

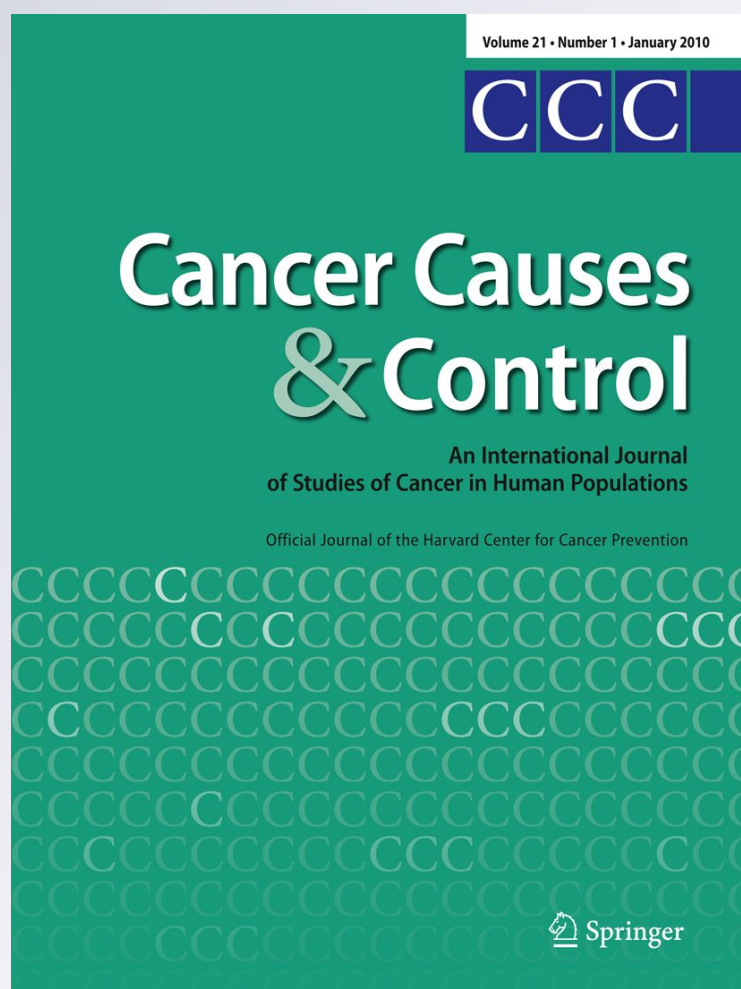
*Smoking and exposure to racial insults  
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Argentina*

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**Cancer Causes & Control**  
An International Journal of Studies of  
Cancer in Human Populations

ISSN 0957-5243

Cancer Causes Control  
DOI 10.1007/s10552-012-9906-0



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# Smoking and exposure to racial insults among multiethnic youth in Jujuy, Argentina

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Received: 11 July 2011 / Accepted: 27 January 2012  
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## Abstract

**Purpose** Exposure to racial insults among youth in Jujuy, Argentina, was examined as a factor associated with smoking behavior.

**Methods** Youth sampled from eighth-grade classes in 27 randomly selected middle schools completed annual surveys in the ninth and tenth grades. Demographics, race/ethnicity (Indigenous/Amazonian, Indigenous/Andean, Indigenous unspecified group, Mixed European-Indigenous, European), cigarette smoking, and other attitudinal and behavioral factors were measured. Exposure to racial insults, measured in the ninth grade, was modeled to predict cigarette smoking in the previous 30 days (defined as current) in the tenth grade conditional on ninth grade smoking.

**Results** Of the 3,122 respondents, 35.5% reported exposure to racial insults and 33.8% were current smokers. Factors associated with racial insults were being male, indigenous language spoken at home, ever and current smoking, smoking in a ceremonial context, exposure to

second-hand smoke at home, number of friends who smoke, having low expectations for the future, low identification with conforming role models, high identification with defiant role models, and depressive symptoms. Reported exposure to racial insults increased the risk of current smoking in the 10th grade among Indigenous Amazonian respondents (OR = 3.8; 95% CI 1.4–10.4) and among the Indigenous-unspecified group (OR = 1.8; 95% CI 1.1–2.8), but not among European or Indigenous Andean youth.

