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Caregiver Support and the Mental Health of Transgender and Gender Expansive
Youth: Race-Specific Effects in a Clinic-based Sample

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The author has no current conflicts to disclose.

Abstract:

Parental and caregiver support has been shown to be a protective factor against poor mental health in transgender and gender expansive (TGE) youth. However, little is known about how race and ethnicity might affect this relationship. This study extends the literature by examining whether the associations between parental support and mental health outcomes are moderated by race. A clinic-based sample of 81 TGE youth (mean age = 15.31, SD = 1.61) completed assessments of their anxiety and depression symptoms. Caregiver support scores were gathered from youth and the caregivers themselves. Results show that TGE youth of color have decreased odds of anxiety and depression when they feel supported by their caregivers. Decreased levels of anxiety in TGE youth of color were also found when their caregivers reported higher levels of support. This was not found true for Non-Latinx, White youth, for whom no significant relationship existed between caregiver support and mental health. These findings suggest the important role of caregiver support in the mental health of TGE youth of color and call for future studies of interventions to foster such support.

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Introduction

Depression rates are higher in transgender populations, with the prevalence of major depressive disorder as high as 33% in transgender and gender expansive (TGE) adolescents and young adults, compared to 12.8% in the cisgender adolescent population (Chodzen, Hidalgo, Chen, & Garofalo, 2018; Reisner et al., 2015). Similarly, transgender individuals have three times the odds of having an anxiety diagnosis compared to their cisgender peers (James, Herman, Rankin, Keisling, Mottet, & Anafi, 2016, Reisner et al., 2015).

Adolescent anxiety and depression have been tied with an increased risk of these mental health disorders in adulthood and an increased risk of suicidality (Fergusson & Woodward, 2002). The prevalence of suicidal thoughts and attempts is a major concern within the transgender community. Roughly two-thirds of transgender individuals in the Virginia Transgender Health Initiative Study (VTHIS) had thoughts of killing themselves at some point in their lives, and, of those that disclosed suicidal ideation, two-fifths reported having made at least one suicide attempt (Bradford, Reisner, Honnold, & Xavier, 2013). The U.S. National Transgender Data set had similar findings, with 40% of TGE respondents reporting attempting suicide at some point in their lives (James, et al., 2015), compared to 1.9% in the general population (Substance Abuse and Mental Health Services Administration, 2017).

Transgender individuals are also more likely to attempt suicide earlier in life compared to cisgender individuals. The median age of first suicide attempt was 15

for female-to-male participants and 16 for male-to-female participants (Bradford et al., 2013). This is much younger than the mean age in the general population, which is 32 for cisgender males and 26 for cisgender females (Roy, 2004). This statistic bespeaks the urgency in addressing anxiety, depression, and suicidal ideation in transgender youth at a young age.

The Gender Minority Stress Model helps provide an explanation for these disparities by conceptualizing how distal and proximal stress factors can impact mental and physical health in TGE individuals (Testa, Habarth, Peta, Balsam, & Bockting, 2015). Distal factors include gender-related discrimination, rejection and victimization, and non-affirmation of gender identity. Proximal stress factors include internalized transphobia, expectations of rejection, and concealment. In addition to the stressors discussed in the gender minority stress model, TGE youth, like all youth, are also tasked with navigating the developmental challenges of adolescence (Lerner & Galambos, 1998).

In the general population, adolescent depression, anxiety, and suicidal ideation is protected against through caregiver support (Fergusson & Woodward, 2002; Festa & Ginsburg, 2011; Leung, Yeung, & Wong, 2009; Lewinsohn et al., 1994; Monroe, 1983; Roy, 2004; Windle, 1992). This appears to hold true in TGE adolescent populations as well. Socially transitioned youth who are affirmed in their gender identity demonstrate lower rates of anxiety and depression (Durwood, McLaughlin, & Olson, 2017; Olson, Durwood, DeMeules, & McLaughlin, 2016). Additionally, caregiver support is positively correlated with fewer depressive

symptoms, decreased perceived burden, and higher life satisfaction in TGE youth (James et al., 2016).

