Published in final edited form as:
J Immigr Minor Health. 2011 June ; 13(3): 453–461. doi:10.1007/s10903-010-9421-x.

Perceived Discrimination and Antisocial Behaviors in Puerto Rican Children

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Abstract

This study examined whether perceived discrimination was related to antisocial behaviors (ASB) in a probability sample of Puerto Rican children living in the South Bronx, New York and the San Juan Metropolitan area of Puerto Rico (*N*= 1,271). After adjusting for a host of well-known factors associated with ASB, such as sociodemographic variables (i.e., age, gender, household composition), psychosocial stressors (i.e., stressful life events, exposure to violence), and various forms of violence and abuse (i.e., coercive parental discipline, verbal, psychological, physical and sexual abuse), perceived discrimination remained a robust correlate of ASB among both samples. Findings are discussed with reference to the detrimental associations of perceived discrimination.

Keywords

discrimination; antisocial behaviors; Puerto Rican; children

Introduction

Latinos are the fastest growing and largest minority group in the U.S. (1). Additionally, they are the youngest of all minority groups, with approximately 40% of the population under the age of 21 (2). Given their size, it is critical to analyze what factors are related to their optimal health. Recently, research has noted that Latino adolescents are at risk for a number of negative health-related outcomes, such as problems with alcohol, drug use, and aggressive behavior (3). These outcomes, or antisocial behaviors (ASB), constitute a major public health problem because they are the primary reasons for referrals to psychiatric clinical services for youth (4). Moreover, early onset of ASB is associated with a host of problems in adulthood, such as increased criminality, psychiatric problems, and problematic social and occupational functioning (5-6).

Among all Latinos, Puerto Ricans are an especially compelling group in which to explore the associations of ASB because recent longitudinal research indicates that youth living in Puerto Rico have lower rates of disruptive behavior disorders, including conduct disorder (CD) and oppositional defiant disorder (ODD), than Puerto Ricans living in the continental

U.S. (7-9). Thus, this group provides the opportunity to explore how the associations of ASB may vary by cultural context. Additionally, while previous research has noted differences in a host of demographic factors that are related to the prevalence of ASB, such as gender (9-10), age (11-12), household composition (8) and other psychosocial risk factors (13), few studies have assessed the relation between ASB and other stressors which can disproportionately affect ethnic minorities, such as perceived discrimination.

Background

Briefly defined, perceived discrimination refers to self-perceived experiences of unfair treatment (14). Current research has found that perceived discrimination is associated with a host of negative outcomes among Latino youth (15-17). Yet, with regards to ASB, only two studies to date have assessed the association between perceived discrimination and aggressive behaviors specifically among Latino youth (18-19). In one study perceived discrimination was associated with increased aggressive behavior among Latino youth living in North Carolina and Arizona (19), while another found that these problematic behaviors decreased over time among Puerto Rican youth (18). Thus, the association between perceived discrimination and ASB still requires further attention, especially since these studies did not control for other psychosocial stressors that are related to ASB (20).

In particular, exposure to psychosocial stressors, such as stressful life events, may be related to higher rates of behavioral problems and engagement in maladaptive coping strategies (21-22). Similarly, exposure to violence has been identified as a predictor of ASB, particularly for youth living in poverty or subject to racial prejudice (23). In addition, other instances of abuse, such as coercive parenting behaviors (24-25), verbal, physical and sexual abuse (26-29) can increase aggressive behaviors in children (30). Thus, in trying to assess the relationship between ASB and perceived discrimination, it is first important to control for the associations with these other factors.

Theoretical Framework

The unique role of perceived discrimination in relation to ASB may best be understood using Agnew's General Strain Theory (GST; 31). In its classic formulation, first introduced by Merton (32), GST stipulated that aggressive behaviors were caused by the strain created when there was a discrepancy between individual aspirations and access to resources (32). However, Agnew has since expanded the definition of strain to include “relationships in which others are not treating the individual as he or she would like to be treated” (31, p. 48). The experience of such negative relationships thus translates into disappointment, frustration, and anger, which further create pressures, or incentives, to engage in delinquent acts (33-34).

