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## The Influence of Racial Discrimination on Smoking among Young Black Men: A Prospective Analysis

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### Abstract

Racial discrimination is a documented risk factor for smoking among black men; mechanisms of effect and protective processes remain to be investigated. This study examined the mediating effect of anger/hostility on the association between racial discrimination and smoking and the influence of protective social ties in buffering the effects of racial discrimination. Hypotheses were tested using longitudinal data from a study of 505 black men ages 19–22. Data collected for the study occurred at three timepoints, each 12 months apart. Racial discrimination is associated with increases in cigarette smoking between baseline and follow-up. Anger/hostility partially mediated this association. Moderational analyses indicated that discrimination had little or no impact on men's smoking in the presence of protective social ties. Study findings suggest that supportive networks make crucial contributions to the reduction of cigarette smoking and feelings of anger within this population. Intervention developers should consider targeting relationship dynamics with supportive networks to understand coping mechanisms and to reduce substance use among young black men.

### INTRODUCTION

Blacks, in general, bear the greatest health burden related to tobacco use compared to other racial/ethnic groups. One contributor of Black tobacco use is the marketing strategies used by large tobacco companies to target Blacks and increase consumption in the Black community (Ballbach, Gasior, & Barbeau, 2003; Gardiner, 2002; Moore, Williams, & Qualls, 1996). Tobacco use is a significant contributor to heart disease, cancer, and stroke, the three leading causes of death among black men (Heron, 2013). Patterns of onset and escalation in smoking among black men indicate low levels of smoking in adolescence, with increases in onset and escalation rates during young adulthood (Tucker, Ellickson, and Klein 2003). By age 30, the prevalence of smoking among black men approximates or exceeds national averages (Jamal et al., 2015). Among black men from stressful, low socioeconomic status (SES) communities, prevalence rates (41%–60%) exceed twice the national average (Delva et al., 2005). These data underscore the importance of understanding factors

associated with the onset and escalation of smoking among young black men, particularly those from low-SES environments.

Accumulating evidence implicates racial discrimination as a factor in black men's smoking behavior. Increases in tobacco use has been attributed to racism perpetuated by marketing campaigns directed at the black community (Moore, Williams, & Qualls, 1996). Racial discrimination can appear in many different forms. It can be direct, such as making racist comments. It can also be very subtle or indirect, such as color-blindness where everything seems to be equal on the surface but, in fact, it is disadvantageous to Blacks (Bonilla-Sivlia, 2002). For the present study, racial discrimination is defined as microaggressions, which include subtle everyday indignities experiences because of race (i.e, refusal of service because of race or treated disrespectfully). Both cross-sectional and prospective studies indicate that perceived racial discrimination are associated with smoking onset and escalation among black adolescents, young adults, and older adults (Guthrie et al., 2002; Bennett, 2005; Barnes et al., 2012). Discrimination may be particularly salient during the transition to adulthood, when smoking rates among black men escalate rapidly. Black men report elevated rates of racial discrimination during these years, a consequence of joining the labor force and increasing contact with members of other racial and ethnic groups in the community (Hurd et al., 2014).

Studies of the influence of racial discrimination on young black men's smoking behavior, however, evince several limitations. The majority of studies focus on adolescents and on women; little or no prospective research addresses the years following high school, when men exhibit considerable vulnerability to smoking onset and escalation. In addition, little information is available on mechanisms that explain how racial discrimination influences black men's smoking behavior. Finally, research is needed that identifies psychosocial processes that may protect men from the influence of racial discrimination. The present study is designed to address these needs.

Experiences of racial discrimination can be affectively charged, being treated as "less than" can be disheartening, humiliating, and infuriating, especially for young Black men. Men often will take experiences of racial discrimination and use them to define their strengths overcome oppression (Shelby, 2002). The affective valence of these experiences, however, often continues to result in stress and, in some cases, maladaptive behavior. Therefore, we hypothesize that racial discrimination will predict smoking behaviors indirectly via influences on hostility and anger. Hostility is defined as assumption of negative views toward others, such as suspicion, cynicism, and mistrust (Weiss et al., 2011). It is often characterized by negative affect towards others and a tendency towards state anger. Anger is a common response to discriminatory treatment (Hurd et al., 2014; Brondolo et al., 2015; Williams, Neighbors, and Jackson, 2003). Repeated exposure to racial discrimination can induce a sense of suspicion and mistrust of the social environment, leading to the defensive attitude toward others that characterizes hostility (Hurd et al., 2014). Hostility and anger thus become mutually reinforcing. Studies indicate that hostility and anger are associated with both the onset and escalation of smoking (Hurd et al., 2014; Williams, Neighbors, and Jackson 2003). Emotional distress in general, and anger in particular, undermines engagement in health-promoting and planful behaviors and encourages impulsive decision