Little research has investigated how one's race and ethnicity factors into the relationship between caregiver support and mental health in TGE youth. Much of the foundational research on parental support was established by studies that looked primarily at adolescents who were white, precluding understanding of how race might play into the relationship between parental support and adolescent mental health. Research on African-American youths has consistently demonstrated that higher parental support is related to lower prevalence of anxiety and depression (Bean, Barber, & Crane, 2006; Elmore & Gaylord-Harden, 2012; Zimmerman, Ramirez-Valles, Zapert, & Maton, 2000). Similarly, research focusing on Hispanic populations has shown that family cohesion, communication, and involvement is associated with decreased depressive symptoms in Hispanic youth (Cano et al., 2016; Gonzales et al., 2006; Guilamo-Ramos et al., 2006; Perrino et al., 2015; Unger et al., 2009).

Research on sexual minorities shows that parental support is an equally effective moderator for stress related to homophobic victimization for youth of color and white-youth (Poteat, Mereish, DiGiovanni, & Koenig, 2011). Despite this, sexual minority youth of color are less likely to be out to their parents compared to their white peers (Garofalo, Mustanski, & Donenberg, 2008; Grov, Bimbi, Nanin, & Parsons, 2006). While research has shown that sexual minorities and gender

minorities have similar patterns in mental health, it is still necessary to investigate how race factors into parental support and mental health in TGE youth.

This study aims to identify associations between parental support of the youth's TGE identity and youths' anxiety and depression symptoms and provide two new considerations to the current literature. First, while previous studies have analyzed the link between mental health and social support as perceived by TGE youth, this study goes further by looking not only at caregiver support rated by the youth, but also rated by their caregivers. Caregiver support was measured from the perspective of both parents and youth to understand the dynamic of support from both sides of the parent-child dyad (De Los Reyes, Ohannessian, & Racz, 2019). Second, this study investigates how race interacts with the relationship between caregiver support and mental health in TGE youth. Examining whether the association between parental support and mental health outcomes are moderated by race extends the literature to consider youth with multiple identities.

Methods

Study Sample

Eighty-one TGE youth, aged 11-18, and their parents were recruited from the Yale-New Haven Hospital Pediatric Gender Program between 2014 and 2019. Eligibility criteria included having completed an initial evaluation with the program's staff, which is completed when the youth starts puberty or at their initial visit if the youth is on-boarded after they have already started puberty.

The mean age of youth at the time of the evaluation was 15.31 years ($SD = 1.61$) with 71.6% identifying as male, 18.5% as female, and 9.9% as nonbinary. The majority of the youth sample was Non-Latinx White (66.7%) with the remainder of the sample being Latinx (22.2%), Non-Latinx Black (3.7%), Non-Latinx Other (2.5%), Latinx Black (1.2%), or Asian (1.2%). Participants who had incomplete data in the electronic health system were categorized as unknown race/ethnicity (2.5%). For the purposes of the analysis, race/ethnicity was treated as a binary variable consisting of Non-Latinx White Youth and Youth of Color. All of the participants were insured, with 70.4% holding private insurance and 29.6% being on Medicaid. On average, the youth reported that they identified having a gender different than the one assigned at birth at 9.09 years ($SD = 3.94$) and that they socially transitioned at 13.62 years ($SD = 1.88$).

Some youth had two caregiver participants attend the assessment while others had only one. The 131 caregivers who participated in completing the support assessments had a mean age of 48.5 years ($SD = 8.8$). The majority of the caregivers were the children's mothers (59.5%) and fathers (38.9%) with one foster mother and one grandmother also participating. Similar to the ethnic and racial composition of the youth, 74.8% of the caregivers were Non-Latinx White, 3.8% were Non-Latinx Black, 16.0% were Latinx, 1.5% were Asian, 0.8% were listed as Other, 2.3% were categorized as Unknown White and 0.8% were categorized as Unknown Race/ethnicity.

Measures

Sociodemographic Characteristics. Age at evaluation, race/ethnicity, and insurance type for youth were pulled from the hospital's electronic health records. During the initial evaluation, participants noted their gender identity (transmasculine, transfeminine, or nonbinary), the age at which they started to recognize their identity, the age they socially transitioned, and the number of years between gender realization and social transition. Parental demographics, including age, gender, and race/ethnicity, were also pulled from the hospital's electronic health record. Race/ethnicity for parents and youth include the categories of Non-Latinx White, Non-Latinx Black, Latinx, Latinx Black, Asian, and Other, in accordance with the electronic health record's options. Given that there was missing data present in the electronic health record, two additional categories were formed: Unknown White and Unknown Race/ethnicity. Given that all the participants have some form of insurance, insurance will be categorized as a binary variable, Medicaid and Non-Medicaid based insurance.