**Conclusions** Exposure to racial insults is commonplace among youth in Jujuy. Evidence of a longitudinal effect of ninth-grade racial insults on tenth-grade smoking rates provides support for an association of racial insults with smoking behavior.

**Keywords** Discrimination · Tobacco use · Adolescents · Latin America · Indigenous

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## Introduction

In South America race and ethnicity have been singled out as enduring determinants of opportunities. Indigenous peoples are the largest disadvantaged group and continue to suffer from a greater incidence of disease and discrimination [1, 2]. In northwest Argentina, the predominant population of Andean or mountain peoples have for millennia adapted to a sedentary, agriculture-based lifestyle. However, Amazonian peoples with a nomadic way of life based on the integrity of their forest environment have had greater difficulty in coping with the encroachment and demands of western development.

Racial prejudice and discrimination have emerged as important health risk factors in a growing number of

studies that document an association with indicators of poor physical and mental health [3–7]. Definitions of racism refer to an organized system that assigns hierarchical status to specific groups and uses this ranking to preferentially allocate societal goods and resources to those who are regarded as inherently superior [8]. In the US context, racism leads to the development of negative attitudes and beliefs toward, and different treatment of, specific groups [9].

Although associations between racial discrimination and health outcomes have been reported in US samples [4, 6, 8, 10], the mechanisms underlying these associations remain unclear. It has been hypothesized that discrimination may lead to negative health outcomes by promoting stress and coping through unhealthy behavior [11]. Several studies have focused on health risk behavior, for example smoking, excessive alcohol consumption, or illicit drug use [12–15]. In cross-sectional studies racial discrimination has been associated with cigarette smoking among immigrant adolescents in the US [16–18], and among adolescents in Johannesburg, South Africa [19]. Among adults, a longitudinal study showed that African Americans experiencing racial discrimination had higher risk of current tobacco use. Other studies using cross sectional data reported positive associations between racism and smoking among adult African Americans [12, 20], ethnic minorities, and Whites in the US [21], and among the Maori in New Zealand [6].

Prevalence of youth smoking in Latin America continues to be among the highest in the world, with about 20% of the youth in the cities of Chile, Colombia, Ecuador, and Argentina currently smoking [22], but data are limited on smoking behavior among indigenous youth [23]. Furthermore, there are no published studies on the effects of racial/ethnic discrimination as determinants of smoking behavior in these populations. This study examines the relationship between exposure to racial insults and smoking behavior, in a longitudinal, multiethnic sample of youth from the Province of Jujuy, Argentina.

## Methods

### Setting

The study was conducted in the province of Jujuy, Argentina, a poor area in the northwest on the border with Bolivia and Chile. The population is diverse, and includes Indigenous populations of the mountain areas (Andean) and of the lowland forests (Amazonian), Europeans predominantly of Spanish background, and individuals of mixed Indigenous-European origin.

### Study procedures

The study methods, which have been described elsewhere [23], are summarized below. A random sample of 27 middle schools was selected from within the three geographic areas of Jujuy: the mountain region; the provincial capital; and the agricultural lowlands. The baseline survey was self-administered in 8th-grade classrooms between June and August of 2004 and follow-up surveys were conducted in 2005 (9th grade) and 2006 (10th grade). Students who completed all three surveys are the focus of this analysis. In follow-up, respondents who dropped out of school or who changed school were interviewed in their homes. The UCSF Committee on Human Rights and an NIH-certified human subjects research board in Buenos Aires based at *Centro de Educación Médica e Investigaciones Clínicas* (CEMIC) approved the research protocol. Passive consent was requested from parents or caretakers and students signed an active consent form that also allowed follow-up contact.

### Questionnaire measures: smoking behavior

The smoking behavior items were adapted and translated from US youth surveys [24] and new items were developed from qualitative research. Current smokers were defined as having smoked at least one puff in the previous 30 days. The subjects were also asked about exposure to second-hand smoke at home and about the number of friends who smoked. To address the use of tobacco in ceremonial contexts among respondents who reported ever smoking, we asked in what place or situation they had first tried smoking and where they felt like smoking the most. Responses that mentioned the *Pachamama* and *Todos Santos* celebrations were categorized as “ceremonial smoking”.

