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Externalizing Behaviors Exacerbate the Link between Discrimination and Adolescent Health Risk Behaviors

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Abstract

Discrimination based on race/ethnicity, sexual minority status, and gender is associated with higher rates of drinking, drug use and risky sexual behavior during adolescence. The current study explored variation in the link between these three types of discrimination and health risk behaviors by focusing on how this association differed according to externalizing problem behavior status. Participants in the Study of Early Child Care and Youth Development were asked about discrimination and their drinking, drug use and risky sexual behavior (age 15; 50% female, 82% White, n = 939). The association between discrimination and health risk behaviors varied according to both externalizing problem status and the type of discrimination, suggesting that individual-level characteristics (i.e., externalizing behaviors) shape variation in the consequences of discrimination for adolescent health outcomes. Ultimately, these findings point to the need for future research to better understand which adolescents are the most vulnerable to the consequences of discrimination, and when these vulnerabilities are most likely to occur.

Keywords

Discrimination; Racism; Sexism; Homophobia; Externalizing behavior problems; Health risk behaviors

Introduction

Health risk behaviors, or behaviors such as drinking (Room et al. 2005), drug use (Hall and Degenhardt 2009), and risky sexual behavior (Barbee et al. 2016), have serious short-

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Conflict of Interest The authors declare that they have no conflict of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

and long-term consequences for health during adolescence and across the life course and have been the focus of considerable monitoring, prevention and intervention efforts. Discrimination is consistently associated with increases in the likelihood that adolescents will engage health risk behaviors such as alcohol use (Gilbert and Zemore 2016), drug use, (Pascoe and Smart Richman 2009) and risky sexual behavior (Stock et al. 2013). Equally clear, however, is that not all youth who experience discrimination report higher levels of health risk behaviors. And, while reducing discrimination is important for addressing the consequences of discrimination for health outcomes, better understanding the factors that exacerbate or attenuate the link between discrimination and health risk behaviors is necessary for developing more effective interventions for vulnerable youth currently experiencing discrimination.

Externalizing behaviors—or problem behaviors characterized by higher levels of aggression, hostility, violations of the rights of others, and impulsivity—are consistently linked with substance use (King et al. 2004) and risky sexual behavior (Caminis et al. 2007). While externalizing behaviors are often considered as an outcome of discrimination (Benner et al. 2018), the goal of the current study was to understand how the presence or absence of clinically significant externalizing behaviors renders youth experiencing discrimination more vulnerable to health risk behaviors.

Discrimination and Health Risk Behaviors

As articulated in Goffman's classic text (Goffman 1963), a stigmatized identity is an identity that has been devalued. Having one or more devalued identities, in turn, has consequences for health and psychosocial functioning via a variety of mechanisms, including more limited access to resources (e.g., safe neighborhoods, good schools), heightened stress, and increased likelihood of discrimination (Hatzenbuehler et al. 2013). One of the most consistent ways of assessing the consequences of stigma is by asking individuals directly about their discrimination experiences (i.e., have they experienced differential treatment because of a stigmatized identity or some salient element of a stigmatized identity). Discrimination measured in this way is associated with a variety of health outcomes, including health risk behaviors, as the stress associated with discrimination increases negative affect (Pascoe and Smart Richman 2009), stresses social resources (Schmitt et al. 2014), and taxes regulatory capacity (Gibbons and Stock 2018).

While discrimination is associated with worse health outcomes across the life course (Pascoe and Smart Richman 2009), adolescence is a particularly important period for understanding discrimination, health risk behaviors, and the association between the two. Discrimination is common for adolescents and is associated with health risk behaviors, even after controlling for general victimization and other stressors (Russell et al. 2012). Health risk behaviors like substance use (Chen and Jacobson 2012) and risky sexual behaviors (Santelli et al. 1998) themselves increase during adolescence, and the emergence of health risk behaviors during adolescence and young adulthood have been proposed as a central mechanism for understanding the health impact of discrimination across the life course (Pascoe and Smart Richman 2009).

Research suggests that youth who engage in one type of risk behavior (e.g., alcohol use, drug use, risky sex) are more likely to engage in other types of risky behaviors both episodically and over time (Rehm et al. 2007). When examining how discrimination is associated with health risk behaviors, problem behavior theory provides a framework for understanding why youth engage in health risk behaviors more generally (Jessor 1987). Health risk behaviors function as strategies for (a) coping with stressors and reducing negative affect, (b) asserting autonomy, and (c) obtaining status, especially among youth who have difficulty attaining socially-acceptable status markers (Jessor 1987). Existing theory and research support the link between discrimination and health risk behaviors and underscore why adolescence may be a particularly important time for understanding the consequences of discrimination for health across the lifespan. More information is needed, however, to understand which youth are likely to engage in risky behavior in response to discrimination.