With regards to perceived discrimination, engagement in deviant behaviors can be exacerbated in conditions, or situations, that are perceived as unjust and are associated with little self-perceived social control (34). Indeed, a recent review of the effects of discrimination on the health of children of color suggests that racial awareness is developed alongside feelings of helplessness, demoralization and discouragement (35). Furthermore, the recognition of being placed in a devalued social group is related to increased anger levels (36). Most telling, however, is recent research that notes how the addition of perceived discrimination amplified the effects of ecological risk on delinquency, but not depressive symptoms,among minority youth (37). Thus, perceived discrimination may be a unique stressor that can either operate independently, or exacerbate conditions or effects, of other well-known risk factors of ASB.

Using the latest revision of GST, we propose that perceived discrimination is a unique strain that is associated with the occurrence of ASB among Latino youth. Additionally, we hypothesize that the association between perceived discrimination may be a more robust cultural strain for Puerto Rican children living in the continental U.S., rather than Puerto Rico, since previous studies have noted high rates of self-perceived discrimination among American-born Latinos (14). Additionally, perceived discrimination might be less of a stressor for Island Puerto Ricans because this group does not have to confront or reaffirm their ethnic identity as much as those in the continental U.S. (38).

Methods

Sample Description and Study Design

Participants were part of a larger, three-wave, longitudinal probability sample, known as the Boricua Youth Study. The data were collected from 2000 to 2004 (39). The principal aim of this larger study was to assess and compare the development of antisocial behaviors and disorders among Puerto Rican children living in two different contexts (40-41). Participants were Puerto Rican youth, who ranged in age from 5 to 15 years (N = 2,491). Children resided either in the South Bronx (SB), New York (N_1 = 1,138), an area with a large Puerto Rican population outside of Puerto Rico, or in the Standard Metropolitan Areas (SMA) in Puerto Rico, which comprised the most densely populated areas in the northeast section of Puerto Rico, including the San Juan and Caguas metropolitan areas (N_2 = 1,353). Data drawn for this sub-study were obtained in the first wave and included all children who were 10 years of age and older (N = 1,271) and their adult informant. This specific age sub-group (10 and over) was selected because this was the age where the full range of data was available for both groups.

To be eligible for the base study, household occupants had to include at least one child (between the targeted ages of 5 to 13 years at enumeration) and a residing primary caregiver who identified as Puerto Rican. Up to three children per household could be selected, and in households with more than three eligible children, three were randomly selected using Kish tables (42).

Measures

Translation

All measures were translated from English into Spanish and back-translated and culturally adapted to ensure that they were equivalent to the original scales. Previously established methods for translation and cultural adaptation of measures were employed (43-45).

Perceived Discrimination

Discrimination was measured using a modified version of the Hispanic Stress Inventory (46-47). For the purposes of this study, only items that specifically dealt with perceived discriminatory experiences were included. Additionally, four items were added that assessed discrimination with regards to language/accent, race/skin color, social class, and gender, which resulted in a final 11-item scale (see Table 1). Scale items were dichotomous and for all questions children were asked to indicate the frequency of stressors during the past year, with “0” indicating *rarely* or *never* and “1” signifying *sometimes* or o*ften*. This measure yielded a Kuder Richardson alpha of .69 and .79 for SMA and SB, respectively.

Antisocial Behaviors

To assess for ASB, children and their primary caretaker were administered identical items from the ODD and CD modules of the Spanish or English Diagnostic Interview Schedule for

Children, IV (DISC-IV) and the Self-Reported Delinquency Scale (41,45,48-50). Items related to antisocial behavior were then ranked systematically along a hierarchy of seriousness or severity that took into account frequency of occurrence and presence of multiple behaviors. This categorization was based on a previous method which used a panel of 9 expert raters to rank a series of 113 antisocial behaviors (51). According to this categorization, children were classified at six levels of ASB ranging from 0-5. Levels 0 and 1 were considered to represent none or trivial ASB (e.g., *defies adults less than once per week)*, while levels 2, 3, 4, and 5 represented increased frequency, heterogeneity, and seriousness of ASB (e.g., ran away from home overnight more than once in the past year or used a weapon).

Because of the low probability of engaging in these behaviors in the general population, we anticipated that the distribution of antisocial behaviors would not be normally distributed. Therefore, antisocial behavior ratings were dichotomized, with “0-1” indicating very low engagement and “2-5” indicating more serious and frequent delinquency. Prior research has indicated that this classification has good face validity and a reliability of .84 (51).

