

# **HHS Public Access**

Author manuscript

Dev Psychol. Author manuscript; available in PMC 2016 February 12.

Published in final edited form as:

Dev Psychol. 2015 January; 51(1): 87-100. doi:10.1037/a0038432.

# Latino Adolescents' Perceived Discrimination in Online and Offline Settings: An Examination of Cultural Risk and Protective Factors

# Adriana J. Umaña-Taylor,

T. Denny Sanford School of Social and Family Dynamics, Arizona State University

# Brendesha M. Tynes,

Rossier School of Education, University of Southern California

# Russell B. Toomey,

Human Development and Family Studies, Kent State University

# David R. Williams, and

Department of Social & Behavioral Sciences, Harvard University School of Public Health

# Kimberly J. Mitchell

Crimes Against Children Research Center, University of New Hampshire

# **Abstract**

Guided by a risk and resilience framework, the current study examined the associations between Latino adolescents' (n = 219;  $M_{\rm age}$  14.35; SD = 1.75) perceptions of ethnic discrimination in multiple settings (e.g., online, school) and several domains of adjustment (e.g., mental health, academic), and tested whether developmentally salient cultural assets (i.e., ethnic identity) directly promoted youth adjustment or moderated the negative impact of discrimination on adjustment. Each of the 3 ethnic identity components (i.e., exploration, resolution, affirmation) demonstrated evidence of promoting positive outcomes among Latino youth; furthermore, there was some evidence that the promotive effects of affirmation and resolution were significantly stronger for older versus younger adolescents. In addition, with the exception of experiences with discrimination from adults outside of the school setting, there was evidence of ethnic identity interacting with each type of discrimination to predict Latino adolescents' self-esteem, depressive symptoms, and externalizing problems. Findings suggest directions for future research and identify potential targets for intervention that may prove fruitful in programming efforts with Latino adolescents.

#### **Keywords**

ethnic identity; racia	l identity; risk; res	ilience; discriminat	ion

Latinos represent the largest ethnic minority group in the United States (U.S. Census, 2008), and the potential impact of the Latino population on U.S. society was most recently evident in the 2012 presidential election, when Latinos were considered by many media outlets to be the driving force behind the reelection of President Barack Obama (e.g., Rodriguez, 2012; González & Nowicki, 2012). The Latino population is relatively young (i.e., Latino median age is 27.5 vs. 37.3 for the total U.S. population; U.S. Census, 2011), and Latino children will make up 39% of U.S. children in 2050 (U.S. Census, 2008); thus, it is imperative to understand paths to positive youth development among this segment of society. One factor that can threaten the positive development of Latino youth is ethnic discrimination (Romero, Martinez, & Carvajal, 2007). In a recent survey, 70% of foreign-born Latinos and 49% of U.S.-born Latinos indicated that ethnic discrimination was a major problem that prevented Latinos' success in the United States (Lopez, Morin, & Taylor, 2010). A resilience framework, however, suggests that assets in a child's life can reduce or eliminate the negative impact of risk (Masten & Coatsworth, 1998). Thus, the current study examined the associations between Latino adolescents' perceived ethnic discrimination in multiple settings (e.g., online, school) and several domains of adjustment (e.g., mental health, academic), and tested whether a developmentally salient cultural asset (i.e., ethnic identity) directly promoted youth adjustment or buffered the impact of discrimination on adjustment.

# **Latino Adolescents' Ethnic Discrimination and Adjustment**

Studies have documented the negative impact of perceived ethnic discrimination on Latino adolescents' self-esteem and internalizing problems (Smokowski & Bacallao, 2007; Zeiders, Umaña-Taylor, & Derlan, 2013), their academic adjustment (DeGarmo & Martinez, 2006), and their engagement in risk behaviors (Okamoto, Ritt-Olson, Soto, Baezconde-Garbanati, & Unger, 2009; Romero et al., 2007). Although most have focused on measures of global ethnic discrimination that capture experiences across settings (e.g., Torres & Ong, 2010; Umaña-Taylor & Updegraff, 2007), a few have examined experiences with peers versus adults (e.g., Greene, Way, & Pahl, 2006) or in academic versus public settings (e.g., Torres, Yznaga, & Moore, 2011). Findings suggest that the association between discrimination and adjustment varies based on the setting and/or the perpetrator. Similarly, some note that peer discrimination may have more significant effects on psychological adjustment and peer relationships, whereas adult discrimination may be more influential for academic outcomes (Rosenbloom & Way, 2004). To more accurately tailor prevention programs, a systematic examination of perceived discrimination in specific contexts and on specific indicators of adjustment is needed.