Externalizing Behaviors, Discrimination and Health Risk Behavior

Although conceptually distinct, externalizing problems are consistently associated with higher levels of health risk behaviors (Edwards et al. 2016) and are also, we argue, a strong candidate for moderating between discrimination and health risk behaviors. Youth's vulnerability to externalizing behaviors reflects interactions between hostile environmental characteristics (e.g., poverty, harsh parenting, stressful life events) and individual-level vulnerabilities in regulatory capacity and response style (Tackett et al. 2017). Children and adolescents high in externalizing behaviors, and particularly those with clinically significant externalizing problems, respond to environmental stressors with greater aggression, impulsivity and hostility than their peers (Laird et al. 2001). As a consequence, they subsequently experience greater social rejection as well as greater acceptance into social groups that increase the likelihood of future stressful events, both factors that increase the likelihood of engaging in problematic health risk behaviors.

Existing theory suggests several reasons as to why the presence of clinically significant externalizing behaviors could worsen the link between discrimination and health risk behaviors. First, externalizing behavior problems reflect a persistent way of responding to external stressors that involve youth expressing higher levels of hostility, impulsivity and aggression when compared to their peers (Tackett 2010). These responses to stressors have consequences for youth's social worlds that may exacerbate the impact of discrimination. For instance, peer and adult rejection associated with externalizing behavior may push youth with higher levels of externalizing behaviors towards integration into deviant peer groups that provide exposure to and encouragement of problematic patterns of substance use. Youth with externalizing problems may be more likely to engage in health risk behaviors as a result of experiences of discrimination, as they may have fewer adaptive strategies to successfully manage stress (Inzlicht et al. 2006), and these maladaptive stress responses may increase their likelihood of integrating into peer groups that encourage health risk behavior.

Second, existing research addressing discrimination due to race/ethnicity indicates that components of externalizing behaviors are associated with increased vulnerability to the consequences of discrimination. Two different studies with Black and Asian students, for

example, found that while both discrimination and impulsivity were associated with higher levels of alcohol use, youth who reported higher levels of both reported the most alcohol use (Gibbons et al. 2012; Latzman et al. 2013). Similarly, emotion regulation has been found to moderate the link between race/ethnicity-based discrimination and depressive symptoms among Black and Latino youth, such that youth with better emotion regulation skills experienced less depression resulting from discrimination (Stein et al. 2016). Indeed, Gibbons and Stock (2018) have recently proposed a theoretical framework in which self-regulation moderates the association between race/ethnicity-based discrimination and substance use, suggesting the importance of regulation in determining the consequences of discrimination. These studies suggest that elements associated with externalizing behaviors are pertinent for understanding variation in response to discrimination.

Types of Discrimination, Externalizing Behaviors and Health Risk Behaviors

The existing literature provides theoretical support and emerging empirical evidence for the role of externalizing behaviors in exacerbating the link between discrimination and health risk behaviors, yet there are likely nuanced experiences tied to discrimination that may vary the salience of the moderating role of externalizing behaviors for youth. Important differences in the content of stereotypes about externalizing behaviors are observed for race/ethnic minorities, girls and sexual minorities starting in childhood (Ghavami and Peplau 2013), which may differentially influence how externalizing behaviors interact with racism, sexism or homophobia. The existing literature addressing how externalizing-related constructs exacerbate the consequences of discrimination, however, primarily focuses on discrimination due to race/ethnicity. Race/ethnicity-based discrimination, particularly among African American and Latino youth, is associated with higher levels of externalizing behavior (Benner et al. 2018), and externalizing behaviors have been shown to link race/ ethnicity-based discrimination and health risk behaviors (Priest et al. 2013). Some (e.g., Black, Latino) but not all (e.g., Asian) racial/ethnic minority youth are stereotyped as being more aggressive or impulsive than their peers (Ghavami and Peplau 2013; Jones et al. 2016). Consequently, race/ethnic minority youth with externalizing problems may confirm pre-existing prejudices of peers or authority figures. For these reasons, race/ethnic minority youth with higher levels of externalizing may be particularly vulnerable to negative psychosocial outcomes like health risk behaviors when experiencing discrimination as a means of coping or gaining social acceptance.