making. Studies further suggest that, among young people experiencing elevated emotional distress, smoking may be a means of coping with difficult emotions (Wiehe et al., 2010). Among individuals who experience nicotine dependence, anger can trigger nicotine craving and preoccupation (al'Absi, Carr, and Bongard 2007). We expect that anger will mediate the association between black men's exposure to racial discrimination and longitudinal increases in cigarette smoking.

We also hypothesize that the link between racial discrimination and smoking will be attenuated among men who report *protective social ties*. Protective social ties are supportive relationships with conventional members of one's proximal network. Social bonding and developmental perspectives underscore the influence of social ties with conventional peers, parents, romantic partners, and mentor figures in the community on young adults' involvement with risky behaviors in general, and substance use in particular (Kogan, Brody, and Chen 2011). Establishment or maintenance of conventional social ties is linked to a decline in substance use from peak rates in the years immediately following high school (Viner et al., 2012).

Considerable research documents the moderating influence of protective social ties in attenuating the influence of contextual stressors on health behavior, including substance use (Cho and Kogan 2016; Cleveland et al., 2008). Studies of black youth indicate that they are strongly influenced by their families' and friends' beliefs about cigarette smoking (Gardiner 2001; Gritz et al. 1998; Mermelstein, 1999). For young men who are embedded in systems of supportive, conventional relationships, prosocial individuals reinforce and model appropriate or desired behaviors. Thus, men with protective social ties are likely to interact with significant others who either discourage smoking or simply will not tolerate it. Our approach to modeling protective social ties is informed by research that suggests the number of ties reported predicts health outcomes more strongly than does any particular relationship (Sameroff, 2006; Ostaszewski and Zimmerman 2006). We thus developed an index reflecting the number of protective social ties rather than specific relationship quality.

A second protective hypothesis involves the potential for protective social ties to affect cigarette smoking by reducing the anger men experience when exposed to racial discrimination. Past research indicates that protective social relationships can reduce emotional distress in the presence of racial discrimination (Kogan, Brody, and Chen 2011; Simons et al., 2006). Protective social ties also may provide alternative means of coping with challenging emotions. In seeking relief from discrimination-induced emotional distress, men can cope by seeking support rather than by smoking (Viner et al., 2012). We thus expect that, for men with high numbers of protective social ties, the association between racial discrimination and anger will be attenuated.

## Summary

During young adulthood, rates of smoking escalate among black men. Accumulating evidence implicates racial discrimination as a risk factor for smoking onset and escalation among black adults. Neither prospective studies of smoking among black men during the transition to adulthood nor studies of mediating mechanisms and protective processes that link racial discrimination to smoking have been conducted. We tested hypotheses regarding

the pathways connecting racial discrimination to changes in smoking among 505 black men age 19 years at baseline and 22 years at follow-up. We hypothesized that racial discrimination would predict smoking behaviors indirectly via influences on hostility and anger. We also hypothesized that men's protective social ties would attenuate the influence of racial discrimination on anger and on changes in smoking behavior.