### Exposure variable: perceived discrimination

Racial discrimination was measured by assessing exposure to racial insults commonly used in the study site that denigrate the physical appearance or intellectual capacity of Indigenous individuals. These included items asking whether on the street or in school a respondent had ever been called “*coya tonto*”, “*chaguanco*”, or “*indio cabeza dura*”, or “*boliviano/bolita*”; and whether someone had used the terms “*coya*”, “*chaguanco*”, “*indio*”, or “*boliviano/bolita*” just to bother the respondent. Items were developed through qualitative work with the target population. Youth participating in semi-structured interviews provided information about the situations, locations, and wording used in racial insults. Exposure to racial insults was assessed over the lifetime and each item was coded as having occurred or not.

## Demographics

Respondents reported their sex, date of birth, age, and religion. The geographical location of the school was noted. Low socioeconomic status (SES) was defined as having parents who had not completed elementary school or who were welfare recipients compared with others with higher achievements. Ethnic self-identification questions were derived from previous qualitative work resulting in a list of five ethnic categories: Indigenous, mixed Indigenous and European, European, Arab and Other. If respondents had self-categorized as Indigenous or mixed, in a follow up question they were asked to select from a list of Andean and Amazonian Indigenous groups in the region. We combined youth's responses to the ethnic self-identification questions to create the following race/ethnic categories: European, Indigenous-European mix, Indigenous of unspecified group, Indigenous Andean, Indigenous Amazonian. The Indigenous-unspecified group resulted when youth were not able to identify a specific group (Amazonian or Andean) in the follow up question even though they acknowledged their Indigenous origin. Respondents reported on whether an Indigenous language was spoken at home, even if only a few words, and whether theirs was a two-parent household.

## Attitudinal and behavioral factors

Positive expectations for the future was measured with the following questions that provided answers with response categories of always, almost always, sometimes, almost never, and never: "I think that when I am older I will be able to have all that I need" and "I think that when I am older I will be able to work in what I like". Questions with a similar response structure were used to measure respect for parents "I obey my parents or the people that care for me", parent support "My parents or the people that take care of me understand me", concern for family "I am concerned about the people in my family", and social concern "I am saddened by the fact that there are people who do not have food", "I am saddened by the fact that there are people who do not have a job". Religiosity was measured with a scale ranging from 1 (not important) to 10 (very important). Respondents self identified with role models by choosing from a list of socially conforming and defiant role models. Identification with "athletes" was used as an indicator of a conforming role model. "Villeros" is a negative stereotype of shanty-town dweller youth constructed by mainstream society and was used as an indicator of a defiant role model. To assess concern for body image we asked whether respondents were trying to lose, gain, or maintain their weight, or were not concerned about their weight.

We ascertained the presence of depressive symptoms in the past year on the basis of previous results showing an association with current smoking [23, 25]. Similarly, we used items to measure thrill-seeking orientation [23, 26].

## Data analysis

Standard errors and confidence intervals were estimated via the Taylor series method [27] to accommodate clustering of students within schools. We cross-tabulated racial insults measured in the 9th grade by current smoking measured in the 10th grade. We also cross-tabulated the racial insult measure by smoking behavior factors identified in our previous research [23], including demographic, and attitudinal variables. Explanatory variables assessing stable individual characteristics were assessed in the eighth grade: sex, religion, poverty, ethnicity, region, and Indigenous language spoken in the family. Other explanatory variables describing relatively mutable risk factors were assessed in the ninth grade.

Logistic regression models were fit to estimate the longitudinal effect of exposure to racial insults in the ninth grade on current smoking in the tenth grade, controlling for current smoking in the ninth grade and all covariates. We estimated adjusted odds ratios and 95% confidence intervals. The models tested for two-way interactions of discrimination with ethnicity, sex, region, and low SES. Within the models, any interaction effects with  $p$ -values greater than 0.05 were removed through backward elimination.