While race/ethnic discrimination is one of the most frequently examined types of discrimination in relation to health risk behaviors, discrimination due to sexual minority status, and to a lesser extent discrimination due to gender, have also been linked with greater likelihood of health risk behaviors such as alcohol use (Gilbert and Zemore 2016), drug use (McCabe et al. 2010), and risky sexual behavior (Ayala et al. 2012). The potential moderating role of externalizing behaviors for sexual minority status-based discrimination, however, is unknown. Peers consider some sexual minority youth as more aggressive than their heterosexual peers (e.g., lesbian girls, bisexual boys), but see others as less aggressive (e.g., gay boys) than their heterosexual peers (Ghavami and Peplau 2013). Yet, externalizing behaviors may be important for understanding variation among sexual minority youth. The victimization resulting from the stigma associated with sexual minority status is central

for understanding negative outcomes among sexual minority youth (e.g., Minority Stress Theory: Meyer 2003). Controlling for behavioral differences, sexual minority youth receive more in-school discipline than heterosexual youth (Palmer and Greytak 2017). Sexual minority youth, and particularly those who confirm the stereotypes of others regarding externalizing behaviors, may experience more social sanctioning than their heterosexual peers and thus be more likely to engage in health risk behavior.

Previous research has also not explored externalizing behaviors as a moderator in the association between gender-based discrimination and risky behavior. Girls are both seen as having (Ghavami and Peplau 2013), and have, lower levels of externalizing behavior compared with boys (Crick et al. 1996). The gender paradox hypothesis, however, suggests that girls who do have higher levels of externalizing behaviors report higher levels of negative mental health outcomes such as depressive symptoms and substance use when compared to boys (Diamantopoulou et al. 2011; Martin-Storey et al. 2011). These gender differences reflect, in part, how externalizing behaviors are a gender role violation for girls, such that girls who go against the "positive" stereotypes by exhibiting externalizing behaviors are more likely to be excluded from their social environments (Kochel et al. 2012). Girls with higher levels of externalizing behaviors, and particularly those experiencing stressors like discrimination, may use health risk behaviors as a strategy to fit in to their environment.

Finally, variation may also be anticipated in the consequences of discrimination based on whether the youth hold a devalued identity. The consequences for discrimination in general have sometimes, but not always, been more strongly associated with negative health outcomes among lower status groups (e.g., girls, race/ethnic minorities, sexual minority youth) compared to higher status groups (e.g., boys, white youth, heterosexual youth) (Schmitt et al. 2014). While experiencing discrimination may be anticipated to be a stressor regardless of group status, the consequences of externalizing on the association between discrimination and health risk behaviors may be stronger among youth with devalued identities.

The Current Study

Existing theory, as well as limited empirical work, suggests that externalizing behaviors may moderate the associations between discrimination and health risk behaviors. Employing the Study of Early Child Care and Youth Development (SECCYD), a sample of youth drawn from ten research sites across the United States, the proposed study focuses on understanding how clinically significant externalizing behaviors exacerbate the link between discrimination based on race/ethnicity, sexual minority status, and gender and health risk behaviors and has two specific hypotheses. First, as is shown in Fig. 1, having clinically significant levels of externalizing problems is anticipated to exacerbate the association between discrimination (based on race/ethnicity, sexual minority status, and gender) and health risk behaviors. As exploratory hypotheses, we anticipate that types of discrimination where stereotype content is associated with externalizing behaviors (e.g., race/ethnicity-based discrimination, sexual minority status-based discrimination) will be more likely to moderate the association between externalizing behavior problems and health risk behaviors

than types of discrimination less associated with externalizing behavior problems. (e.g., gender-based discrimination).

Second, the moderating role of externalizing behavior was anticipated to be stronger among youth from more stigmatized groups (e.g., race/ethnic minority students, sexual minority students, girls) compared with youth from more privileged groups (e.g., white youth, heterosexual youth, boys). Although previous work focusing on understanding how different constructs linked with externalizing behavior (e.g., impulsivity, anger, hostility) exacerbate discrimination has made important contributions to the field, the current study's focus on clinically significant externalizing behaviors offers specific theoretical and practical advantages. From a theoretical perspective, leveraging developmental psychopathology theory to understand variation in the consequences of discrimination provides a novel way of understanding the consequences of discrimination. From a practical perspective, focusing on youth with and without clinically significant levels of externalizing behavior problems can inform practice with a population that is already frequently targeted for significant intervention efforts. Finally, comparing across different types of discrimination and for those with versus without devalued social identities makes it possible to develop a more nuanced understanding of when, how, and for whom externalizing problems exacerbate the impact of discrimination.