## METHODS

### Participants and Procedures

Hypotheses were tested using data from the African American Men's Health Project, a longitudinal study of 505 black men age 19 at baseline who were recruited from 11 counties in rural Georgia. Participants were recruited using respondent-driven sampling (RDS), which is a referral-based recruitment method that alleviates the bias inherent in typical snowball sampling methods by providing means to control for personal network size (Heckathorn, 1997). RDS improves upon traditional snowball sampling methods because it produces samples that are independent of initial participants (Heckathorn, 1997). RDS is a preferred method of recruitment from interconnected but hard-to-reach populations, such as young black men who change residences often (Kogan et al., 2011). Community liaisons in the counties of interest recruited 45 initial participants, known as *seeds*, to complete the survey. Participants completed the survey in their homes or at a convenient location in the community. Upon completion of the survey, participants were asked to give the names of three other men they knew who met the criteria for inclusion in the study but were not members of their immediate families. Participants received \$25 for each referred individual who completed the survey. This procedure was repeated with each referred participant until the desired sample size was reached. Participants completed the survey on a laptop computer using an audio computer-assisted self-interview that allowed them to navigate the survey with the help of voice and video enhancements. The survey was completed in one hour. Participants received \$100 for completing the survey. Informed consent was obtained from all participants following a protocol that was approved by the institutional review board of the university at which the study was conducted.

At baseline (Time 1, T1), the sample comprised 505 men with a mean age of 20.26 years ( $SD = 1.08$ ). Of the 505 baseline participants, 423 (83.7%) provided a second wave of data approximately 18 months later (Time 2, T2) when their average age was 21.85 years ( $SD = 1.26$ ). We examined the differences between retained participants and those lost to attrition on all study variables; no differences emerged.

### Measures

**Cigarette Smoking**—Men reported their cigarette smoking at T1 and T2 in response to the question, "In the past three months, how much did you smoke cigarettes?" Possible responses were 0 (*none at all*), 1 (*less than 1 cigarette a day*), 2 (*1 to 5 cigarettes a day*), 3 (*about a half a pack a day*), 4 (*about a pack a day*), 5 (*about 1 and a half packs a day*), 6 (*about 2 packs a day*) and 7 (*more than two packs a day*). Test-retest reliability of self-reported tobacco use is high compared with other health-risk behaviors (e.g., kappas exceeding .80 for cigarettes consumed in past 30 days versus .62 for seat belt use) and are

associated with serum cotinine levels among young adults (.46-.64,  $p < .0001$ ) (Brener, Billy, and Grady, 2003; Wagenknecht et al., 1990). This item was recoded to reflect an approximate count of the number of cigarettes smoked per day (0, 1, 3, 10, 20, 30, 40, 50).

**Racial Discrimination**—Men reported their exposure to racial discrimination at T1 using a nine-item measure adapted from the Schedule of Racist Events (Landrine and Klonoff, 1996). The adaptation of the scale was based on focus group feedback, in which minor wording changes for clarity were suggested (Murry and Brody, 2004). Participants reported the frequency during the past 6 months with which each event occurred, ranging from 0 (*never*) to 3 (*frequently*). Example items included, “Have you been ignored, overlooked, or not given service because of your race?” and “Have you been treated rudely or disrespectfully because of your race?” Cronbach’s alpha was .84.

**Protective Social Ties**—A protective social ties index was developed at T1 based on men’s self-reports of affiliations with prosocial vs. antisocial peers; of close, supportive relationships with romantic partners; and of a positive relationship with a primary parent figure. Men reported the frequency of antisocial and substance use behaviors among their close friends using an 11-item scale that Elliott developed (Elliott and Menard, 1996). Example items included, “How many of your friends used tobacco regularly?” and “How many of your friends damaged or destroyed something that does not belong to them?” Participants’ responses ranged from 0 (*none of them*) to 3 (*all of them*). This scale was reverse coded to reflect affiliations with prosocial peers. Cronbach’s alpha was .89. For men who reported that they had a “a woman or girl that you have a very special or committed romantic or sexual relationship with, such as a girlfriend or a spouse,” support from that partner was assessed with four items selected from the Network of Relationships Inventory (NRI) (Furman and Buhrmester, 1985). Example items included, “How often do you turn to her for support with personal problems?” and “How often do you depend on her to cheer you up when you are feeling down or upset?” Responses ranged from 0 (*never*) to 3 (*very often*). Cronbach’s alpha was .80. Support from a primary parent figure was assessed with six items selected from the NRI (Furman and Buhrmester, 1985). Example items included, “How often do you depend on this parent for help, advice, or sympathy?” and “How often do you turn to this parent for support with personal problems?” Responses ranged from 0 (*never*) to 3 (*very often*). Cronbach’s alpha was .94. For each relationship measure (peers, romantic partners, parents), scores above the mean of the distribution were assigned a “1” and those below the mean were assigned a “0.” Scores were summed to form a protective social ties index that ranged from 0 to 3. An index of protective social ties was created to investigate the cumulative effect of protection on smoking. Protective social ties being coded in this way allows for the exploration of how much protection (ranging from 0 –3) young black men experienced.