Stressful Life Events

A shortened version of the Stressful Life Events Scale was used to assess stressful events within the last year (49-50). This 21-item scale asked children whether various negative events occurred to them within the past twelve months (e.g., During the past 12 months did a close friend die/did your parents divorce?). Once an event was endorsed, children were asked to rate whether these events were *mostly good* (1) or *mostly bad* (2) for them, and how much these events affected their lives, from *not at all* (1) to *a lot* (2). An event was counted as stressful if it was reported as mostly bad and had a negative impact. A dichotomous variable, defined as having experienced two or more life events, was used to denote a higher probability of experiencing stressful life events. Previous research with this abridged version has noted it has good reliability, with kappas ranging from 0.49 to 0.76.

Exposure to Violence

To assess lifetime exposure to violence, a modified version of the Exposure to Community Violence Scale was used (52). With this scale children were asked to report whether a host of violent events happened to them or someone else. For example, children were asked if they ever saw someone being beaten, mugged, or sexually assaulted. Responses were dichotomous; however, to account for greater distress, a sum scale was created that differentially weighted the levels of exposure (49). In particular, greater weight was given to items where the child directly experienced an event as opposed to witnessing or hearing about the event. This scale has previously been used in epidemiological research and has good internal consistency, ranging from .76 to .92, with a test-retest reliability of .81(53).

Coercive Parental Discipline

Children were asked a series of questions from the Parental Discipline Scale to assess coercive parental discipline and various forms of abuse (41). In particular, six items were used to assess for coercive parental discipline (e.g., How often does your caretaker/parent ignore you or act cold and unfriendly toward you?). This scale yielded an internal consistency of .67.

Other Abuse Indicators

To assess for lifetime verbal and psychological abuse, two separate dichotomous items were used (e.g., *Has your caretaker/parent sworn or cursed at you?* and Has your caretaker/ parent told you that you would be sent away or kicked out of the house?). Additionally, four

dichotomous items were used to assess for lifetime physical abuse (e.g., Has your caretaker/parent hit you with a fist or kicked you hard?). Finally, to assess for lifetime sexual abuse, respondents were asked to endorse three items, such as Has anyone ever tried to force you to touch your private parts? from a sexual victimization scale (54).

Sociodemographic Variables

To account for the effect of demographic variables on ASB, we controlled for child age, gender, and household composition since prior research has shown that these variables were associated with ASB in this population (41). Maternal education, however, was not controlled for separately because it was part of the propensity score that was used to equate these samples based on their covariates.

Analytic Strategy

Data were analyzed using the statistical package SUDAAN which is specialized software that allowed for the analyses of correlated data. The program adjusted for differences in the probability of selection and corrected for skewed standard errors induced by multistage and cluster sampling (55). Analyses were conducted with the full sample (N = 2,491), instead of only the subpopulation (N = 1,271) in order to ensure the correct computation of the sampling variance. Propensity scores were also constructed which balanced for a number of covariates and allowed for both sites to be appropriately matched and compared. Finally, data were weighted to make the results comparable to age and gender distributions of the 2000 U.S. Census (1).

In order to facilitate comparison between the two sites, logistic regressions were computed with each site codified (1 = SB, 2 = SMA). We constructed three separate hierarchical models. In the first model, we first entered the unadjusted effect of site, perceived discrimination, followed by the interaction between site and discrimination. Following this, we entered a block of sociodemographic variables, including the child's gender, age and household composition (Model 2). Finally, in our last model, we adjusted for a number of psychosocial stressors and various indicators of abuse, namely, stressful life events, exposure to violence, coercive parental discipline, verbal, psychological, physical and sexual abuse (Model 3). Within each model, each odds ratio was interpreted as the effect of each variable on the odds of engaging in more severe (i.e., higher level) ASB once the effects of the other covariates were adjusted. Propensity scores were controlled for in each model.