# The Importance of Including the Online Setting

In addition to work examining discrimination in multiple contexts and specifically among Latino populations (e.g., Fisher, Wallace, & Fenton, 2000; Greene et al., 2006; Benner & Graham, 2011; Torres & Ong, 2010), findings also underscore the importance of discrimination in online settings (Tynes, Giang, Williams & Thompson, 2008; Tynes, Reynolds, & Greenfield, 2004; Tynes, Rose, & Williams, 2010). For example, Tynes and colleagues (2008) found that online experiences uniquely contribute to depressive symptoms and anxiety among high school students, over and above experiences offline. These findings

point to the importance of examining online discrimination, and help distinguish online and offline discrimination.

Early research argued that perceived anonymity online may heighten the likelihood of individual expression of intergroup biases (Glaser & Kahn, 2005). Recent work suggests that social media is more "nonymous," and revealing one's identity can make individuals more susceptible to discrimination (Kahn, Spencer, & Glaser, 2013). Given the perception of privacy online, perpetrators can feel as though they are in a large crowd of others with a low likelihood of identification, which arguably leads to less self-monitoring when expressing beliefs (Kahn et al., 2013). Also, the more permanent nature of Internet interaction distinguishes offline and online experiences (Palfrey & Gasser, 2008). Face-to-face experiences potentially fade from memory, but online targets may experience the same incident repeatedly; if unreported and not removed, the text or image can remain on a given site in perpetuity. Targets and witnesses may revisit the site, save it to their devices, retweet (resend messages on the microblogging site Twitter), or repost. Repeated viewing of the text, image, and video can be common in online settings (Malamuth, Linz, & Yao, 2005) and may increase opportunities for rumination.

Although online settings have become increasingly salient for youth in the past decade, research with Latino youth is limited. Reports show, however, that Latino youth spend an average of 4.5 more hours with media than White youth (13:00 vs. 8:36), including using computers and mobile devices (Rideout, Lauricella, & Wartella, 2011). Also, 88% of Latino youth aged 12–17 have Internet access, 26% go online several times a day (Pew Research Center, 2012a, 2012b), and 83% use social network sites (Lenhart et al., 2011). Internet access can vary based on age and nativity, as noted in a national survey of Latino youth 16–19, where 59% of foreign-born versus 92% of U.S.-born youth had Internet access (Livingston, 2010). Nevertheless, a significant number of Latino adolescents are cyberbullied or harassed online (e.g., Jones, Mitchell, & Finkelhor, 2012) and this is linked to maladjustment (Tynes, Umaña-Taylor, Rose, Lin, & Anderson, 2012).

# **Cultural Assets Serving a Protective and/or Promotive Function**

A risk and resilience framework (Masten & Coatsworth, 1998; Rutter, 1987) directs our attention to considering the resources in Latino youths' lives that can protect them from negative experiences of discrimination. Fergus and Zimmerman (2005) draw a meaningful distinction between resources (external to the individual, such as parental support) and assets (residing within the individual, such as coping skills) that can protect against risk.

Zimmerman et al. (2013) note the value of matching the asset or resource to the risk factor, such as examining ethnic identity as an asset that can help ethnic minority youth overcome culturally informed risk (e.g., ethnic discrimination). The current study tested three culturally informed assets (ethnic identity exploration, resolution, and affirmation) as promotive (i.e., positive associations with adjustment across all levels of risk; Masten, Cutuli, Herbers, & Reed, 2009; also referred to as a compensatory model; Fergus & Zimmerman, 2005) and/or protective (i.e., reduce the negative effects of risk on adjustment; Masten et al., 2009) factors that could lead to positive outcomes in the context of risk. In the current study, we operationalize culture as one's ethnic heritage.