Predictor Variables

Caregiver Support Measure. The *Support of Gender-nonconforming /Transgender Children (SGTC)* Survey was adapted from the family subscale of the *Multidimensional Scale of Perceived Social Support (MSPSS)* (Zimet, Dahlem, Zimet, & Farley, 1988). After the *SGTC* began to be administered at the clinic, it was transformed into the *Parental Attitudes of Gender Expansiveness Scale for Youth Development (PAGES-Y)* (Hidalgo, Chen, Garofalo, & Forbes, 2017). *PAGES-Y* has

both internal consistency ($\alpha = 0.91$) and validity compared to the *MSPSS* ($r = 0.72$, $p < 0.0$) among TGE youth (Hidalgo et al., 2017).

The SGTC survey has two versions, a 21-item youth-report version in which the youth assesses their parent's support of their gender identity and an 18-item parent-report version in which the parent identifies how supportive they are of their child's gender identity. Items are rated on a 5-point Likert scale, ranging from "strongly disagree" to "strongly agree" and values of 1-5 were assigned to each item with a higher score indicating greater parent support. The youth-report version has a possible range of 21 to 105 points while the parent-report version has a possible range of 18 to 90 points.

Outcome Variables

Anxiety Symptoms. The *Multidimensional Anxiety Screening for Children, 2nd edition* (MASC-2) is a standardized measure of anxiety symptoms in youth aged 11-19 years old. The MASC-2 has been shown to have good test/retest reliability, with the total scores having coefficient alphas of $\alpha = .92$ (Fraccaro, R. L., Stelnicki, A. M., & Nordstokke, D. W., 2015). The youth self-report version is a 50-item standardized child self-report in which youth are asked to assess their own mood and behaviors in the past two weeks. Each item is rated on a 4-point Likert scale ranging from 0 (*never true*) to 3 (*often true*). The total score was converted to a t-score to compare the individual to the standardized group. Per the MASC-2 guidelines, youth with a T-score less than 60 were categorized as low-risk for anxiety, and youth with a T-score greater than or equal to 60 were categorized as at-risk for anxiety.

Depression Symptoms. The *Child Depression Inventory, 2nd Edition* (CDI-2) is a standardized measure of depression for youth aged 7-17 years old. The test has a coefficient alpha of $\alpha = .91$ (Bae, 2012). For each of the 28-items in the self-report test, youth are instructed to select one of the three statements that best describes their experiences in the last two weeks. Each question is totaled for a final score, which was then converted to a T-score using the guidelines provided by the CDI-2. Youth that had a T-score of less than 60 were categorized as low-risk for depression and youth with a T-score greater than or equal to 60 were categorized as at-risk for depression, per the CDI-2 guidelines.

Analysis Plan

Analyses were conducted using SAS software (version 9.2). There was minimal missing data present, ranging from 5.0 to 7.4% across the items. A *t-test* was utilized to identify the differences between youth-rated and parent-rated support. Given that the two tests are on different scales, z-scores were calculated for this comparison. Univariate analyses were calculated to assess demographic characteristics of the sample, including the youth's age, the age at which they began to recognize their gender identity, the age of their social transition, the number of years between their gender realization and social transition, their affirmed gender, race/ethnicity, and insurance type as well as parent's age, relationship to the child, and race/ethnicity.

Given the dichotomous nature of the outcome variables, two bivariate logistic regression models were used to estimate how anxiety and depression were related to each of the youth's demographic variables and caregiver support variables

(youth- and parent-rated). The variables that were significantly associated with anxiety or depression ($p < 0.10$) in the bivariate analyses were considered in a multivariate adjustment model. Any multivariate model that considered the age at which the youth recognized their gender was not fully aligned with their sex assigned at birth or the age that they socially transitioned was run controlling for the youth's current age.

Finally, an additional model was run to consider if the youth's race/ethnicity interacted with the caregiver support scores, as rated by both the youth and the caregiver. This interaction was tested in predicting both anxiety and depression scores.