Method

The current study used data from the age 15 wave of the SECCYD. This study recruited families at the birth of the target child from ten sites across the United States (see NICHD Early Child Care Research Network, 2005, and http://www.nichd.nih.gov/research/supported/seccyd.cfm) in 1991 (N= 1,364). These children and their families were followed until the age of 15, when the data used in the current study were collected. Participants were included in original study if the mother was age 18 or above, if the family did not plan to move, if the primary caregiver spoke English, and if the child was not a twin, did not require hospitalization for more than seven days post birth, and did not have any obvious disabilities. While this sample is not nationally representative, the sample is socioeconomically diverse and reflects the race/ethnicity and socioeconomic status of the 10 study areas.

Measures

Discrimination—Discrimination was assessed using three different questions in which youth were asked about the number of times in the past year they had been harassed because of their race, their gender, or their sexual minority status (response options 0 = never, 1 = once or twice, 2 = more than twice). In the current sample, 9% of youth reported being harassed once or more due to their gender, 12% reported being harassed once or more due to their gender, 12% reported being harassed once or more due to their gender, 12% reported being harassed once or more secause of their sexual minority status (presented in Table 1). Because the data were zero-inflated, youth's responses were dichotomized (presence/absence of discrimination) for all analyses. Less than 5% of the sample reported two or more types of discrimination, and for this reason, the overlap between discrimination types could not be integrated into the analyses.

Health risk behavior—Health risk behavior was assessed by asking youth three questions: the number of times in the past year they drank at least one bottle or glass of alcohol (response options: 0 = never, 1 = once or twice, 2 = more than twice), if they had used or smoked marijuana (response options 0 = never, 1 = once or twice, 2 = more than twice), and their number of lifetime sexual partners (coded continuously, with higher values indicating higher numbers of sexual partners).

Externalizing behaviors—Externalizing behaviors were assessed by the youth's mother or primary caregiver at age 15 using the Child Behavior Checklist (Achenbach 1991; 33 items, alpha = .91). Responses (ranging from 0, *not true* to 2, *very true or often true*) were summed, and standardized t-scores were employed. Because of the focus on clinically significant externalizing problems, mother-rated externalizing problems were dichotomized at 60 or above, which is considered the bottom of the borderline range (Achenbach 1991), and the sample was grouped according to presence or absence of externalizing problems. This scale typically includes a single item assessing alcohol and drug use, which was removed for the current analyses to avoid overlap with the outcome variable. While correlated with health risk behavior in the current sample (r = .24, p < .01), this scale included no items which assessed risky sexual behavior, alcohol use, or drug use.

As a sensitivity check, youth-reported CBCL externalizing scores (Achenbach 1991) were also included in the current study. This scale includes a total of 30 items (and one that addresses drug use that was removed) and had a Cronbach's alpha of .84 in the current study. Again, because of the focus on clinically significant externalizing problems, externalizing problems status was dichotomized at scores of 60 or above.

Covariates—A number of control variables were included in the current study. Participant *gender* was assessed based on parent report at the initial assessment period (0 = girl, 1 = boy). *Race/ethnicity* was assessed based on parent report at the initial testing period with the following categories: African American or Black (12%), Asian or Pacific Islander (less than 1%), other (5%), American Indian or Alaskan Native Alaskan (less than 1%) or White (81%). Given this distribution, youth were classified as white (1) or not (0) for multivariate analyses. Sexual minority status was assessed by asking youth if they were attracted to girls, boys or both girls and boys. For all subsequent analyses this variable was dichotomized as sexual minority (1; 4% of the sample) or not (0). *Family socioeconomic status* was assessed using maternal years of education, based on the number of years that the child's mother reported attending school, which was assessed at the child's birth and was included as a continuous measure in the current study.

Analytic Sample and Missing Data

As would be anticipated from any longitudinal study, by age 15 a total of 939 of the initial participants had been evaluated by their parents for externalizing problems, and had reported on their experiences of discrimination at age 15, and were thus included in the current analyses (69% of the initial baseline sample). Employing the entire sample would have involved accounting for approximately 31% of the data for both the predictor and outcome variables, which is associated with increased likelihood of error (Dong and Peng 2013).

Furthermore, as parent-reported externalizing behavior was used as a grouping variable, individuals missing data on this variable could not be grouped. Compared to those who were retained for the analytic sample, those who were not retained because of missing information regarding discrimination were less likely to be white $(X^2(1) = 3.56, p < .05)$ and had mothers with lower levels of education (F(1, 1361) = 23.91, p < .01), but those excluded from the analytic sample were not significantly different according to sex $(X^2(1) = 3.56, p < .05)$

2.81, *p* = .10).