## Results

### Participation and exclusions

The 27 participating schools included a total of 4,276 registered eighth-grade students in 2004. Within each geographic stratum participation for the baseline sample was 81.5, 84.3, and 91.5%. For this analysis the sample only included students who were 13–15 years old at baseline and participated in the follow up surveys in which questions about racial insults were included. Ethnic groups with low frequency, Asians, Arabs, Indigenous Mapuche, and a mix of Andean/Amazonian Indigenous were excluded from this analysis leaving a final sample of 3,122. In 2005 and 2006, the ninth and tenth-grade sample sizes equaled 2,955 (94.7%) and 2,787 (89.3%), respectively.

### Descriptive results

The demographic characteristics of ninth-grade respondents were 53.7% girls, 63% age 13 or 14 years, and 24.7%

who fit the low SES definition. The largest proportion self-identified as Andean (43.0%) followed by Indigenous of unspecified group (24.2%), Indigenous-European mix (21.1%), European (7.3%), and Amazonian (4.4%), and 33.6% reported an Indigenous language spoken in the family. The distribution of low SES varied by race/ethnicity with a greater percentage among Amazonian youth (31.8%), followed by Andeans (28.8%), Indigenous of unspecified group (23.2%), Indigenous-European mix (20.1%), and Europeans (10.6%) ( $p < 0.0001$ ). The prevalence of current smokers was 33.8% and was higher among boys (37.2%) than girls (31.0%) ( $p = 0.004$ ).

The Cronbach alpha for the racial insults items was 0.80 for the ninth-grade sample and 0.75 for the tenth-grade sample. Over one-third of respondents (35.5%) reported exposure to racial insults, which did not vary significantly by ethnicity but was significantly higher among respondents who reported an Indigenous language spoken at home (Table 1). The proportion of respondents who reported exposure to racial insults was also significantly higher among boys than girls and among current smokers. Several other variables were significantly associated with racial insults: older age, not having a two-parent household, smoking in ceremonial contexts, exposure to second hand smoke at home and having friends who smoke, having low positive expectations for the future, low levels of social concern, low identification with conforming role models, high identification with defiant role models, and having depressive symptoms.

Carbon monoxide (CO) was measured for a total of 427 participants in 8th grade, corresponding to 11.6% of the total sample. Among the 202 students who reported they were not smokers, only 1 (0.5%) had expired CO values of 10 ppm or more.

#### Multivariate models

Several covariates significantly increased the risk of current smoking (Table 2). Boys and older youth were at higher risk, and likelihood of current smoking was almost twice for Andean respondents as for Europeans (adjusted OR 1.7; 95% CI 1.1–2.5). Although smoking in ceremonial contexts, identification with defiant role models, and having friends who smoked were risk factors, living in the mountain region, having parental support, and identification with conforming role models were significant protective factors. The main effect of racial insults on current smoking ( $p = 0.003$ ) was significantly modified by ethnicity. Amazonian respondents who reported having ever experienced racial insults while in the ninth grade (2006) had almost four times the odds of current smoking in the tenth grade (2007), compared with respondents of this ethnic group who were not exposed to insults (adjusted

OR = 3.8; 95% CI 1.4–10.4). Respondents of the Indigenous-unspecified group who experienced racial insults in the previous wave had relatively lower, but still significant increased, odds of current smoking in the tenth grade (adjusted OR 1.8; 95% CI 1.1–2.8), compared with those of the same group who did not report exposure to insults. A significant interaction effect was also found between living in the mountain region and experiencing discrimination (adjusted OR = 2.9; 1.8–4.9), versus living in the capital city or the lowland region.

#### Discussion

This study suggested that racial/ethnic discrimination is commonplace among youth in this Latin American sample. This analysis provides evidence for a longitudinal effect of ninth-grade racial insults on tenth-grade cigarette smoking (conditional on ninth-grade smoking) among Amazonian and Indigenous-unspecified ethnic groups. Within these groups the effects persisted even after controlling for a range of factors known to be strongly associated with smoking in this population and others [23, 28–31]. Amazonian Indians were the group most affected by perceived discrimination, resulting in a fourfold increase in the risk of current smoking, by far the largest among the variables tested in this study. The effect was also significant for youth of the Indigenous-unidentified group but not among the largest group of Andeans. Amazonian youth also had the highest rates of low SES among all ethnic/race categories, although we did not find evidence of a relationship between low SES and smoking behavior.