# **Ethnic Identity During Adolescence**

Ethnic identity is the component of one's overall identity focused on the values, attitudes, and behaviors of one's ethnic heritage culture (Umaña-Taylor, 2011), and becomes particularly salient during adolescence as youth increasingly reflect on the meaning of their ethnicity and the role it will play in their lives (Umaña-Taylor et al., 2014). Individuals' understanding of ethnic identity is believed to become more sophisticated from early to late adolescence (Umaña-Taylor et al., 2014); furthermore, adolescence is uniquely characterized as a period in which the consequences of one's ethnic identity are particularly pronounced, given increases in group consciousness during this developmental period (Quintana, 1994). Thus, considering the developmental context in tandem with a risk and resilience framework, it is expected that the promotive benefits of ethnic identity on adolescents' adjustment would be significantly more pronounced in late versus early adolescence. Informed by Phinney's (1993) conceptualization of ethnic identity, the developmental components of ethnic identity exploration and resolution reflect the degree to which individuals have explored their ethnic background and the extent to which they have a clear sense of the meaning of ethnicity in their lives, respectively. On the other hand, the more affective component of *ethnic identity affirmation* (guided by social identity theory; Tajfel & Turner, 1986) captures one's positive feelings about one's ethnic group (Umaña-Taylor, Yazedjian, & Bámaca-Gómez, 2004).

# **Ethnic Identity and Protective Mechanisms**

Social and developmental changes that characterize adolescence make these indices of ethnic identity particularly salient and relevant to the adjustment of Latino adolescents, and specifically regarding protection against the negative effects of discrimination. For instance, increases in autonomy and independence that exemplify adolescence expose youth to new social groups and extrafamilial experiences that can result in experiencing new and possibly divergent views and opinions regarding ethnicity (Phinney, 1990). This exposure increases from early to late adolescence and, as such, the developmental processes of exploration and resolution are believed to become increasingly salient from early to late adolescence (Umaña-Taylor et al., 2014). Also during adolescence, individuals become more focused on others' perceptions of themselves and of groups to which they belong and these perceptions factor into their general sense of self and can have consequences for adjustment (Sellers, Copeland-Linder, Martin, & Lewis, 2006; Umaña-Taylor et al., 2014).

In terms of specific mechanisms of resilience, it has been theorized that exploration may bring protection because, when faced with derogatory experiences related to their ethnicity, adolescents who have explored their ethnicity have a more nuanced understanding of their ethnic group membership, which helps them evaluate the basis for the discriminatory comment or act (e.g., founded in truth vs. in racist ideologies; Neblett, Rivas-Drake, & Umaña-Taylor, 2012). Resolution, or having a clearer sense of the meaning that one attaches to one's ethnic group membership, provides adolescents with a sense of confidence that reinforces their convictions regarding the meaning ethnicity has for them and, in fact, has been linked with greater use of more proactive strategies for coping with discrimination (e.g., talking to the perpetrator to work things out) among Latino adolescents (Umaña-Taylor, Vargas-Chanes, Garcia, & Gonzales-Backen, 2008). Thus, resolution may confer

protection via access to more adaptive coping strategies. This is consistent with Erikson's (1968) theorizing in which greater clarity and a sense of commitment regarding one's identity provides a sense of connectedness, which promotes adjustment. With respect to ethnic identity affirmation, consistent with social identity theory (Tajfel & Turner, 1986), feeling positively about one's social group facilitates maintaining a positive sense of self in the face of threat against one's group. This notion of cultural assets offsetting the negative impact of risk from discrimination is consistent with theoretical work advanced with African American youth (i.e., Spencer, Fegley, & Harpalani, 2003) and ethnic minority youth more broadly (Neblett et al., 2012).

