically prohibit discrimination based on gender

expression both in schools and in public accommodations. Less than half of current state non-discrimination policies protect individuals based on gender identity and/or sexuality (Conron & Goldberg, 2019). Further, many states do not specifically provide protections for public accommodations or restrooms and non-discrimination laws do not specifically state protections related to gender expression (Conron & Goldberg, 2019). Research has shown that GNC adults who live in states with non-discrimination policies are less likely to endorse experiences of community stigma (Gleason et al., 2016). We imagine that this finding may extend to GNC children ages 10 to 12. In order to improve mental health outcomes among GNC youth it is necessary to create federal non-discrimination policies that protect individuals based on gender identity and expression.

Implications for families of GNC youth

Although our study has important implications for policy and greater systemic changes, it also has implications for family intervention. In our study, family conflict mediated the association between gender presentation and total mental health problems. GNC youth often experience the unique challenge of not sharing the same experience of oppression with their family. Not only do they not have the collective support of a shared outgroup experience, but they often experience increased family ostracization and conflict related to their gender expression (e.g. Gartner and Sterzing, 2018). It is important to improve families' access to resources so that parents can be provided with education on diversity in gender expression, informed of the negative consequences of family rejection and empowered to be a support to their GNC children. An example of such an intervention can be found in Malpas (2011).

Decreasing proximal stressors

A number of studies have demonstrated that transgender or GNC adolescents and adults that have positive external or distal factors have fewer mental health problems (Brennan et al., 2017; Hatchel et al., 2019). We expect that improving the distal factors in GNC children's lives will decrease the proximal process of internalization of society's negative views. For example, if a child grows up in a family and goes to a school that is very supportive and accepting of gender non-conformity, they will probably be less likely to internalize negative views about GNC people. The proximal process of expectation of rejection towards others was not a significant moderator of gender non-conformity and mental health problems in the larger sample. This may be a developmental process where GNC children do not learn to expect rejection until they have had more years of experiencing victimization and peer ostracization as a result of their gender expression or identities. It is also possible that expectation of rejection was not a significant moderator due to the way that expectation of rejection was measured. Items that were used to assess expectation of rejection were taken from a scale that was not specifically designed to measure gender expression minority stress. Future studies may benefit from adapting the gender minority stress and resilience scale (Testa et al., 2017) for gender non-conforming adolescents.

Race and sex differences in the minority stress model

There were no racial differences in any of the models. This may be because there are fewer participants in a racial minority group than there are white participants and fewer males in the sample that endorsed gender non-conformity. Different methods are needed to differentiate the experiences of GNC children within racial groups that are oppressed.

Interestingly, sex differences were detected in the model that included expectation of rejection. There was an interaction between gender non-conformity and expectation of rejection in males but not in females. Expectation of rejection was associated with greater mental health problems in males assigned at birth. This sex difference may be due to the fact that males assigned at birth are more penalized for having a gender presentation that is non-conforming (e.g. Van Beusekom et al., 2019; Spivey et al., 2018). It is important to note that GNC youth in the study were more likely to be female assigned at birth. It is possible that there are sex differences in expectation of rejection but not sex differences in other stressors because we measured gender non-conformity by asking about GNC play. It is possible that GNC males would be more likely to expect rejection if engaging in play that is unexpected for their gender, something we would imagine would be more stigmatized in males.

Limitations and Future Directions

When interpreting these results, it is important to consider the limitations of this study. Notably, the measures used to assess proximal and distal processes were not specifically assessing the experience of discrimination and victimization based on or due to gender non-conformity. Our results merely suggest a relationship between family conflict, school environment, feelings of worthlessness, gender non-conformity and total mental health problems. Additionally, this study was cross-sectional, and we were only able to investigate one aspect of gender non-conformity, children's GNC behavior during play. Future research will be needed to assess the extent to which children with a GNC presentation feel that their gender non-conformity has initiated or affected potential proximal and distal stressors in their life. It is noteworthy that the data used in this study

is part of an ongoing study that will allow for longitudinal assessment of this and other dimensions of gender non-conformity such as peer and parent/guardian perception of gender non-conformity and additional physical (e.g. hair, clothing, voice) and behavioral (e.g. friend group, mannerisms) presentations of gender non-conformity throughout adolescence and into young adulthood.