Planned Analyses

Structural equation models in MPlus 7.4 (Muthén and Muthén 1998–2010) were employed to address the study objectives. This approach was used because it allows (a) the integration of both latent (i.e., risky behavior) and observed variables, (b) full information maximum likelihood to address missing data, and (c) multiple group analyses (e.g., analyses of children with versus without externalizing behaviors). To address the primary research question of whether the association between the three types of discrimination (e.g., sexism, racism, homophobia) and risky behavior differed according to clinically significant externalizing problems, the risky behavior factor was regressed on the three types of discrimination and the control variables (gender, race/ethnicity, sexual minority status, and family SES). In the subsequent model, multiple group analyses were employed to compare the coefficients of youth with and without clinically significant externalizing problems. SEM establishes the fit between a proposed model and the actual data, using, among other fit indices, a χ^2 significance test, the root mean square error of approximation (RMSEA), which is considered acceptable at .08 or below, and a comparative fit index (CFI), which is considered acceptable at .90 or above (Hooper et al. 2008). To assess if the differences observed between the groups were statistically significant, the link between discrimination and health behaviors were constrained to be equal across groups, and model fit between the constrained and unconstrained models was compared using a chi-square difference test. Significant chi-square values indicate group differences.

To explore the secondary research questions, gender and race/ethnicity were integrated separately into an externalizing grouping variable. For instance, to assess for gender differences in the associations between discrimination and risky behavior and the moderating role of externalizing behaviors, we tested the coefficients across four groups —girls and boys with and without clinically significant externalizing behaviors. The model where all coefficients linking discrimination to health behaviors were free to vary (unconstrained model) was run and compared the model fit to a model where these links were constrained to be equal across the groups. When differences in the groups were observed, individual paths were constrained separately to determine exactly where the differences were. The same steps were taken to examine differences in the associations between the three types of discrimination and risky behavior according to whether the youth was part of a race/ethnic minority or not. Finally, although we were interested in understanding if the models varied across sexual minority identity, the number of sexual minority youth was not sufficient for further analyses.

Results

Prior to the multivariate analyses, a factor was constructed using the three health risk behaviors. When the three variables were loaded onto a single factor (called risky behavior), standardized factor loadings were acceptable (.53, .63, and .86 for risky sexual behaviors, alcohol use and marijuana use, p < .001 for all factor loadings), with higher values of the latent factor indicating higher levels of risky behavior. Note that the model was saturated and thus model fit statistics were not available.

The first multivariate model, testing the association between the three types of discrimination and health risk behavior within the total sample, is presented in Table 2, Model 1. This model had acceptable fit ($X^2 = 65.87$, p < .001; CFI = .92; RMSEA = .06 [CI: .05–.08]) and showed that discrimination due to both race/ethnicity and sexual minority status, but not discrimination due to gender, were significantly associated with higher rates of risky behaviors. The subsequent model, testing the associations between the three types of discrimination and risky behaviors among youth who were or were not described by their mothers as having clinically significant levels of externalizing problems, is presented in Table 2, Model 2. This model had acceptable fit ($X^2 = 86.78$, p < .01; CFI = .90; RMSEA = .06 [CI: .05–.07]). For youth with clinically significant levels of externalizing problems, sexual minority-status related discrimination was the only type of discrimination that was associated with higher levels of risky behaviors. In contrast, among youth who did not have clinically significant externalizing problems, discrimination due to race/ethnicity was the only type of discrimination that was significantly associated with higher levels of risky behaviors.

The second model was subsequently constrained across youth with and without clinically significant externalizing symptoms to assess if the differences observed were statistically significant. Constraining the coefficients capturing the link between each type of discrimination and risky behaviors to be equal across groups resulted in a significantly worse fitting model ($X^2_{diff}(7) = 21.00, p < .01$). Subsequent models constrained the link between each type of discrimination and health risk behaviors separately. We observed no differences in the link between race/ethnicity-based discrimination and health behaviors for those with versus without clinical levels of externalizing symptoms $(X^2_{diff}(1) = .14,$ p = .71), suggesting that the link between race/ethnicity-based discrimination and risky behaviors is similar for youth with and without clinically-significant externalizing problems. Similarly, no significant difference was observed in the association between gender-based discrimination and health risk behaviors according to the presence of clinically significant externalizing problems ($X_{diff}^2(1) = 3.48$, p = .06). In contrast, constraining the association between sexual-minority status based discrimination and health risk behaviors resulted in a significantly poorer model fit ($X_{diff}^2(1) = 3.85$, p = .04), indicating groups differences. Specifically, sexual minority-status based discrimination was related to higher levels of health risk behaviors for youth with clinically-significant externalizing problems (b = .29, p = .02) but not for those without these problems (b = .02, p = .63).