**Anger/Hostility**—At T1 and T2, men completed the eight-item anger/hostility subscale of the Client Evaluation of Self and Treatment (Joe et al., 2002). Example items included, “You feel a lot of anger inside of you,” and “You have urges to fight or hurt others.” Responses ranged from 1 (*strongly disagree*) to 4 (*strongly agree*). Cronbach’s alphas were .87 at T1 and .91 at T2.

**Control Variables**—To account for plausible rival explanations, we controlled for several demographic and contextual factors. Age was calculated using the participants' birthdates. For employment status, participants who were currently employed (full or part-time) were coded as "1" and participants who were not employed were coded as "0." Because past studies linked community disadvantage with both exposure to racial discrimination and smoking behavior, disadvantage was included as a covariate measured using the nine-item Community Social Disorder Scale (Witherspoon, Seaton, and Rivas-Drake, 2016; Sampson, 1997). Responses ranged from 1 (*not a problem or never*) to 3 (*a big problem or often*). Example items included, "How big of a problem is vacant or deserted houses in the neighborhood in which you live?" and "How often has a fight in the neighborhood in which a weapon was used happened in the neighborhood in which you live?" Cronbach's alpha was .89.

**Data Analysis Plan**—The distribution of cigarettes smoked in the past month included a large proportion of zeros. Because of these distributional characteristics, and because research suggests that the onset and escalation of smoking may be influenced by unique processes, a Zero-Inflated Poisson (ZIP) regression model was used to test study hypotheses (Sheu et al., 2004). The ZIP regression estimates effects on two components of the smoking count: (a) a binary yes or no report indicating that smoking was present or absent, and (b) the frequency with which smoking occurred. As implemented in MPlus 7.4, missing data are modeled using full information maximum likelihood estimation, testing hypotheses with all data present and preserving the baseline sample size ( $N = 505$ ). First, we tested the mediation hypothesis using 95% bias corrected confidence intervals obtained from bootstrapping to test for the significance of indirect effects (Preacher, Rucker, and Hayes, 2007). Bootstrapping is a common method of testing mediation. The present analyses used 1,000 bootstrapped samples. There is a lower limit confidence interval (LLCI) and an upper limit confidence interval (UPCI). The indirect effect is significant if 0 lies outside of the confidence intervals. Employment status, age, community disadvantage, cigarette smoking (T1), and anger/hostility (T1) were included in the model. Second, we created a two-way interaction term (racial discrimination  $\times$  protective social ties) to test for moderation. To produce a common scale, standardized regression weights were used in which all study variables were standardized (a mean of 0 and a standard deviation of 1) before the interaction terms were calculated. Benefits of standardized weights in the interaction model include making coefficients easier to interpret, reducing multicollinearity, and making the simple slope easier to test (Dawson & Richter, 2006).

## RESULTS

Table 1 presents means, standard deviations, and associations among the study variables. Cigarette smoking at T2, the outcome variable, was positively associated with anger ( $r = .19$ ,  $p < .05$ ) and racial discrimination ( $r = .19$ ,  $p < .05$ ), and negatively associated with protective social ties ( $r = -.12$ ,  $p < .05$ ). At baseline, the age of participants ranged from 19–22 years ( $M = 20.26$ ,  $SD = 1.26$ ), and 67% had completed high school or obtained a GED. Their average monthly income was \$508.20. On average, at T1 participants smoked one cigarette per day ( $SD = 1.40$ ). At T1, 50.8% of the men reported that they did not smoke; the men who

smoked reported the following daily cigarette use rates: 7.7%, less than one cigarette; 12.7%, 1 to 5 cigarettes; 6.9%, about half a pack; 5.1%, 1 pack; and 2%, 1.5 to 2 packs. Cigarette smoking rates for Time 2 were similar: 7.5%, less than one cigarette; 12.1%, 1 to 5 cigarettes; 6.1%, about half a pack; 4.6%, 1 pack; and 2%, 1.5 to 2 packs.