These findings emphasize the hierarchical nature of Latin American society and provide an indication of its potential health impact [32]. Indigenous peoples are positioned in contexts of unequal power relations that establish multiple levels of top-down discriminatory practices [33]. Thus, achieving equity in social and health assets will involve overcoming intra and inter-group barriers. Social boundaries have been created, among other means, by rhetoric that devalues the other persons [34]. Amazonian peoples, in particular, are a minority in a society that places them at the bottom of the social stratification system and this may result in increased sensitivity to discrimination. Andeans as the largest ethnic group in Jujuy may actually be more resilient to discrimination and to its association with cigarette smoking. Youth who self-identified as Indigenous but did not recognize a specific group of reference (Andean or Amazonian) may have more difficulties dealing with identity issues because they may not have the support of such a group. Thus, they may be more emotionally vulnerable to racial discrimination. These results are similar to findings in the US showing that racial and

**Table 1** Exposure to racial insults by demographic variables, smoking behavior, and attitudinal factors among 2,955 youth, Jujuy, Argentina, 2006–2007

	Total <i>n</i> 2,955	Racial insults 35.5%	<i>p</i> value
<b>Demographics</b>			
<b>Sex</b>			
Girls	1,603	28.9	<0.001
Boys	1,352	43.3	
<b>Age in years</b>			
13–14	1,862	33.6	0.05
15–17	1,093	38.8	
<b>Region</b>			
Mountain	674	33.1	0.204
Lowlands	1,177	38.6	
Capital city	1,104	33.7	
<b>Religion</b>			
Catholic	2,517	35.8	0.822
Evangelical	324	34.4	
Other	114	33.3	
<b>Low SES</b>			
No	2,209	35.1	0.408
Yes	710	36.7	
<b>Race/ethnicity</b>			
Indigenous—Amazonian	129	40.3	0.500
Indigenous—Andean	1,219	34.3	
Indigenous—unspecified	703	34.3	
Indigenous—European mix	606	37.6	
European	213	34.7	
<b>Indigenous language in family</b>			
No	1,895	33.8	0.040
Yes	954	38.7	
<b>Two-parent household</b>			
No	958	39.2	0.002
Yes	1,991	33.8	
<b>Smoking behavior/exposure</b>			
<b>Current smoking</b>			
No	1,956	32.0	
Yes	978	42.7	<0.001
<b>Ceremonial smoking</b>			
No	2,441	34.5	0.007
Yes	484	40.8	
<b>Second hand smoke at home</b>			
No	766	30.8	<0.001
Yes	2,157	37.2	
<b>Number of friends who smoke</b>			
None	729	30.3	<0.001
1–4	737	33.9	
5+	1,322	40.2	
<b>Attitudinal factors</b>			
<b>Positive expectations for the future</b>			
Never/almost never	195	49.0	<0.001
Sometimes/almost always	2,075	36.2	
Always	680	29.7	

**Table 1** continued

	Total <i>n</i> 2,955	Racial insults 35.5%	<i>p</i> value
Respect for parents			
Never/almost never	197	38.8	0.342
Sometimes/almost always/always	2,743	35.2	
Parental support			
Never/almost never	300	39.3	0.245
Sometimes	648	37.4	
Almost always/always	2,000	34.3	
Concern for family			
Never/almost never	107	35.8	0.937
Sometimes/almost always/always	2,837	35.5	
Social concern			
Never/almost never	173	35.5	0.002
Sometimes/almost always	1,384	39.0	
Always	1,392	32.1	
Identification with conforming role model			
Nothing/almost nothing	2,038	30.7	0.002
A little/some/a lot	867	37.6	
Identification with defiant role model			
Nothing	1,682	31.6	<0.001
Almost nothing/a little	647	41.2	
Some/a lot	573	39.7	
Concern for body image			
Trying to lose or gain weight	981	38.4	0.060
Trying to maintain weight	965	35.3	
Does not worry about weight	953	32.9	
Religiosity			
Low	252	36.8	0.150
Medium	1,414	36.7	
High	1,184	32.9	
Depressive symptoms			
No	1,708	32.9	<0.001
Yes	1,114	39.6	
Thrill seeking orientation			
No	2,439	34.8	0.187
Yes	509	38.5	