Results

Caregiver Support

With a range of potential scores of 21 to 105, the youth rated the support from their caregivers as an average of 85.79 (SD = 12.40). Caregivers had a potential range from 18 to 90 and rated their support of their child as an average of 80.31 (SD = 6.70). When converted into z-scores to compare the two groups, caregivers' reported scores showed no difference compared to youth's ($\bar{x} = -0.02$, SD = 1.14, $p = 0.84$).

Youth-reported anxiety

Per the self-report MASC-2 assessments, the prevalence of anxiety symptoms in youth was 59.74% in the total sample. When examined bivariately, anxiety was

associated with youth-reported caregiver support scores but not with caregiver-reported support scores. Anxiety was also associated with race, with youth of color having greater odds of anxiety. There was no association between anxiety and affirmed gender, type of insurance, the age at which they began to recognize their gender identity, the age of their social transition, the number of years between their gender realization and social transition. In the adjusted analysis, youth who reported feeling supported by their parents have 41% lower odds of anxiety (AOR = 0.41 [0.22, 0.76]). Additionally, youth of color had over six and a half times the odds of having clinical indications of anxiety (AOR = 6.66 [1.88, 23.57]).

Interactions were present between race/ethnicity and perceived parental support, as rated by both youth and caregivers in predicting odds of anxiety. Youth of color who felt supported by their parents in their gender identity reported significantly decreased odds of anxiety compared to youth who did not feel supported (OR = 0.08, [0.01, 0.61]). Additionally, decreased odds of anxiety were found for youth of color if their parents rated their support as higher (OR = 0.23, [0.06, 0.89]). For white youth, caregiver support was not associated with anxiety (youth-rated support: OR = 0.70 [0.36, 1.39]; caregiver rated support: OR = 0.92, [0.51, 1.69]).

Youth-reported depression

As reported by youth via the self-report assessments, the prevalence of depressive symptoms was 63.16%. There were no significant associations found between depression and youth or caregiver-reported support scores. Additionally,

depression was not linked with youth's race/ethnicity, gender, insurance type, age at social transition, or years between youth's gender realization and their social transition. Depression was only marginally associated with a youth's age of gender realization, with youth who realized later in adolescence having a higher odds of depressive symptoms.

In the analysis of interactions between race/ethnicity and caregiver support, youth of color who reported high caregiver support had significantly decreased the odds of depression compared to youth of color who did not feel supported by their caregivers (OR = 0.25 [0.08, 0.79]). However, this significance was not present when examining caregiver-rated support scores for youth of color (OR = 0.50 [0.17, 1.43]). Nor was it found for white youth, regardless of if youth or caregivers were the ones rating the support (youth-rated support: OR = 0.91 [0.49, 1.71]; caregiver-rated support: OR = 1.46 [0.81, 2.65]).

Discussion

This study supports previous research demonstrating that caregiver support plays a critical role in the mental health of TGE youth. It also sheds light on an important dynamic between race, caregiver support, and mental health. In this clinic-based sample, three main findings emerged. First, youth who feel less supported in their gender identity and youth of color have greater odds of anxiety. Second, TGE youth of color demonstrate significant negative relationships between anxiety and support as reported by the youth and their caregivers. Third, TGE youth of color also

demonstrate significant negative relationships between depression and youth-rated caregiver support. This relationship was not seen in TGE Non-Latinx, White youth.

These data illustrate how anxiety and depression symptoms negatively correlate with youth of color's perception of caregiver support. The protective factor of caregiver support can be explained in part through Gender Minority Stress Model, with supported youth feeling fewer distal stress factors, including discrimination, rejection, and non-affirmation (Testa et al, 2015). Youth who do not experience these stress factors less are also less likely to demonstrate the proximal factors of internalized transphobia, expectation of rejection and concealment. This pathway explains the importance that support has on both anxiety and depression in TGE youth.