Figure 1 presents the direct effects of racial discrimination on smoking. The zero inflated (logistic) portion of the model indicated that racial discrimination significantly predicted the probability of abstinence from smoking (OR = 1.28,  $p = .02$ ). The count portion indicated that racial discrimination predicted an increase in smoking rates (IRR = 1.69,  $p = .00$ ). In Model 2, we tested the indirect effect hypothesis (See Figure 2). Racial discrimination significantly predicted changes in anger ( $\beta = .25$ ,  $p = .00$ ), which in turn predicted changes in both smoking initiation and escalation (logistic portion: OR = 1.14,  $p = .00$ ; count portion: IRR = 1.93,  $p = .04$ ). A main effect of T1 racial discrimination on T2 cigarette smoking was significant for the logistic portion (OR = 1.15,  $p = .01$ ) and marginally significant for the count portion (IRR = 1.28,  $p = .08$ ) of the model in the presence of the mediator. The indirect effects of T1 racial discrimination on the logistic portion of the model via anger was significant,  $\beta = -.17$ , 95% CI [-.26, -.09]. The indirect effects of T1 racial discrimination on the count portion of the model via anger also was significant,  $\beta = .16$  95%, CI [.02, .31].

Finally, we modeled the influence of the racial discrimination  $\times$  protective social ties interaction on anger and on smoking (See Figure 3). The interaction term was significantly associated with frequency (count) of smoking at Time 2 (IRR = .96,  $p < .05$ ). No significant effects were detected linking the interaction term to anger or to the logistic smoking outcome. A main effect of protective social ties on anger was detected ( $\beta = -.26$ ,  $p < .05$ ). Figure 4 presents a graph of the significant interaction across levels of protective social ties ranging from -2 to +2 standard deviations from the mean. This figure indicates that, when protective social ties are high, the association between racial discrimination and increases in the number of cigarettes smoked is attenuated.

## DISCUSSION

Current research implicates racial discrimination in elevated rates of cigarette smoking among young black men (Borrell et al., 2007). We used a short-term (18 months) prospective design to test hypotheses regarding this association. Racial discrimination was linked to the likelihood of any cigarette smoking in the past month and increases in the number of cigarettes smoked. Anger/hostility mediated the association of discrimination with each smoking outcome. Interaction analyses indicated that protective social ties buffered the influence of racial discrimination on increases in the number of cigarettes smoked.

The present study replicates and extends a growing body of research indicating that racial discrimination is a risk factor for smoking among black adults in general, and men in particular (Hurd et al., 2014; Brondolo et al., 2015; Williams et al., 2010). Past research has focused mainly on the effects of racial discrimination among adolescents and older adults. The present study highlights the influence of racial discrimination during the transition to adulthood, when many young black men begin smoking. Accumulating research implicates

the transition to adulthood as a potentially stressful period for African American men from low-SES contexts (Hurd et al., 2014; Allen et al., 2018). Reasons pointing to the transition to adulthood as a critical developmental time period are not well understood. However, proposed reasons could be an increase in exposure to racial discrimination and a lack of vocational and educational opportunities may make the transition to the labor force particularly challenging, increasing men's vulnerability to substance use in general, and smoking in particular. Results of a ZIP model suggest that racial discrimination may be important in both the onset of smoking and increases in rates of smoking.

Although multiple studies link racial discrimination to smoking, few studies examine the mechanisms through which racial discrimination confers risk. We found that anger/hostility mediated the association of racial discrimination with each smoking parameter. This finding is consistent with past research implicating anger in smoking onset and escalation (Cheetham et al., 2015; Mischel et al., 2014). For young black men, exposure to racial discrimination elicits feelings of anger and hostility, which can undermine protective health behavior and increase the attraction of behaviors that place their health at risk. Young men experiencing the immediate emotional toll of discrimination may consider the health consequences of smoking to be a distant concern.

Smoking also may represent a means of coping with the stressors involved in joining the labor force. Targeting the emotional consequences of racial discrimination may represent an important component of prevention efforts for young black men. The finding of a partial mediation effect in the present study suggests that other mechanisms may also explain the effects of racial discrimination on smoking, particularly smoking onset. Potential mechanisms for future investigation include factors associated with self-regulation, a proximal antecedent to smoking. Gibbons et al. (2012) found that racial discrimination undermines self-regulation among black youth, increasing vulnerability to substance use (Gibbons et al., 2012).