All comparisons are by chi-squared test

ethnic discrimination constitutes a significant component of adolescents' daily experiences [3, 35–37] and strengthens the evidence from cross sectional data supporting a significant association of perceived discrimination with smoking [16–19].

Our study is subject to several limitations. Our exposure variable, racial insults, was measured through self-report from respondents. Individual emotional and psychological factors may affect both recollection and the reporting of discrimination events that could lead to underestimation by youth with high self-esteem or overestimation by youth emotionally susceptible to aggressive behavior. Respondents with positive expectations for the future reported

racial insults in a significantly lower proportion than youth with low expectations. Similarly, in bivariate analysis a higher percentage of youth with depressive symptoms reported exposure to racial insults but these variables were controlled for in regression models. Our data on smoking are based on self-reports from students who might under or over-report their behavior, but is the standard used in youth surveys and generally found to be valid and a predictor of future smoking [38]. The CO tests conducted in our study indicate that the incidence of under-reporting of smoking was very low.

These findings are relevant in that they contribute to overcoming the dearth of data on the relationship between



**Table 2** Multivariate logistic regression models to predict current smoking by exposure to racial insults in the previous year among youth, Jujuy, Argentina, 2006–2007

	Current smoking 2007 OR (95% CI)
Discrimination and ethnicity interaction terms	
Racial insults by ethnicity	
Indigenous Amazonian	<b>3.8 (1.4–10.4)</b>
Indigenous Andean	0.8 (0.6–1.2)
Indigenous-unspecified	<b>1.8 (1.1–2.8)</b>
Indigenous European mix	1.2 (0.8–1.8)
European	1.3 (0.7–2.6)
Demographics	
Sex	
Male versus Female	<b>1.5 (1.2–2.0)</b>
Age in years	
15–17 versus 13–14	<b>1.3 (1.0–1.7)</b>
Region	
Mountain versus lowlands	<b>0.5 (0.3–0.7)</b>
Capital city versus lowlands	1.1 (0.7–1.5)
Race/ethnicity	
Amazonian versus European	0.6 (0.2–2.0)
Andean versus European	<b>1.7 (1.1–2.5)</b>
Indigenous-unspecified versus European	1.2 (0.8–1.8)
Indigenous European mix versus European	1.3 (0.8–2.0)
Smoking behavior and exposure	
Current smoking in previous year	
Yes versus No	<b>7.5 (5.7–10.0)</b>
Ceremonial tobacco use	
Yes versus No	<b>1.3 (1.0–1.8)</b>
Number of friends who smoke	
1–4 versus none	<b>1.6 (1.1–2.3)</b>
5+ versus none	<b>2.0 (1.5–2.6)</b>
Attitudinal factors	
Parent support	
Sometimes versus almost never/never	1.1 (0.7–1.8)
Almost always/always versus almost never/never	<b>0.7 (0.5–1.0)</b>
Identification with conforming role model	
A lot/a little versus almost nothing/nothing	<b>0.7 (0.6–0.9)</b>
Identification with defiant role model	
A little/almost nothing versus nothing	<b>1.3 (1.0–1.7)</b>
A lot/some versus nothing	<b>2.1 (1.5–2.9)</b>

Analyses controlled for current smoking in 2006, religion, Indigenous language spoken in the family, low SES, two-parent household, exposure to second-hand smoke, expectations for the future, respect for parents, concern for family, social concern, concern for body image, religiosity, depressive symptoms, and thrill-seeking orientation

racism and health status in Latin America. However, this is an initial step toward expanding the research agenda. On one hand there is need to develop methodological tools. Our discrimination variable for example, measured only one domain, racial insults. New, more comprehensive and locally relevant measures should be developed to include the diverse domains of the racial discrimination experience. Other forms of discrimination, for example gender or class-based, should also be explored. In addition, the results are conducive to addressing a set of new research questions that may include the assessment of new risk factors and mediator variables, particularly in the cultural

domains, examining differences by the characteristics of the receiver and the sender and the context of exposure.