Prior work provides some empirical support for these ideas but, because studies have not uniformly examined the same contexts of discrimination, the same populations, or the same indicators of adjustment, the findings are difficult to synthesize and appear mixed. For example, there is some evidence that affirmation can reduce the negative impact of peer discrimination on self-esteem (Greene et al., 2006) and the negative impact of general discrimination on self-esteem (Romero & Roberts, 2003), thereby serving a protective function with respect to these specific stressor-outcome combinations. However, for exploration and resolution, in a study of Latino, Black, and Asian American adolescents, exploration and resolution (composite score) exacerbated the negative impact of peer discrimination on adolescents' self-esteem (e.g., Greene et al., 2006); whereas, in a second study with Latino adults, resolution reduced the negative effect of covert discrimination on psychological distress (Torres et al., 2011). The current study expands on prior work by focusing specifically on one ethnic population (e.g., findings could be mixed due to pooled ethnic samples in prior work; Umaña-Taylor, 2011), examining each unique ethnic identity component as an individual predictor and moderator (e.g., lack of specificity could explain mixed findings; Rivas-Drake et al., 2014), and examining multiple types of discrimination and protective factors simultaneously to enable an understanding of potential compensatory effects (see Fergus & Zimmerman, 2005) of the dimensions of ethnic identity.

# **The Current Study**

Within a multivariate framework, we first examined a main effects model whereby five types of discrimination and three cultural assets were examined as predictors of five indicators of youth adjustment. We included assessments of: *externalizing problems* and *academic functioning*, as each has been identified as a key indicator of a broader construct of adolescent problem behavior (Ary et al., 1999); *depressive symptoms*, given scholars' recognition that internalizing problems are a serious health concern among adolescents (Graber, 2004); and *self-esteem* as a global indicator of self-concept, given that it has been identified as a fundamental individual characteristic consistently linked with youth competence (Masten & Coatsworth, 1998). There is significant value in testing multiple indices of adjustment, as a focus on just one could lead to an erroneous conclusion that perceived discrimination does not impact adjustment. Furthermore, youth can demonstrate adjustment or maladjustment in numerous domains, each of which have their own long-term consequences for developmental outcomes (Rivas-Drake et al., 2014).

We examined multiple types of discrimination (including settings) to understand the experiences that were most detrimental for youth adjustment, which is critical to help identify priorities for intervention. We tested discrimination from peers versus adults in school given the salience of the school context during adolescence. We also included individual and vicarious experiences with online racial discrimination (ORD; Tynes et al., 2008), and experiences with adults outside of school to capture more global experiences (e.g., Fisher et al., 2000).

Given the dearth of research, our main goal was to provide preliminary evidence regarding the types of discriminatory experiences that could be most consequential for Latino adolescents' adjustment. At the bivariate level, we expected each type of discrimination to be associated with greater externalizing behaviors and depressive symptoms, and lower self-esteem and academic adjustment. With all risk and protective factors examined simultaneously, however, we expected: (a) a positive association between individual ORD and depressive symptoms (Tynes et al., 2008); (b) a negative association between discrimination from adults in school and academic adjustment (Rosenbloom & Way, 2004); (c) a negative association between peer discrimination and self-esteem (Greene et al., 2006); (d) a positive association between ethnic identity affirmation and self-esteem (Rivas-Drake et al., 2014); and (e) a negative association between ethnic identity resolution and externalizing problems (Umaña-Taylor et al., 2008). Furthermore, the promotive effects of ethnic identity were expected to be stronger among older versus younger adolescents (Umaña-Taylor et al., 2014); our analyses with developmental period as a moderator of the links between cultural risk and adjustment were exploratory.

Prior research has found that older adolescents perceive more ethnic discrimination than younger adolescents (e.g., Fisher et al., 2000), but few studies have examined if the effects of discrimination on adjustment vary by developmental period. Older adolescents' more formal reasoning and abilities to think abstractly may lead to a clearer understanding of discrimination (Seaton, Caldwell, Sellers, & Jackson, 2010) and perhaps a greater awareness of the broader impact discrimination can have on their future prospects, which could result in discrimination having a stronger negative impact on older versus younger adolescents. On the other hand, the effects of discrimination could be more pronounced among younger adolescents because, given their younger age, they are less likely to have been exposed to ethnic socialization (Hughes et al., 2006) that could help them cope with ethnically based derogatory experiences. Findings have emerged in support of both of these competing ideas. One study found stronger effects of discrimination on depressive symptoms among older versus younger Black Caribbean adolescent females (Seaton et al., 2010); yet among Chinese American adolescents, discrimination in early adolescence, but not later adolescence, predicted academic adjustment (Benner & Kim, 2009). Thus, our analyses were exploratory.