Despite these limitations, this study also has numerous strengths. Notably, this study is the first, to our knowledge, to examine minority stress processes with school-aged children who present as gender non-conforming. This finding has important implications for early intervention at the systemic, school and family levels. Future longitudinal research on the ways in which minority stress processes change over time will be imperative to the continued work of advocating for and protecting children with a gender non-conforming presentation.

Table 1
Demographics (N = 4,846)

	Frequency	Percentage
Sex Assigned at Birth		
Female	2,370	47.90%
Male	2,580	52.1%
Missing	1	.0002%
Race		
White	2,940	59.4%
Black/African American	465	9.4%
LatinX/Hispanic	940	18.99%
Asian	99	2%
Other	507	10.24%
Age		
Nine	143	2.9%
Ten	2,188	44.2%
Eleven	2,403	48.5%
Twelve	217	4.4%
Combined Family Income		
<50K	1,097	22.2%
50-100K	1,317	26.6%
>100K	2,183	44.1%
Participant did not know/Did not respond	354	7.2%

Table 2

Multi-Dimensional Assessment of Gender

Question

How much do you feel like a <boy/girl>?

How much do you feel like a <girl/boy>?

How much have you had the wish to be a <girl/boy>?

How much have you dressed or acted as a <girl/boy> during play?

Table 3

Descriptive Statistics of Untransformed Variables

Variable	Mean	SD	Range
Gender Non-Conformity	4.69	0.48	1 - 5
Total Mental Health Problems	17.04	16.89	0 - 123
Family Conflict	1.82	1.83	0 - 9
School Environment	20.47	2.63	6 - 24

Table 4

Zero-order correlations

Variables	Gender Non-Conformity	Total Mental Health Problems	School Environment	Age	Sex	White	Black	Latino/Latino/Hispanic	Asian	Income	Puberty	Expectation that others could not be trusted	Expectation that others wanted bad things to happen	Family Conflict	Feelings of inferiority/worthlessness
Gender Non-Conformity	1														
Total Mental Health Problems	-.06**	1													
School Environment	-.06**	-.15**	1												
Age	.04**	-.04**	0.02	1											
Sex	-.19**	-.01**	.10**	-.01	1										
White	-.02	0.01	0.04	0.04**	-.02	1									
Black	0.01	-.02	0.05**	-.01	0.01	-.39**	1								
Latino/Latino/Hispanic	0.03	.01	0.01	-.05**	-.01	-.59**	-.15**	1							
Asian	0.01	-.07**	0.01	0.01	0.02	-.19**	-.05**	-.08**	1						
Income	-.02	-.08**	.06**	.07**	-.002	.36**	-.23**	-.29**	.05**	1					
Puberty	-.01**	-.02	0.02	.22**	.58**	.16**	.16**	.05**	.002	-.13**	1				
Expectation that others could not be trusted	-.07**	.1**	-.16**	-.03*	.04**	-.11*	.11**	.06**	-.03	-.12**	.07**	1			
Expectation that others wanted bad things to happen	-.09**	.11*	-.17**	-.05**	-.03	-.07**	.07**	.03*	-.003	.07**	.02	.44**	1		
Family Conflict	-.011**	0.17**	-.023**	-.03*	-.07**	-.05**	.06**	.01	-.01	-.14**	-.02	.15**	.15**	1	
Feelings of inferiority/worthlessness	-.1**	.15**	-.021**	-.04**	.02	-.03	-.02	.03*	-.01	-.03*	.03	.25**	.26**	.17**	1