**Acknowledgments** This research was funded by grant no. TW05935 from the Tobacco Research Network Program, Fogarty International Center, National Cancer Institute, National Institute of Drug Abuse, and National Institutes of Health and by grant no. 001726-037 from Research on International Tobacco Control, International Development Research Center, Canada. We thank Dana Nickleach for invaluable help in data analysis, Constanza Almiron for critical support in survey development and data management, Marina Bejarano, Susana Durán y Carina Delgado who administered surveys and supported the research work in Jujuy, and Elvira Gomez, Cambria Garrell, and Cecilia Populus-Eudave for administrative and research support at UCSF.

**Conflict of interest** There is no conflict of interest for any of the authors.

## References

- Perry G, Arias O, Lopez H, Maloney W, Serven L (2006) Poverty reduction and growth: virtuous and vicious circles. Washington, DC
- Hall G (2005) Indigenous peoples poverty and human development in Latin America 1994–2004. Palgrave MacMillan, New York
- Fisher C, Wallace S, Fenton R (2000) Discrimination distress during adolescence. *J Youth Adolesc* 29:279–695
- Borrell L, Jacobs D, Williams D, Pletcher M, Houston T, Kiefe C (2007) Self-reported racial discrimination and substance use in the coronary artery risk development in adults study. *Am J Epidemiol* 166(9):1068–1079
- Cutter G, Burke G, Dyer A, Friedman G, Hilner J, Hughes G et al (1991) Cardiovascular risk factors in young adults. The CARDIA baseline monograph. *Control Clin Trials* 12(1 suppl):1S–77S
- Harris R, Tobias M, Jeffreys M, Waldengrave K, Karlsen S, Nazroo J (2006) Racism and health: the relationship between experience of racial discrimination and health in New Zealand. *Soc Sci Med* 63(6):1428–1441
- Landrine H, Klonoff E (1996) The schedule of racist events: a measure of discrimination and a study of its negative physical and mental health consequences. *J Black Psychol* 22:144–168
- Ahmed A, Mohammed S, Williams D (2007) Racial discrimination and health: pathways and evidence. *Indian J Med Res* 126:318–327
- Krieger N (2008) Does racism harm health? Did child abuse exist before 1962? On explicit questions, critical science, and current controversies: an ecosocial perspective. *Am J Public Health* 98(9 suppl):S20–S25
- Shariff-Marco S, Klassen A, Bowie J (2010) Racial/ethnic differences in self-reported racism and its association with cancer-related health behaviors. *Am J Public Health* 100(2):264–374
- Jackson J, Knight K, Rafferty J (2010) Race and unhealthy behaviors: chronic stress, the HPA axis, and physical and mental health disparities over the life course. *Am J Public Health* 100:933–939
- Landrine H, Klonoff E (2000) Racial discrimination and cigarette smoking among Blacks: findings from two studies. *Ethn Dis* 10(2):195–202
- Martin J, Tuch S, Roman P (2003) Problem drinking patterns among African Americans: the impacts of reports of discrimination, perceptions of prejudice, and “risky” coping strategies. *J Health Soc Behav* 44(3):408–425
- Whitbeck L, Hoyt D, McMorris B, Chen X, Stubben J (2001) Perceived discrimination and early substance abuse among American Indian children. *J Health Soc Behav* 42:405–424
- Whitbeck LB, Chen X, Hoyt D, Adams G (2004) Discrimination, historical loss and enculturation: culturally specific risk and resiliency factors for alcohol abuse among American Indians. *J Stud Alcohol* 65(4):409–418
- Guthrie B, Young A, Williams D, Boyd C, Kintner E (2002) African American girls’ smoking habits and day-to-day experiences with racial discrimination. *Nurs Res* 51(3):183–190