The findings on race in this study also point to the importance of recognizing how the interactions within families might impact the relationship between caregiver support and mental health. Minority adolescents typically look to family members, who often share similar social characteristics, for guidance and support through instances of stigma or discrimination (Hughes, Kiecolt, Keith, & Demo, 2015; Thoits, 2011). However, family members of TGE adolescents often do not share the same stigmatized identity and, therefore, are unable to provide primary group member social support that has been shown to be a protective factor against psychological distress (Klein & Golub, 2016). Parental support may be especially important for African American and Hispanic youth because of the strong value placed on family relationships in both communities (Cano et al., 2016; Larson, Richards, Sims, &

Dworkin, 2001; Wilson, Foster, Anderson, & Mance, 2009). African American and Hispanic youth place a higher value on family interaction than their white counterparts (Harrison, Wilson, Pine, Chan, & Buriel, 1990; MacPhee, Fritz, & Miller-Heyl, 1996).

This further highlights how intersectional social identities must be considered both in the Gender Minority Stress Model and in working with TGE youth and their families. Integrating intersectionality practices into treatment will allow therapists to understand that multiple social identities influence each other in a complicated rather than a simple additive effect (Warner, 2008). Golden and Oransky (2019) describe what an intersectional model of therapy with TGE youth might look like, emphasizing that therapists should involve the family through the process. Family therapy provides a place for families to navigate a youth's gender journey and address the ways race, ethnicity, income, disability status, and immigration status may influence their acceptance of said gender identity.

A primary limitation of this study involves its clinical nature, specifically that, for all participants, at least one caregiver was willing and able to bring their child to the clinic for gender-related care. This excludes a subset of TGE youth who are not financially able to attend the clinic, are not able to discuss gender identity with their parents, or do not have parents who are willing to bring them to the clinic. However, this is difficult as individuals under the age of 18 frequently, but not always, need a caregiver signature to participate in research (Flores, McKinney, Arscott, & Barroso, 2018; Smith & Schwartz, 2019). Future research should aim to include data from this

population in order to capture youth who may conceal their gender identity or are rejected by their family. Given research on concealment, one might expect an even greater correlation between youth mental health and caregiver support for the TGE youth missing in this sample (Bockting, Miner, Swinburne Romine, Hamilton, & Coleman, 2013).

The findings of this study are also limited in that the data are cross-sectional in nature, and thus, the longitudinal relationship between parental support and the mental health of TGE youth is not understood. These data were collected shortly after many participants visited the clinic for the first time, meaning that many families were just starting to discuss their youth's gender. Future research should investigate caregiver support and mental health over time.

In conclusion, this study bolsters previous findings that relate caregiver support and mental health of TGE youth. Beyond this, this research provides unique contributions to the literature by demonstrating that the mental health of youth of color is particularly affected by the absence of caregiver support. This points to the necessity of an intersectional approach to therapy for TGE youths and their families.

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Appendix

Table 1
Demographics of youth participants.

	N	%
Race		
Non-Latinx White	54	66.7%
Latinx	18	22.2%
Non-Latinx Black	3	3.7%
Non-Latinx Other	2	2.5%
Latinx Black	1	1.2%
Asian	1	1.2%
Unknown	2	2.5%
Insurance		
Medicaid	24	29.6%
Other	57	70.4%
Gender		
Transmale	58	71.6%
Transfemale	15	18.5%
Nonbinary	8	9.9%
Total	81	
	N	Mean ± SD
Age of Child	81	15.31 ± 1.61
Age at Gender Realization	81	9.09 ± 3.94
Age at Social Transition	81	13.62 ± 1.88
Years between realization and social transition	81	4.52 ± 4.06

Table 2
Demographics of caregiver participants.

	N	%
Race		
Non-Hispanic White	98	74.8%
Non-Latinx Black	4	3.8%

Asian	2	1.5%
Latinx	21	16.0%
Non-Latinx Other	1	0.8%
Unknown	1	0.8%
Unknown White	3	2.3%
Relationship to Child		
Father	51	38.9%
Mother	78	59.5%
Foster Mother	1	0.8%
Grandma	1	0.8%
Total	131	
	N	Mean ± SD
Age of Parent	131	48.5 ± 8.8

Table 3
Youth anxiety and depression scores as rated by youth, caregiver support scores as rated by both youth and the caregivers.

	N	% Population
Anxiety		
Low Risk	31	40.26%
High Risk	46	59.74%
Depression		
Low Risk	29	37.66%
High Risk	48	62.34%
	N	Mean ± SD
Caregiver Support		
Youth-report ^a	77	85.79 ± 12.40
Percentage		81.7% ± 11.8%
Caregiver-report ^b	75	80.31 ± 6.02
Percentage		89.2% ± 6.7%

^a out of a potential score of 105.