Finally, we examined cultural assets as moderators of cultural risk factors on adjustment. First, based on work noting the protective benefits of affirmation for youths' psychological adjustment and general well-being (Romero & Roberts, 2003), we expected high affirmation to reduce the negative impact of all sources of discrimination on self-esteem and depressive symptoms. Second, we expected high resolution to reduce the negative impact of all sources

of discrimination on externalizing problems, given prior links between resolution and proactive coping (Umaña-Taylor et al., 2008); youth with better coping may be less likely to engage in deviant behaviors as a method to cope with discrimination. We expected exploration to function in a similar manner for academic outcomes, and particularly in response to discrimination by adults in school (Rosenbloom & Way, 2004). As adolescents better understand the basis of ethnic-based academic stereotypes, discrimination from adults in school is expected to have less of a negative impact on academic adjustment among those reporting high exploration relative to those with an unexamined ethnic identity. Given our limited sample size, we were unable to examine further moderation by developmental period, and instead included this as a control.

# Method

# Sample

Data were from a larger study focused on the risk and protective factors associated with the online experiences of an ethnically and racially diverse sample of sixth through 12th graders. Participants were recruited from a total of 12 public schools (i.e., two K-8 schools, three sixth-eighth grade middle schools, one sixth-12th school, and six ninth-12th high schools). The Latino population at each school ranged from .2% to 82%. Parental consent forms were returned by 49.8% of students. The current study focused specifically on Latino youth (n = 233). Fourteen of these youth were dropped from analyses after preliminary results revealed that they were multivariate outliers. Thus, the analytic sample included 219 Latino youth, who ranged in age from 10.99 to 18.31 years (M = 14.35; SD = 1.75) and reported that their parents had at least a high school education, on average (M = 2.11, SD =0.81; 1 = elementary, 2 = high school, 3 = college, 4 = graduate school). Among the 219 participants, 13% attended schools with a Latino student body of 15% or less, 13% attended a school that had a 30% Latino student body, 24% attended a school with a 58% Latino student body, and 50% attended a school with an 82% Latino student body. Furthermore, 68% of the sample was in middle school (sixth-eighth) and 32% of the sample consisted of high school students (ninth-12th). In addition, a majority of adolescents who reported their country of birth were born in the United States (i.e., 65.8%). Given the focus of the larger study on online experiences, participants were asked to indicate whether they accessed the Internet from a home computer (91%), a school computer (95%), and a cell phone (68%); based on their responses, only a few students did not have computer access from home, and a majority had cellular phone access to the Internet. Year in school ranged from 6 to 12.

#### **Procedure**

Research assistants distributed informational flyers and consent forms (in English and Spanish) to students after a brief 10-min presentation at schools. Students were told that the study focused on learning more about students' experiences with the Internet. At an agreed-upon date with school administrators, the research team returned to schools to administer surveys via a web link to students who obtained parental consent. Surveys were programmed and administered using surveymonkey.com, and survey administration took place in school computer labs (or onsite labs created by the research team by bringing laptops into a classroom). Participants provided online assent at the beginning of the survey,

and answered questions addressing topics such as general Internet use, discrimination and victimization experiences, cultural orientation, and psychosocial functioning. On average, students completed surveys in 45 minutes. Research assistants were present to inform students of confidentiality, answer questions, and troubleshoot any technical difficulties. Each participant received a \$15 gift certificate, and schools received a stipend. All procedures were approved by the Institutional Review Board.

#### **Measures**

**Discrimination offline**—Perceived discrimination in offline settings was assessed using the shortened Perceived Discrimination by Adults/Peers Scale (Way, 1997). Items capture experiences with Students in School (i.e., Peers; five items; e.g., "How often do you feel that other students in school think that you won't know the answer in class because of your race or ethnicity"); Adults in School (five items, e.g., "How often do adults in school treat you like you're NOT smart because of your race or ethnicity?"); and Adults You Don't Know Outside of School (five items, e.g., "How often do you feel that adults you don't know outside of school (e.g., shop owners, police, neighbors) treat you with less respect because of your race or ethnicity?"). Responses were scored on a 5-point Likert scale (0 = *Never* to 4 = *All the time*), and a mean was calculated for each context; higher scores indicated greater perceived discrimination. With a separate sample of Latino students (ages 14–16 years), Cronbach's alpha was above .80 for all subscales (Greene et al., 2006). Alphas were .85 (Peers), .91 (Adults in School), and .93 (Adults Outside of School) in this study.