Results

Comparison of Puerto Rican Children on Main Study Variables

There were no significant differences by gender or age between the two sites, and the mean age of participants at each site was approximately twelve years old. However, as indicated by Table 2, there were a number of differences in sociodemographic characteristics, psychosocial stressors, and the prevalence of various forms of abuse among Puerto Rican children by site. Children in the SB were more likely to come from single parent homes than children in the SMA. Additionally, children in the SB were more likely to have mothers with less education than children in the SMA (see Table 2).

There were no significant site differences in the prevalence of ASB. In fact, both sites had approximately the same low level of ASB, 1.49 and 1.41, in the SB and in the SMA, respectively. Hence, their scores represented mild ASB based on the aforementioned ASB classification. However, children in the SMA reported more self-perceived discrimination than youth in the SB. More specifically, on the perceived discrimination scale that ranged from 0 to 1, children in Puerto Rico reported a scale score, or mean of the items, of .18. This

indicated that on average 18% of children in SMA endorsed an item as compared to 13% of children in the SB (see Table 2).

No significant site differences were found in the prevalence of stressful life events. In fact, an equally high percentage of children in both sites indicated that they had at least two or more stressful life events in the last 12 months. Moreover, children in the SB reported more exposure to violence than youth in the SMA.

There were no site differences with regards to the use of coercive parental discipline. However, children in the SB generally fared worse than their SMA peers on other abuse measures. More children in the SB reported a higher percentage of lifetime physical abuse by caregivers when compared to youth in the SMA. Finally, approximately 3-4% of all children in the SB ($n = 29$) and the SMA ($n = 20$) reported some type of sexual abuse during their lifetime, indicating no significant site differences in prevalence.

Logistic Regression Indicating the Association of Perceived Discrimination and ASB

To assess whether greater perceived discrimination was associated with an increased chance of engaging in more frequent and severe ASB, we ran a series of logistic regressions. In our first unadjusted model, we entered site, perceived discrimination, and the interaction between site and perceived discrimination, to explore if either one of these variables was related to ASB. As Table 3 demonstrates, children in the SB were more than one and a half times more likely to engage in ASB than those in the SMA. In addition, children who perceived discrimination were significantly more likely to engage in more frequent and severe ASB than those who did not experience perceived discrimination. Surprisingly, the interaction between site and perceived discrimination was not significantly related to ASB, thus suggesting that regardless of context perceived discrimination was associated to ASB.

Having thus established the unadjusted association between perceived discrimination and ASB, we entered a host of demographic variables. In this step of the model, we obtained a significant site effect. As expected, older children were more likely to engage in ASB than younger children. Males were also one and a half times more likely to engage in ASB than girls. Finally, children living in a two, versus single, parent household were less likely to have ASB. Thus, children who were males, older, or who came from single parent households were significantly more likely to engage in ASB. However, even after adjusting for the effects of site, child age, gender, and household composition, perceived discrimination was still related to an elevated risk of ASB (see Table 3).

Finally in model 3, after we adjusted for various indicators of psychosocial stressors, such as stressful life events, exposure to violence, and other factors related to abuse, such as coercive parental discipline, and lifetime verbal/psychological abuse, as well as physical and sexual abuse, we found that many of the noted associations in model 2 still remained significant. That is, while stressful life events, coercive parental discipline, lifetime physical and sexual abuse were not associated with an increased risk of ASB, older children and males were still at an elevated risk for ASB compared to their younger and female peers. Additionally, children who had experienced exposure to violence, and lifetime verbal and psychological abuse, were more likely to have higher levels of ASB (see Table 3). However, even after controlling for all of these variables, perceived discrimination still remained an important correlate of ASB. In fact, once all of the aforementioned variables were appropriately adjusted, the odds of being in the high ASB group were nine times higher when a child reported experiencing discrimination

Discussion

Antisocial behaviors are a costly public health problem that has many antecedents and consequences. Consistent with previous research, we found that ASB was associated with a host of demographic and psychosocial variables (8, 12, 39, 56). In particular, gender and age, as well as a number of traumatic life experiences, such as exposure to violence, verbal and psychological abuse, placed children at greater risk for ASB. Specifically, we found that children who had experienced exposure to violence and lifetime verbal and psychological abuse were more likely to have higher levels of ASB. These findings are important as they suggest that abusive experiences from parents/caregivers are associated with ASB. However, what these findings also indicate is that although abusive parental relationships tend to increase the risk for ASB, perceiving discrimination continued to be significantly associated with higher levels of ASB.