Gender Differences

The next set of models tested if the association between discrimination and risky behavior varied according to the overlap of gender and externalizing behavior status. Results from these multiple group analyses are presented in Model 3 of Table 2. Completely constraining the model resulted in a significantly worse fit $(X^2_{diff}(18) = 49.93, p = .00)$, suggesting differences in the models according to externalizing behaviors and gender. Follow-up analyses examined potential group differences for the effects of each type of discrimination separately. Starting with the association between race/ethnic discrimination and health risk behaviors, model fit was not significantly worse when constraining across all four groups $(X^2_{diff}(3) = 2.78, p = .25)$. Similarly, for gender-based discrimination, constraining across all four groups did not result in significantly worse fitting model $(X^2_{diff}(3) = 5.05, p = .17)$, again suggesting no significant group differences across the overlap of externalizing behaviors and gender.

In contrast, the constrained model assessing differences across the four groups in the association between sexual minority status-based discrimination and health risk behaviors fit significantly more poorly than the unconstrained model ($X^2_{diff}(3) = 11.03, p = .01$). Follow-up constraints suggested that the model fit was significantly worse between girls with clinically significant externalizing problems compared to those without clinically significant externalizing problems compared to boys with clinically significant externalizing problems compared to boys with clinically significant externalizing problems compared to boys with clinically significant externalizing problems ($X^2_{diff}(1) = 5.78, p = .02$). Sexual-minority status based discrimination was associated with higher levels of health risk behaviors among girls with clinically significant externalizing problems (b = .53, p < .01), but not among girls not exhibiting clinically significantly externalizing problems (b = .09, p = .18) nor among boys with clinically significant externalizing problems (b = .03, p = .89).

Race/Ethnic Differences

The final model assessed differences in the links between discrimination and risky behavior at the overlap of race/ethnicity (White versus racial/ethnic minority youth) and externalizing problem status. Among the twenty racial/ethnic minority youth with externalizing problems, nineteen reported experiencing neither gender nor sexual-identity related discrimination, and one individual reported both types of discrimination. Because of the 100% correlation between sexual identity and gender-based discrimination, these two types of discrimination could not be included in the same model, and findings relating to these types of discrimination should be interpreted cautiously for this group. The fit for the fully constrained model was significantly worse both when discrimination based on race-ethnic and sexual minority status was included ($X^2_{diff}(16) = 35.38$, p < .00) and when race-ethnic and gender-based discrimination was included ($X^2_{diff}(16) = 37.58, p < .01$), indicating significant differences across the four groups. Again, follow-up analyses examined potential group differences for the effects of each type of discrimination separately. When the model was constrained for the association between race/ethnicity-based discrimination and health risk behavior across all four groups, model fit was not significantly worse overall $(X^2_{diff}(3))$ = 4.25, p = .24), nor was the model fit significantly worse when the association between sexual minority status-based discrimination and health risk behavior $(X^2_{diff}(3) = 3.58, p =$

.31) or gender-based discrimination and health risk behavior ($X^2_{diff}(3) = 4.20, p = .25$) was constrained to be equal across groups. As a result, no subsequent analyses were conducted (results available on request).

Sensitivity Analyses

Sensitivity analyses were subsequently conducted in which youth-reported externalizing behavior problems, rather than mother reported externalizing problems were used to categorize the youth. This model had poor fit ($X^2 = 110.66$, p < .01; CFI = .86; RMSEA = .08 [CI: .06–.09]). The model fit was not significantly worse when constrained to compare youth with and without clinically significant externalizing behavior problems (X^2 (6) = 13.51, p = .06), and as such no further models were tested.

Discussion

The health consequences of discrimination have long been the focus of research addressing health disparities between adolescents with and without different types of stigmatized identities (Priest et al. 2013). Examining the associations between different types of discrimination and health risk behaviors, and more particularly how these associations varied according to externalizing problem status, provides new insights into how different types of discrimination are associated with health risk behaviors such as drinking, drug use and risky sexual behavior. The current study suggested that both discrimination due to race/ethnicity and discrimination due to sexual minority status, but not discrimination due to gender, were associated with higher rates of health risk behaviors. Previous work has also more consistently linked race/ethnicity and sexual minority-status based discrimination to health risk behaviors when compared to gender-based discrimination (albeit without considering externalizing) (Pascoe and Smart Richman 2009). Moreover, the association between discrimination due to sexual minority status, but not the other two types of discrimination, and health risk behaviors varied according to externalizing behavior problem status and is discussed in more detail below.