To date, little research has examined protective processes that moderate the negative effects of racial discrimination on cigarette smoking. We found that having close, supportive relationships with family members, conventional peers, and intimate partners significantly moderated the effect of racial discrimination on increases in smoking rates. This is consistent with previous studies that have shown an association between supportive social ties and a decline in substance use during young adulthood (Lee, Chassin, and MacKinnon, 2015; Nelson, Van Ryzin, and Dishion, 2014). For young black men, being rooted in conventional relationships may affect smoking through direct disapproval of smoking behavior and the influence of anti-smoking norms. This finding suggests the importance of including protective social ties in the development of interventions designed to help young black men avoid or quit smoking.

The hypothesis that protective social ties would buffer racial discrimination by decreasing anger was not supported. Thus, the mechanisms through which protective ties moderate racial discrimination in this sample remain unclear. Future investigations may consider alternative mechanisms, such as improved coping strategies. We did, however, detect a main effect of protective social ties on changes in anger. Those men with more social ties were



less likely to report increases in anger than were men with fewer social ties. This is consistent with past research linking social support to reductions in anger and angry coping styles (Palfai and Hart, 1997; Arnett and Brody, 2008).

Several strengths and limitations of the study should be mentioned. The present study examines a unique population of Black men aged 19–22 in the rural South. Therefore, results are generalizable to similar populations. It is notable that effects emerged in a short-term longitudinal design. This permitted examination of the effects of discrimination on increases in anger and smoking over an 18-month period. Prospective research focusing on young black men's health behavior is rare; additional studies with three or more time points, however, are needed to examine more thoroughly changes in smoking outcomes. The use of a ZIP model allowed an investigation of both onset and escalation in smoking. Future studies, however, that specify the timing of smoking onset will be particularly useful in understanding smoking initiation and progression to nicotine dependence. Our index of protective processes included assessment of protective romantic relationships with women; this could have reduced the significance of protective process by omitting those that men with same-sex romantic partners experience. Our data revealed, however, that less than 4% of the sample reported same-sex activity, suggesting little bias from this issue. We also note that individuals in your social network may engage in smoking behaviors. Given the available data, we controlled for substance use among peers and romantic partners. Additionally, we acknowledge that there are multiple aspects of racial discrimination (i.e. structural, institutional). The present study focuses on microaggressions; however, future studies may benefit from an investigation of multiple aspects of racial discrimination. Lastly, we are aware that experiencing racial discrimination may evoke many emotions and reactions. Anger is just one reaction/emotion. Further studies are needed to investigate other emotions and reactions to racial discrimination.

## Conclusions

To date, little research has examined mediators and moderators of the relations between racial discrimination and cigarette smoking among black men. Study findings suggest that supportive networks make crucial contributions to the reduction of cigarette smoking and feelings of anger within this population. Intervention developers should consider targeting relationship dynamics within families, peer groups, and intimate partnerships to understand coping mechanisms and to reduce substance use among young black men.