**Discrimination online**—Students' experiences with discrimination based on race and ethnicity in online settings was assessed using two subscales of the Online Victimization Scale (Tynes et al., 2010). The 4-item Individual Online Racial Discrimination (i.e., Individual ORD) subscale captures derogatory text, images, and symbols that directly target an individual because of his or her race or ethnicity (e.g., "People have said mean or rude things about me because of my race or ethnic group online"). The Vicarious Online Racial Discrimination (i.e., Vicarious ORD) subscale consists of three items (e.g., "People have cracked jokes about people of my race or ethnic group online" and "I have witnessed people saying mean or rude things about another person's ethnic group online") that assess experiences directed at same-race and cross-race peers and adults witnessed online by the respondent. Responses range from 0 = Never to 5 = Every day. In the current study, Cronbach's alphas for the subscales were .64 (Individual ORD) and .84 (Vicarious ORD).

**Ethnic identity**—The Ethnic Identity Scale (Umaña-Taylor et al., 2004) was used to assess ethnic identity exploration (seven items, e.g., "I have attended events that have helped me learn more about my ethnicity"), ethnic identity resolution (four items, e.g., "I have a clear sense of what my ethnicity means to me"), and ethnic identity affirmation (six items; e.g., "My feelings about my ethnicity are mostly negative"—reverse scored). Items were scored on a 4-point Likert scale, with end points of 1 (*Does not describe me at all*) to 4 (*Describes me very well*); higher scores in each subscale indicated higher levels of the construct. The measure has been used with Latino adolescent samples, has demonstrated strong internal consistency, and findings have provided support for its validity and reliability (e.g., Umaña-

Taylor et al., 2008). In the current study, Cronbach's alphas were .79 (exploration), .85 (resolution), and .78 (affirmation).

**Depressive symptoms**—Depressive symptoms were assessed with the Center for Epidemiologic Studies Depression Scale-12 (Radloff, 1977; Roberts & Sobhan, 1992). Items (e.g., "I had crying spells") were scored on a 4-point Likert scale from 0 = Rarely or none of the time to 3 = Most or all of the time, with higher scores indicating the presence of more symptomology. In a different study with Latino adolescents (ages 12–17 years), the 12-item version demonstrated a Cronbach's alpha of .68 (Roberts & Sobhan, 1992). Alpha with the current sample was .68.

**Self-esteem**—Adolescents' self-esteem was measured using the 10-item Rosenberg Self Esteem Scale (Rosenberg, 1965). Items (e.g., "On the whole, I am satisfied with myself") were scored on a 4-point Likert scale ranging from 0 = *Strongly disagree* to 3 = *Strongly Agree*; higher scores indicated higher self-esteem. Cronbach's alpha was .83 in the current study.

**Externalizing behaviors**—Adolescents' externalizing behaviors were assessed with the rule breaking and aggressive behavior subscales of the Youth Self Report of the Child Behavior Checklist (Achenbach, 1991). Participants rated how true each item was of their behavior within the past 6 months, using a 3-point response scale ranging from 0 = Not True to 2 = Very True or Often True. Items captured delinquent rule breaking (14 items, e.g., "I break rules at home, school, or elsewhere") and aggressive behaviors (16 items, e.g., "I get in many fights"). Cronbach's alpha for the composite scale was .90 in the current study.

**Academic adjustment**—Academic adjustment was assessed with two measures of achievement motivation: academic values and academic efficacy (Eccles, 1983; Ryan, 2001; Midgley et al., 1996). Four items from Eccles', 1983 achievement motivation measure were utilized to assess adolescents' values related to school (e.g., "The work we do in school is important") using a 5-point Likert scale (1 = *Not at all true* to 5 = *Always true*). Academic efficacy was assessed with five items (e.g., "I can do even the hardest schoolwork if I try") from the Patterns of Adaptive Learning Scales (Midgley et al., 1996), scored on the same scale. Cronbach's alphas in the current study were .89 (academic values) and .92 (academic efficacy).