One possible interpretation maybe that supportive and non-violent parenting is likely to reduce the association between discrimination and ASB (57). Thus, the absence of parental warmth may explain these associations. This is particularly intriguing as previous research with Puerto Rican youth has specifically identified lack of parental warmth and approval as predictive of disruptive behavioral disorders (41). Still, even when controlling for parental practices, as well as other well-known correlates of ASB, we continued to find a persistent relation between discrimination and ASB. Furthermore, although our initial bivariate analyses indicated that perceived discrimination was higher in the SMA than in the SB, once all of these variables were considered, perceived discrimination was a robust correlate of ASB regardless of site.

Limitations of the Study

While this study showed a strong association between perceived discrimination and ASB, cross-sectional analyses limit our ability to infer causality. Thus, it could be that youth who engaged in ASB were more likely to perceive discrimination, rather than ASB being the result of perceived discrimination. Additionally, children with high ASB levels may have been more likely to interpret the actions of others as discriminatory. Furthermore, we did not explore the potential role of acculturation in influencing the aforementioned findings, particularly for the New York sample. Previous research suggests an association between acculturation and aggressive behaviors among Latino youth (58-59). Indeed, research with these data has indicated an association between parental acculturation and ASB, but not for youth acculturation (18). Future research should analyze and explore the role of acculturation on ASB.

New Contributions to the Literature

The theory of GST suggests that perceived discrimination is a strain that is associated with aversive social relations. Perceived discrimination was strongly associated with ASB lending support to the idea that perceived discrimination can be a stressor that is related to pressures to engage in delinquent behavior or ASB, for both Puerto Rican children living in the U.S. and Island Puerto Ricans.

Most telling, however, we found that the nature of the strain associated with perceived discrimination was different from other stressors, such as sexual and physical abuse, and that the association between perceived discrimination and ASB still held even after taking these risk factors into account. We believe this may be because the experience of perceived discrimination lends itself more readily to the expression of ASB, while the effects of sexual and physical abuse may be more directly related to other forms of distress, such as internalizing disorders. Indeed, evidence suggests that sexually abused children more readily

express internalizing disorders such as depressive symptoms and post-traumatic stress disorder (60-61). Thus, there may be different pathways or mechanisms, as well as predictors, for externalizing versus internalizing disorders and this may explain why perceived discrimination was persistently related to ASB over and above other abuse indicators. At the minimum, our results add evidence to the current debate and research direction that suggests that perceived discrimination is a unique stressor because it fosters feelings of marginalization, decreased self-efficacy, and powerlessness over life choices (62). Our results also highlight the necessity of including measures of perceived discrimination in the assessment of violence (62).

Acknowledgments

Data for this study were obtained from the Boricua Youth Study (RO-1 MH56401), Hector Bird, P.I.. Additionally, preparation of this article was supported by the following National Institute of Mental Health (NIMH) Grants: the UPR/CHA Exploratory EXPORT Center: Bridging Communities (MD000537-03), the Research Training in Transitions, Family and Mental Health Grant (MH019734), and the Mental Health Services and Systems Training Program Grant (MH016242-27).

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Table 1

Adapted items from the Hispanic Stress Inventory.

You feel other people don't like you because you are Puerto Rican.
You've had problems making friends because you don't know enough English.
You have been treated badly because you don't speak English well.
You've had problems in school/at work because you don't understand English well.
You feel like you have to learn to speak English well.
People have treated you badly because you are Puerto Rican.
Other people have treated you badly because of your race, skin color or where you come from.
Other people have treated you badly because of your language or your accent
Other people have treated you badly because of your social class or because you are poor.
Other people have treated you badly because of being female/male.
You keep from going some places or being with some people because you feel they will not treat you well.