Youth with externalizing problems, and particularly girls with externalizing problems, who also reported experiencing homophobic discrimination, reported higher levels of health risk behaviors compared to other groups of youth that did not experience this type of discrimination. That the association between homophobic discrimination and health risk behaviors, but not other types of discrimination and health risk behaviors, varied according to externalizing problem status may reflect how homophobic discrimination has been more strongly linked to wellbeing outcomes than race/ethnicity or gender-based discrimination (Schmitt et al. 2014). That this variation was observed exclusively for sexual-minority status-based discrimination may also be shaped by the age of the participants. Homophobic attitudes among peers are at their highest during the developmental period assessed in the current study, such that mid-adolescence may be a particularly pertinent developmental period for understanding how discrimination interacts with individual-level variables (Poteat and Anderson 2012). Similarly, social integration is particularly important during adolescence (Crosnoe 2011), and for youth experiencing homophobic discrimination, externalizing problems may be particularly determinative for health risk behaviors as

adolescents who experience this type of discrimination may have few pro-social pathways for social integration.

While sample size may be a limiting factor, understanding why the moderating role of homophobic discrimination was present for girls but not for boys bears some exploratory discussion. The majority of youth reporting any same-sex attraction in the current study were girls (Corliss et al. 2010), and previous research suggests that girls, more so than boys, with sexual minority identities are perceived as more aggressive than their peers (Ghavami and Peplau 2013). Compared to boys, externalizing behaviors among girls experiencing homophobic discrimination may confirm pre-existing stereotypes in ways that are more likely to lead to discrimination. While they required replication, this finding suggests the importance of examining gender differences in the factors that moderate homophobic victimization.

While discrimination due to race/ethnicity was associated with higher levels of health risk behavior generally, variation was not observed in terms of externalizing behavior problems. Indeed, previous research suggesting that constructs associated with externalizing (e.g., impulsivity, emotional regulation) moderated the association between race/ethnicity-based discrimination and health risk behaviors examined these associations among larger samples of exclusively race/ethnic minority youth or young adults (Gibbons et al. 2012; Latzman et al. 2013). The races/ethnicities of the youth in the current study were varied, and the limited number of youth per race/ethnic minority group precluded examining differences between specific groups. Given that stereotypes about externalizing behaviors (Ghavami and Peplau 2013) differ according to race/ethnicity, how externalizing problems moderate the association between discrimination and health risk behaviors may vary according to youth race/ethnicity and stereotype content. Future work should focus on the consequences of discrimination among racial/ethnic minority youth who are versus are not stereotyped as being more aggressive.

Gender-based discrimination was not associated with higher levels of health risk behaviors, and this association did not vary according to externalizing behavior problem status (or its overlap with gender or race/ethnicity). While previous research has linked sexism to health risk behaviors such as drinking among college students (Zucker and Landry 2007) or risky sexual behavior with adults (Choi et al. 2011), these studies used measures of discrimination that better define sexist experiences for the participant (e.g., objectification, sexual harassment, benevolent sexism). Radke et al. (2016) suggest that women experience numerous barriers in interpreting these kinds of behaviors as sexism, and these barriers may be even greater for adolescent girls given their more limited life experiences. While the current findings do not link sexism with higher levels of health risk behaviors, further research where sexist discrimination is defined more clearly for the participants may clarify the current findings.

Identifying if the association between discrimination and health risk behaviors varies according to externalizing problem status provides a valuable opportunity to understand how one of the most common developmental psychopathology constructs modifies the health risk consequences of discrimination. The current study, by focusing on the role

of multiple types of discrimination, suggests that the association between discrimination due to sexual minority status in particular and health risk behavior may vary according to externalizing behaviors. The current findings, however, should be interpreted in light of some limitations. First, the use of single-item assessments of stigma-based harassment likely resulted in an underestimation of discrimination. When asked about harassment due to a specific identity, youth may not code certain types of harassment (e.g., sexual harassment) as stigma-related discrimination (e.g., gender-based discrimination). Furthermore, youth may have experienced forms of discrimination besides harassment that could also influence health risk behaviors. Similarly, because of the relatively low level of youth reporting these kinds of discrimination, certain analyses (e.g., comparing findings across sexual minority and heterosexual youth) were underpowered or not feasible.

Second, while the SECCYD is longitudinal, the current study employed cross-sectional data from age 15, the only wave at which discrimination data were available. Future research, examining the association between discrimination, externalizing behavior problems and health risk behaviors over time may help to clarify the findings in the current study. Third, while alcohol use poses clear health risks for adolescents (Bonomo et al. 2001), the measure of alcohol use in the current study focused on relatively low levels of alcohol use (i.e., 24% of the sample reported having a bottle or glass of alcohol or more in the past year). Future studies should investigate more problematic levels of alcohol consumption, such as binge drinking, particularly with older samples where binge drinking will be a less rare phenomenon (Esser 2017).