Table 5

Model	Chi-square	CFI	TLI	RMSEA	SRMR
Aim 1 Distal Model *	N/A	N/A	N/A	N/A	N/A
Aim 1 Internalization of Society's Negative Attitudes Model*	N/A	N/A	N/A	N/A	N/A
Aim 1 Expectation of Rejection Model *	N/A	N/A	N/A	N/A	N/A
Aim 2 Distal Model Racial Differences - Constrained	$\chi^2(28) = 36.19, p = .14$	0.99	0.98	.01 (90% CI = 0 – 0.03)	0.02
Aim 2 Distal Model Racial Differences - Unconstrained*	N/A	N/A	N/A	N/A	N/A
Aim 2 Internalization of Society's Negative Attitudes Model Racial Differences - Constrained	$\chi^2(18) = 15.28, p = .64$	1	1	0 (90% CI = 0 – 0.02)	0.01
Aim 2 Internalization of Society's Negative Attitudes Model Racial Differences - Unconstrained*	N/A	N/A	N/A	N/A	N/A
Aim 2 Expectation of Rejection Model Racial Differences - Constrained	$\chi^2(22) = 61.99, p < .001$	0.8	0.72	.04 (90% CI = .03 – .05)	0.01
Aim 2 Expectation of Rejection Model Racial Differences - Unconstrained	$\chi^2(2) = 8.13, p = .02$	0.97	0.53	.05 (90% CI = .02 – .08)	0.005
Aim 2 Distal Model Sex Differences - Constrained	$\chi^2(27) = 22.03, p = .74$	1	1	0 (90% CI = 0 – 0.012)	0.008
Aim 2 Distal Model Sex Differences - Unconstrained*	N/A	N/A	N/A	N/A	N/A
Aim 2 Internalization of Society's Negative Attitudes Model Sex Differences - Constrained	$\chi^2(17) = 11.39, p = .84$	1	1	0 (90% CI = 0 – 0.01)	0.005
Aim 2 Internalization of Society's Negative Attitudes Model Sex Differences - Unconstrained*	N/A	N/A	N/A	N/A	N/A
Aim 2 Expectation of Rejection Model Sex Differences - Constrained	$\chi^2(14) = 82.18, p < .001$	0.6	0.26	.04 (90% CI = .04 – .05)	0.01
Aim 2 Expectation of Rejection Model Sex Differences - Unconstrained	$\chi^2(1) = .59, p = .44$	1	1	0 (90% CI = 0 – .05)	0.001

*Model is saturated so fit indices were not generated

Table 6

Responses to the question “are you gay or bisexual?”

	Number	Percentage
Yes	40	0.8
Maybe	113	2.3
No	4342	87.7
I do not understand this question	447	9

Table 7

Percentage of responses to the question, “are you gay or bisexual?” at each level of gender non-conformity

Are you gay or bisexual?	How much have you dressed or acted as a <girl/boy> during play?				
	Not at all	A little	Somewhat	Mostly	Totally
Yes	3.8	9.6	4.3	1.5	0.3
Maybe	15.4	17.8	3.2	4.9	1.3
No	65.4	64.4	80.3	86.1	89.6
I do not understand this question	15.4	8.2	12.2	7.4	8.8

Table 8

Untransformed Descriptive Variables by Race

Race	Feelings of inferiority/worthlessness (Percentage Not True/Somewhat True/Very True/Declined to answer)	Gender Non-Conformity (M/SD)	Expectation others could not be trusted (Percentage No/Yes/Declined to answer)	Expectation others want something bad to happen (Percentage No/Yes/Declined to answer)	Family Conflict (M/SD)	School Environment (M/SD)	Total Problems (M/SD)	Average Puberty (M/SD)
White	88.7/8.4/1.3/1.6	4.68/.69	89.1/10.9/0	93.2/6.8/0	1.75/1.84	20.57/2.51	16.54/16.08	1.94/.93
Black	86.6/8/.7/4.7	4.71/.69	74.2/25.8/0	85.7/14.3/0	2.15/1.84	20.30/2.85	17.15/18	2.58/.93
LatinX/Latino/Hispanic	85/11/1.5/2.5	4.73/.68	81.9/18/.1	89.7/10.2/.1	1.80/1.72	20.50/2.73	17.86/17.86	2.17/.99
Asian	90.4/8.8/0/0	4.75/.62	92.1/7.9/0	92.1/7.9/0	1.68/1.72	20.61/2.07	11.16/12.19	2.08/1.15
Other	84.4/10/2.5/3.1	4.67/.76	83.8/16.2/0	91.1/8.9/0	2/1.97	20.04/2.84	18.95/18.44	2.19/1