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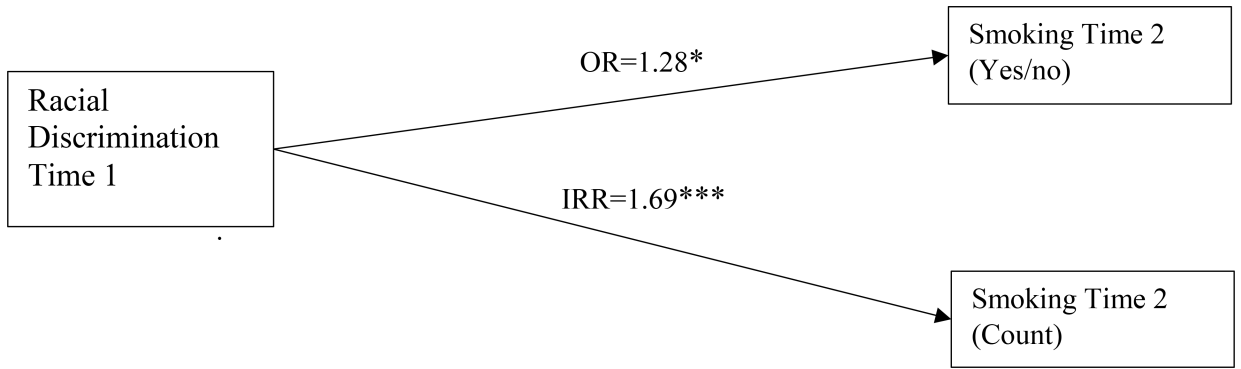
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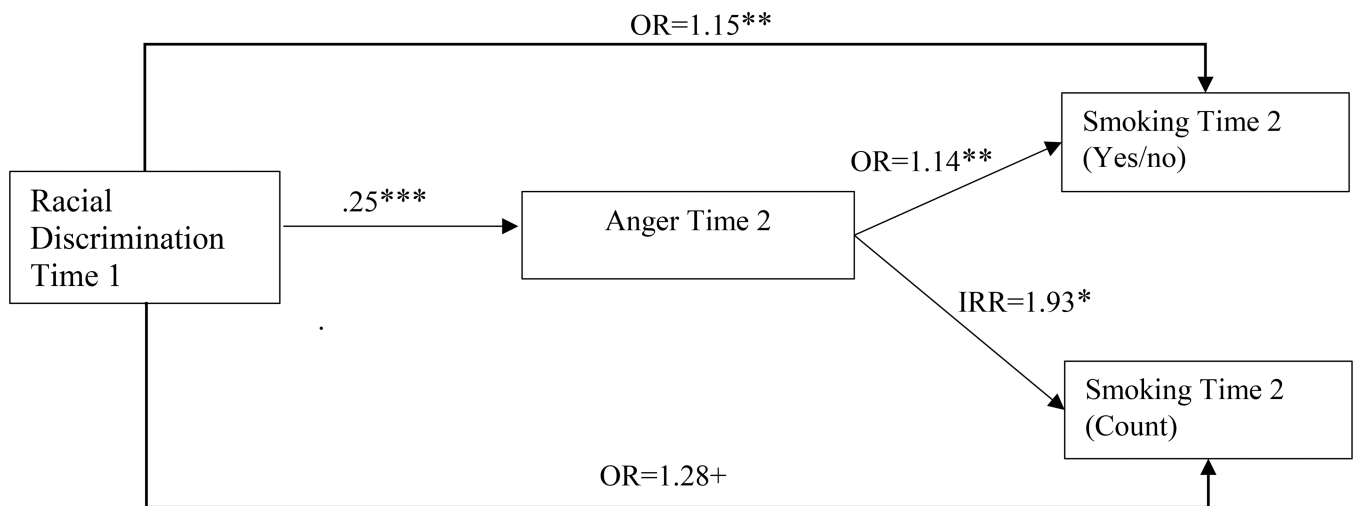
**Figure 1.** Baseline model controlling for Age, Employment, Community Disadvantage and Smoking Time 1. Controls are not presented.