^b out of a potential score of 90.

Table 4

Odds of anxiety and depression, by caregiver support scores, youth's race/ethnicity (person of color vs non-latinx white), insurance type, affirmed gender, age of gender realization and social realization, and years between realization and transition.

	Risk of Anxiety (n=77)				Risk of Depression (n=75)			
	Bivariate Model		Multivariable Model		Bivariate Model		Multivariable Model ^a	
	Odds Ratio	P-value	Adjusted Odds Ratio	P-value	Odds Ratio	P-value	Adjusted Odds Ratio	P-value
Caregiver Support Scores								
Youth Reported	0.537 (0.318, 0.908)	0.020*	0.413 (0.225, 0.759)	0.004*	0.627 (0.378, 1.041)	0.071†	0.694 (0.411, 1.171)	0.195
Caregiver Reported	0.688 (0.417, 1.133)	0.142			1.101 (0.678, 1.787)	0.697		
Race/Ethnicity								
Person of Color	3.385 (1.126, 9.345)	0.019*	6.660 (1.882, 23.570)	0.003*	1.479 (0.577, 4.320)	0.374		
Non-Latinx White	Reference		Reference		Reference			
Affirmed Gender								
Nonbinary	2.156 (0.339, 11.658)	0.365			1.714 (0.316, 9.309)	0.347		
Trans-female	0.958 (0.293, 3.139)	0.537			0.571 (0.175, 1.865)	0.228		
Trans-male	Reference				Reference			
Insurance								
Private	0.935 (0.345, 2.537)	0.895			0.773 (0.269, 2.217)	0.632		
Medicaid	Reference				Reference			
Age at Gender Realization	1.429 (0.903, 2.263)	0.127			1.703 (1.057, 2.743)	0.029†	1.604 (0.982, 2.619)	0.061
Age at Social Transition	1.407 (0.875, 2.261)	0.159			1.171 (0.728, 1.886)	0.515		
Age between realization and transition	0.952 (0.851, 1.066)	0.397			0.899 (0.802, 1.007)	0.067†		

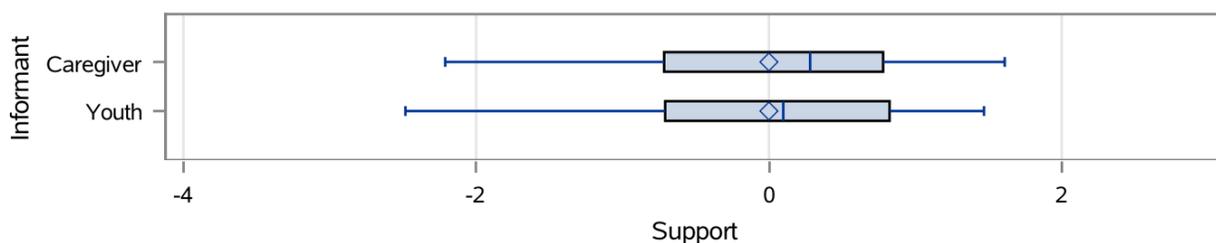
† Meets significance at the $p < 0.10$ threshold to be included in multivariate model

* Significant at the $p < 0.05$ threshold

^a Model controlled for age of child

Figure 1.

Average scores of caregiver-support as rated by youth and by caregivers.

**Table 5**

Odds of anxiety and depression associated with caregiver support scores by the youth's race/ethnicity.

	Anxiety		Depression	
	Youth of Color	Non-Latinx White Youth	Youth of Color	Non-Latinx White Youth
Caregiver Support Scores				
Youth Reported	0.079 (0.009, 0.608)*	0.703 (0.355, 1.393)	0.245 (0.076, 0.791)*	0.913 (0.486, 1.713)
Caregiver Reported	0.238 (0.064, 0.886)*	0.924 (0.507, 1.685)	0.496 (0.172, 1.431)	1.462 (0.806, 2.652)

* Significant at the $p < 0.05$ threshold

Figure 2.

Associations of anxiety (left) and depression (right) with interactions of race and caregiver support, rated by youth (top) and caregiver (bottom).