- Tran A, Lee R, Burgess D (2010) Perceived discrimination and substance use in Hispanic/Latino, African-born Black, and Southeast Asian immigrants. *Cultur Divers Ethnic Minor Psychol* 16(2):226–236
- Okamoto J, Ritt-Olson A, Soto D, Baezconde-Garbanati L, Unger J (2009) Perceived discrimination and substance use among Latino adolescents. *Am J Health Behav* 33(6):718–727
- Brook J, Morojele N, Brook D, Zhang C, Whiteman M (2006) Personal, interpersonal, and cultural predictors of stages of cigarette smoking among adolescents in Johannesburg, South Africa. *Tob Control* 15(suppl 1):i48–i53
- Borrell L, Jacobs D, Williams D, Pletcher M, Houston T, Kiefe C (2010) Self-reported racial discrimination and substance use in the coronary artery risk development in adults study. *Am J Epidemiol* 171(3–4):307–312
- Landrine H, Klonoff E, Corral I, Fernandez S, Roesch S (2006) Conceptualizing and measuring ethnic discrimination in health research. *J Behav Med* 29(1)
- Page R, Danielson M (2011) Multi-country, cross-national comparison of youth tobacco use: findings from global school-based health surveys. *Addict Behav* 36(5):470–478
- Alderete E, Kaplan C, Gregorich S, Mejia R, Perez-Stable E (2009) Smoking behavior and ethnicity in Jujuy, Argentina: evidence from a low income youth sample. *Subst Use Misuse* 44(5):642–646
- Global Youth Tobacco Survey Collaborative Group (2002) Tobacco use among youth: a cross country comparison. *Tob Control* 11(3):252–270
- Benjet C BG, Medina-Mora ME, Fleiz C, Blanco J, Zambrano J, Rojas E, Ramirez M (2007) Prevalence and socio-demographic correlates of drug use among adolescents: results from the Mexican adolescent mental health survey risk. *Addiction* 102: 1261–1268
- Vega ZR, Warheit GJ, Apospori E, Gil AG (1993) Risk factors for early adolescent drug use in four ethnic and racial groups. *Am J Public Health* 83:185–189
- SAS (2006) SAS Institute Inc. SAS Institute Inc, Cary, NC
- Koval J, Pederson L, Chan S (2004) Psychosocial variables in a cohort of students in grades 8 and 11: a comparison of current and never smokers. *Prev Med* 39(5):1017–1025
- Van Den Bree M, Whitmer M, Pickworth W (2004) Predictors of smoking development in a population-based sample of adolescents: a prospective study. *J Adolesc Health* 35(3):172–181
- Biglan A, Duncan T, Ary D, Smolkowski K (1995) Peer and parental influences on adolescent tobacco use. *J Behav Med* 18(4):315–330
- Conrad K, Flay B, Hill D (1992) Why children start smoking cigarettes: predictors of onset. *Br J Addict* 87(12):1711–1724
- Psacharopoulos G, Patrinos H (1994) Indigenous people and poverty in Latin America: an empirical analysis. World Bank Washington DC, Washington DC
- Albo X (1994) Ethnic violence: the case of Bolivia. United Nations University Press, New York
- Santos-Granero F (2002) Boundaries are made to be crossed: the magic and politics of the long-lasting Amazon/Andes divide. *Identities Global Stud Cult Power* 9(4):545–569
- Rosenbloom S, Way N (2004) Experiences of discrimination among African American, Asian American, and Latino adolescents in an urban high school. *Youth Soc* 35:420–451
- Way N (1998) *Everyday courage: the lives and stories of urban teenagers*. NYU Press, New York
- Greene M, Way N, Pahl K (2006) Trajectories of perceived adult and peer discrimination among Black, Latino, and Asian American adolescents: patterns and psychological correlates. *Dev Psychol* 42(2):218–236
- Willis T, Cleary S (1997) The validity of self-reports of smoking: analyses by race/ethnicity in a school sample of urban adolescents. *Am J Public Health* 1(1):87