Table 9

Untransformed Descriptive Variables by Sex Assigned at Birth

Table 10

	Feelings of inferiority/worthlessness (Percentage Not True/Somewhat True/Very True/Declined to answer)	Gender Non-conformity (M/SD)	Expectation of rejection (Percentage No/Yes)	Expectation of ill-intent (Percentage No/Yes/Decline to answer)	Family Conflict (M/SD)	School Environment (M/SD)	Total Problems (M/SD)	Average Puberty (M/SD)
Male	89.7/9/1.1/2.1	4.82 (.50)	87.2/12.8	90.9/9.1	1.93 (1.88)	20.23 (2.70)	18.59 (17.83)	1.53 (.70)
Female	87/9.1/1.7/2.2	4.55 (.83)	84.6/15.4	92.3/7.7	1.69 (1.78)	20.74 (2.50)	15.19 (15.45)	2.66 (.88)

Figure 1

Racial Discrimination Responses

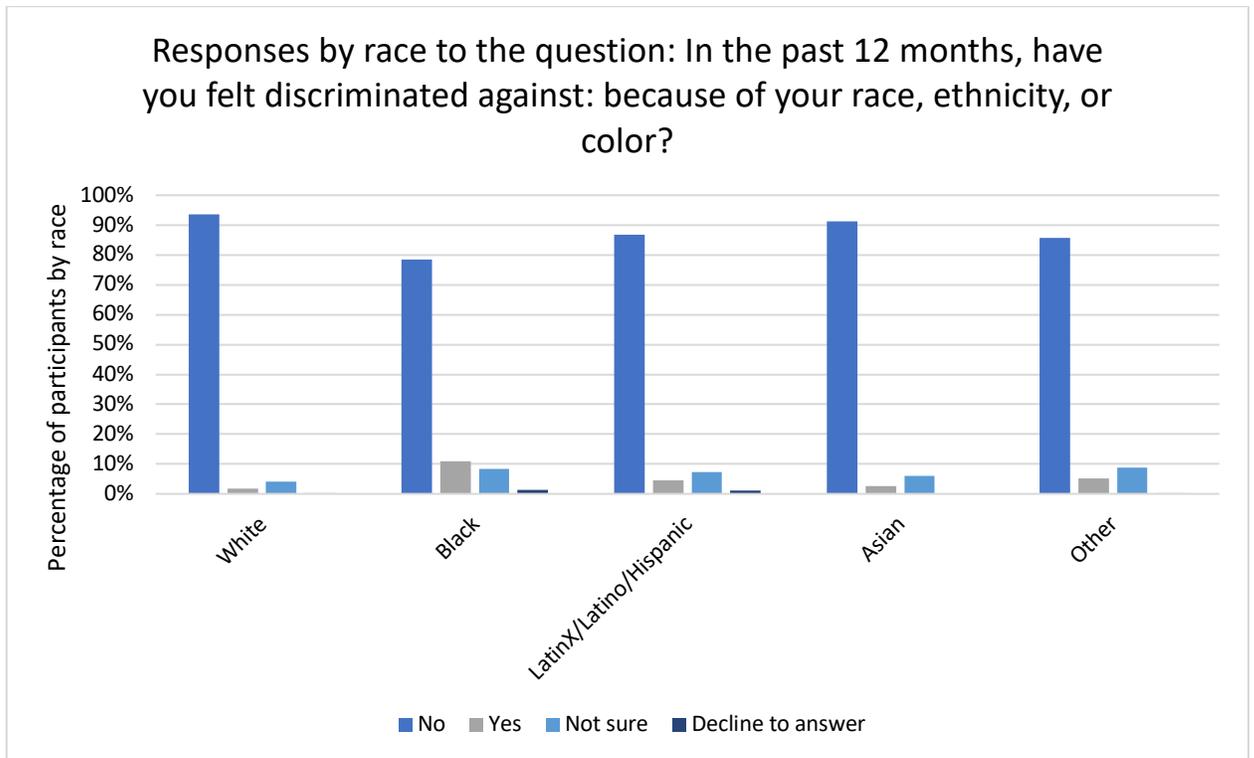
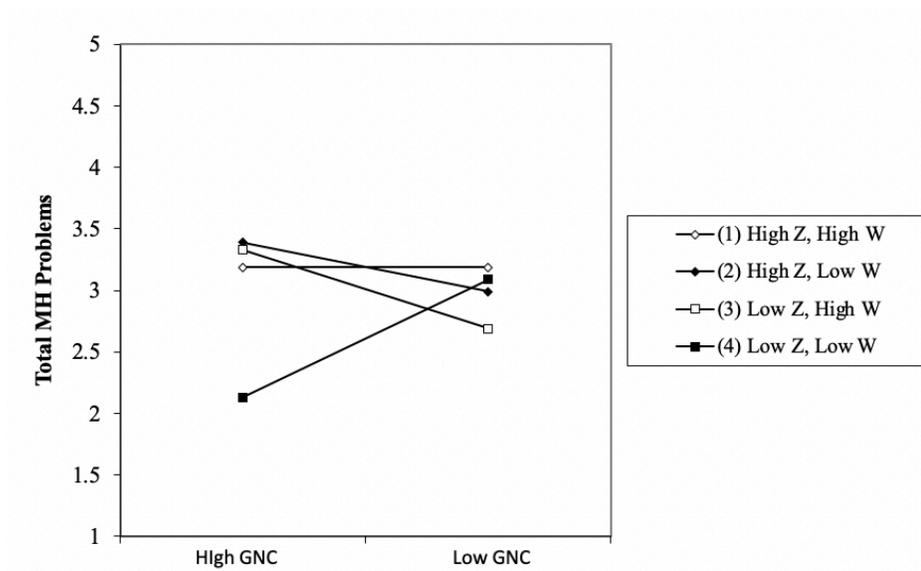