Table 2

Site Differences in Sociodemographic Characteristics and Psychosocial Stressors

	Entire Sample N = 1,271		SB n_1 = 598		SMA n_2 =673		Comparison by Site	
Variables	**N**	**%/Mean (SE)**	**N**	**%/Mean (SE)**	**N**	**%/Mean (SE)**	***t/X²***	***p***
Sociodemographic								
Age (mean)	1,271	11.57 (0.05)	598	11.57 (0.06)	673	11.57 (0.05)	0.02	0.98
Gender (%)	1,271		598		673		0.29	0.59
Males	653	50.11 (1.47)	307	49.90 (1.70)	346	51.29 (1.93)		0.62
Females	618	49.89 (1.47)	291	50.10(1.70)	327	48.71 (1.93)		
Household Composition (%)	1,263		591		672		34.94	.0001
Single Parent	491	45.99 (2.12)	292	49.11 (2.42)	199	29.06 (2.14)		
Two Parent	772	54.01 (2.12)	299	50.89 (2.42)	473	70.94 (2.14)		
Maternal Education (%)	1,235		577		658		61.94	.0001
< High School	419	42.73 (2.30)	266	46.31 (2.69)	153	23.29 (2.90)		
High School	525	43.33 (2.07)	251	43.49 (2.38)	274	42.47 (2.97)		
College+	291	13.93 (1.42)	60	10.20 (1.55)	231	34.24 (3.04)		
Antisocial Behaviors, mean	1,271	1.48 (0.05)	598	1.49 (0.05)	673	1.41 (0.05)	1.12	0.27
Psychosocial Stressors								
Perceived Discrimination, mean	1,248	0.14 (0.01)	578	0.13 (0.01)	673	0.18 (0.01)	-4.73	.0001
Stressful Life Events (≥2) (%)	249	19.95 (1.47)	118	20.23 (1.72)	131	18.44 (1.66)	0.56	0.45
*Exposure to Violence, wtd.	1,271	4.23 (0.21)	598	4.47 (0.24)	673	2.94 (0.18)	5.00	.0001
Abuse Indicators								
Coercive Discipline, mean	1,271	0.47 (0.02)	598	0.47 (0.03)	673	0.47 (0.02)	-0.04	0.97
*Verbal/Psyc. Abuse %)	213	23.06 (1.43)	153	25.65(1.64)	60	8.96 (1.22)	54.51	.0001
*Physical Abuse (%)	163	13.94 (1.11)	88	14.56 (1.28)	75	10.55 (1.26)	4.81	0.03
*Sexual Abuse (%)	49	4.63 (0.80)	29	4.89 (0.94)	20	3.16 (0.99)	1.61	0.21

Note: SB = South Bronx; SMA = Standard Metropolitan Areas in Puerto Rico; Psyc. = Psychological. *Ns* are unweighted.

Percentages were weighted with SUDAAN to account for the complex sampling frame. wtd: Weighted.

*Refers to lifetime events.

Table 3

Logistic Regressions Noting the Association Between Perceived Discrimination and Antisocial Behaviors After Controlling for Sociodemographic Variables, Psychosocial Stressors And Abuse Indicators.

	Model 1			Model 2			Model 3		
Variables	**OR**	**95% CI**	***p***	**OR**	**95% CI**	***P***	**OR**	**95% CI**	***p***
Perceived Discrimination	15.93	4.94-51.36	.0001	17.78	5.11-61.82	.0001	9.73	2.77-34.15	.0005
Site, South Bronx	1.66	1.16-2.37	.0056	1.58	1.08-2.31	.0201	1.28	.87-1.87	.2091
Site X Perceived Discrim.	.38	.08-1.77	.2169	.43	.09-2.20	.3102	.39	.08-1.96	.2499
Demographic Variables									
Age				1.25	1.11-1.41	.0004	1.16	1.02-1.33	.0265
Gender, Males				1.55	1.14-2.09	.0053	1.43	1.03-1.98	.0317
Household, Two Parent				.67	.48-.92	.0131	.73	.52-1.03	.0726
Psychosocial Stressors									
Stressful Life Events (≥2)							1.26	.81-1.97	.2958
*Exposure to Violence							1.07	1.03-1.10	.0001
Abuse Indicators									
Coercive Parental Discipline							1.34	.87-2.05	.1855
*Verbal/Psyc. Abuse							1.75	1.17-2.60	.0065
*Physical Abuse							1.37	.84-2.25	.2047
*Lifetime Sexual Abuse							1.09	.50-2.40	.8265

Note. Discrim. = Discrimination; Psyc. = Psychological; OR = Odds Ratio.

*Refers to lifetime experience