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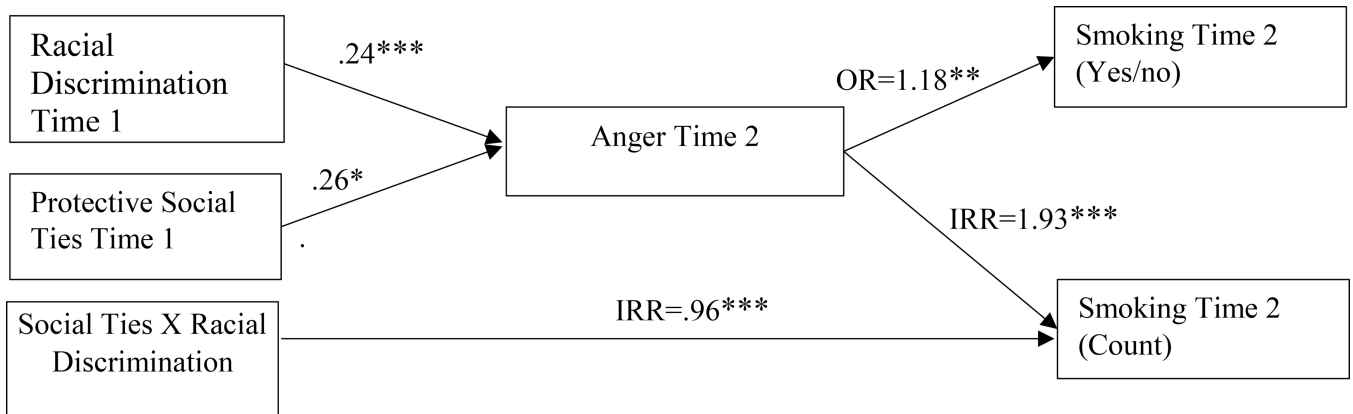
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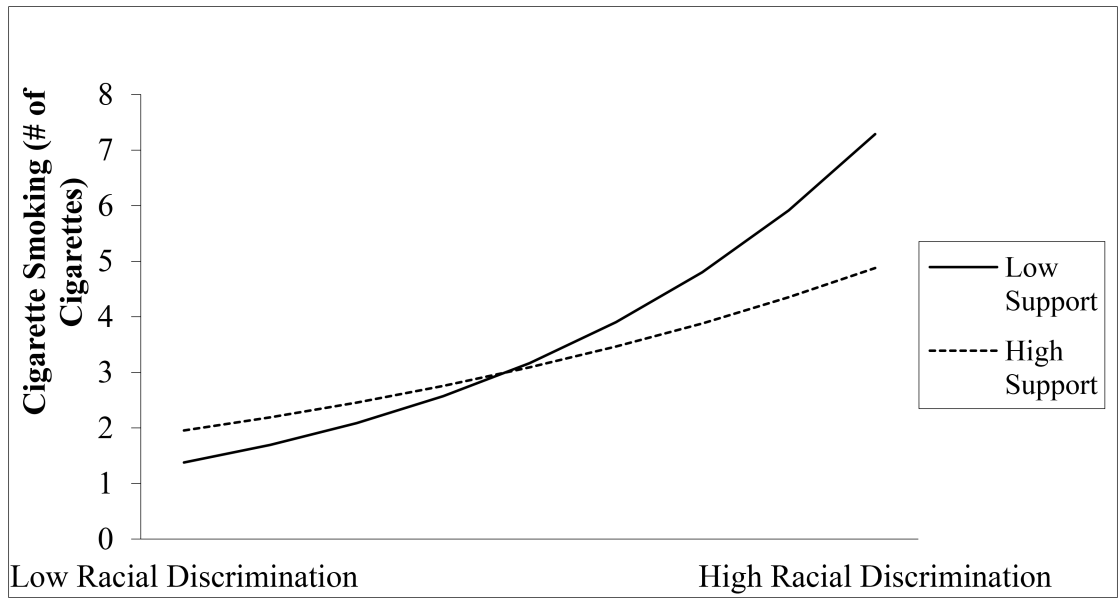
Model Fit: AIC 5031.74; BIC 5068.17; Loglikelihood -2506.87, N=505

**Figure 2.** Mediation model of Anger on Racial Discrimination and smoking. Controls not presented in the figure.



Model Fit: AIC 1968.21; BIC 2032.93; Loglikelihood -968.10, N=505

**Figure 3.** Mediated-Moderation Model (controls variables and nonsignificant paths are not present in the figure)



**Figure 4.** Interaction Graph of Protective Social Ties on Racial Discrimination and Smoking



**Table 1.**

Correlations Among Study Variables

	1	2	3	4	5	6	7	8	9
1. Smoking, Time 2	1								
2. Smoking, Time 1	.56**	1							
3. Anger/hostility, Time 2	.19**	.15**	1						
4. Anger/hostility, Time 1	.13**	.25**	.41**	1					
5. Racial discrimination, Time 1	.19**	.15*	.25**	.16**	1				
6. Protective social ties, Time 1	-.12**	-.09	-.26**	-.14**	-.12*	1			
7. Age	.21**	.24**	.14**	.11*	.06	-.03	1		
8. Community disadvantage	.05	.01	.03	.02	.03	-.01	-.06	1	
9. Employment status	-.23**	-.20**	-.17**	-.14**	-.01	.09	-.12*	.02	1
Mean	3.03	3.07	17.59	18.31	7.76	1.62	20.34	17.00	0.71
SD	6.89	6.24	5.66	5.66	5.36	1.04	1.23	5.45	0.45

*P* values

\* < .05

\*\* < .01