Figure 2



W = Expectation others cannot be trusted, Z = Expectation others want bad things to happen

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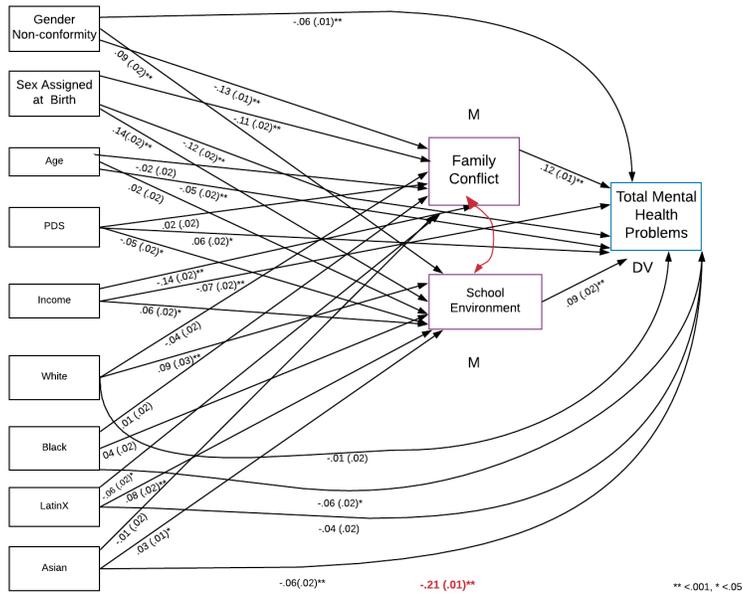
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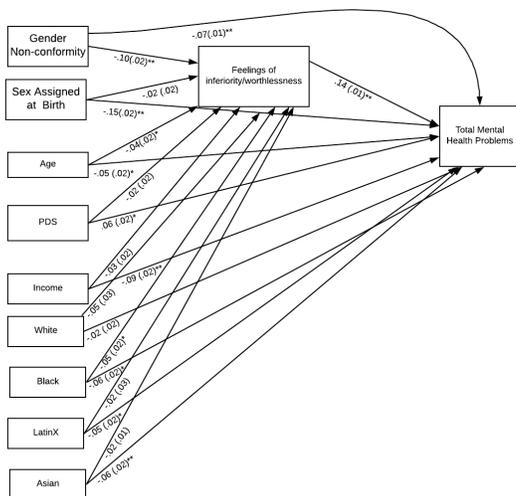
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Appendix A



Appendix B



Data used in the preparation of this article were obtained from the **Adolescent Brain Cognitive DevelopmentSM Study (ABCD Study[®])** (<https://abcdstudy.org>), held in the NIMH Data Archive (NDA). This is a multisite, longitudinal study designed to recruit more than 10,000 children age 9-10 and follow them over 10 years into early adulthood. The **ABCD Study** is supported by the National Institutes of Health and additional federal partners under award numbers:

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