Finally, while racist, sexist, and homophobic harassment are three of the most common forms of stigma-based discrimination, youth experience other forms of stigma-based discrimination including discrimination based on socioeconomic status (Sigelman 2012), weight (Puhl and Latner 2007), and gender identity (Reisner et al. 2015). Furthermore, while we acknowledge the importance of examining overlapping forms of discrimination as being central for understanding the social positioning of individual adolescents (Crenshaw 1989), few youth in this sample reported multiple types of discrimination, preventing intersectional examinations of the consequences of discrimination for health risk behaviors.

Conclusions

The findings from the current study provide preliminary evidence that the consequences of homophobic discrimination for health risk behaviors vary by youths' externalizing behaviors. These findings suggest the importance of understanding how individual-level characteristics shape adolescent experiences of discrimination and suggest that developmental psychopathology and stigma theories may both provide important information regarding how youth's experiences of discrimination are associated with health risk behaviors. Moreover, they suggest the importance of examining differences in the consequences of different types of discrimination across development. While sexual-minority status based discrimination may be particularly salient during adolescents, other forms of discrimination may be more or less important during other developmental periods. If replicated, these findings have direct clinical implications. More specifically, although they support the importance of reducing overall levels of homophobic discrimination

in the long term, they also suggest the added value of addressing experiences of discrimination, and particularly homophobic discrimination as a salient stressor, in interventions for externalizing behavior problems. Ultimately, while reducing different forms of discrimination is essential for improving health outcomes among vulnerable

youth, these findings suggest how variation in this vulnerability may be linked with wellestablished developmental constructs and point to the importance of future work examining the role of stigma in interventions concerning externalizing behavior problems.

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Data Sharing and Declaration

The data that support the findings of this study are available from The National Institute of Child Health and Development Study of Early Child Care and Youth Development Series but restrictions apply to the availability of these data, which were used under license for the current study, and so are not publicly available. However, data are available from the authors upon reasonable request and with permission of the Inter-university Consortium for Political and Social Research.

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Table 1

Demographic variables (n = 939)

	Mean (SD)
Types of discrimination	
Gender-based discrimination (%)	9.00
Race/ethnicity-based discrimination (%)	11.72
Sexual minority status-based discrimination (%)	4.40
Externalizing behavior problems (%)	10.22
Health risk behaviors	
Alcohol use	.34(64)
Marijuana use	.13(.45)
Number of sexual partners	.28(.89)
Control variables	
Gender (% girls)	50.00
Race/ethnicity	
White (%)	81.49
African American (%)	11.90
Asian (%)	1.40
Hispanic/Latino (%)	5.00
Native American/Native Alaskan/Native Hawaiian/Pacific Islander (%)	0.20
Same-sex attraction (%)	4.42
Maternal education (years)	14.45 (2.24)

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Table 2

Standardized coefficients on the association between discrimination and risky behaviors

	Model 1 total model	Model 2 mode	l by externalizing status	Model 3 mo	dels by externalizi	ing status and	gender
	-			Girls		Boys	
	Total sample $N = 939$	Ext $n = 96$	No Ext $N = 843$	Ext $n = 63$	No Ext $N = 405$	Ext $n = 33$	No Ext $N = 438$
Gender-based discrimination	.02	13	.07	13	.13*	07	04
Race/ethnicity-based discrimination	.13**	.17	.14 **	00.	.13*	.57 **	17
Sexual orientation-based discrimination	.13**	.30*	.01	.53 **	60.	.03	03
Gender (referent girl)	00.	04	.04				
Race/ethnicity (referent white)	04	19	01	00.	.06	28	06
Sexual minority (heterosexual referent)	.06	04	.03	00.	.13*	30	06
Maternal education	06	.31 **	* 60	.20	04	.31 *	06
\mathbb{R}^2	.06	.26**	.04 **	.33 **	.08	** 09 [.]	.04

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Model 2: Externalizing problems $X^2 = 23.23$, No externalizing problems $X^2 = 63.56$, df = 30, p < .01, RMSEA = .06 CI [.05, .08], CFI = .90

Model 3: Girls Externalizing problems $X^2 = 25.50$; Girls no externalizing problems $X^2 = 46.16$; Boys externalizing problems $X^2 = 20.12$, Boys no externalizing problems $X^2 = 32.57$, df = 54, p < .01, RMSEA = .07 CI (.06, .09), CFI = .89

Ext above the cut-off for externalizing problems, No Ext below the cut-off for externalizing problems

p < .01, **

* *p*<.05