**Control variables**—Two control variables were included in all analyses. First, because prior work has found that discrimination and psychological adjustment may be more strongly related for youth who are relatively more acculturated to mainstream society (Umaña-Taylor & Updegraff, 2007), all analyses controlled for adolescent acculturation using a 4-item version of the non-Hispanic subscale from the Bidemensional Acculturation Scale (Marín & Gamba, 1996). Items (e.g., How often do you speak English?) were scored on a 4-point Likert scale ( $1 = Almost\ never$  to  $4 = Almost\ always$ ) and capture language use and media preferences. Cronbach's alpha was .77. In addition, analyses controlled for gender (0 = male, 1 = female) because the effects of discrimination on outcomes have varied for Latino boys and girls in prior studies (e.g., Alfaro, Umaña-Taylor, Gonzales-Backen, Bámaca, & Zeiders, 2009).

# **Analytic Approach**

The analytic approach consisted of two steps. In the first step, risk factors (i.e., five forms of perceived ethnic discrimination) and cultural assets (i.e., ethnic identity exploration, resolution, affirmation) were examined simultaneously in a structural equation model (SEM) in Mplus (Muthén & Muthén, 2010) as predictors of five indicators of adolescent adjustment (i.e., externalizing problems, depressive symptoms, self-esteem, academic values, and academic efficacy). Examining risk factors and cultural assets simultaneously in SEM allows for conclusions about the unique contributions (i.e., specificity) of each predictor's associations with the five adjustment indicators. Further, interactions between adolescents' year in school and each of the risk factors and cultural assets were included in the model as predictors of the five adjustment indicators to examine for potential developmental differences in associations. In the second step, interactions between each risk factor and each cultural asset were examined as predictors of the five indicators of adolescent adjustment in an SEM framework to assess the protective nature of each cultural asset. The interactions for each cultural asset were examined in three separate models (i.e., modeling only five interactions, rather than 15, in a single model). Prior to testing interactions in both steps, all variables were mean-centered to avoid problems with multicollinearity. Significant interactions and their respective simple slopes were probed at the mean and at one standard deviation above and below the mean of the moderator (Preacher, Curran, & Bauer, 2006). Because of the number of predictors present in each model for Step 2, the two protective assets that were not the focus of the interaction analyses for a particular model were not entered as covariates, but post hoc analyses using linear regression in Mplus, which allowed for these terms to be modeled, revealed that the findings were consistent across analytic procedures (results are available upon request).

In both steps, model fit was evaluated with four standard indices: the chi-square test, the Comparative Fit Index (CFI), the Root Mean Square Error of Approximation (RMSEA), and the Standardized Root Mean Square Residual (SRMR). Model fit is considered to be good (acceptable) if the CFI is equal to or greater than .95 (.90), and if the RMSEA and SRMR are equal to or less than .05 (.08) (Kline, 2011). A post hoc power analysis indicated that we had 74% power for identifying a good-fitting model for Goal 1 with a sample size of 219 and 41 degrees of freedom, and 46% power for identifying a good-fitting model for Goal 2 (Preacher & Coffman, 2006). Full-information maximum likelihood (FIML) was used to account for missing data in all models (e.g., Schlomer, Bauman, & Card, 2010). Gender (0 = Male, 1 = Female) and acculturation were controls in all models; year in school (range = 6– 12) was included as a control in models testing the second step. Furthermore, because students were nested within schools, we examined intraclass correlations; none of the covariance parameter estimates for the intercepts were significant for any study variables, suggesting that the between-school variance was negligible and that a multilevel modeling approach was not necessary. Means, standard deviations, and bivariate correlations for study variables are shown in Table 1.

# Results

#### **Goal 1: Examination of Direct Associations**

First, all risk factors and cultural assets, as well as their interactions with year in school, were simultaneously entered into a structural equation model predicting the five indicators of adjustment (see Figure 1). The model demonstrated good fit:  $\chi^2(df = 41) = 67.70$ , p = ...005; CFI = 0.96; RMSEA = .055 (90% C.I.: .030-.077); SRMR = .03. Controlling for gender and acculturation, higher levels of individual ORD were associated with higher levels of externalizing problems ( $\beta = .29$ , p < .01) and depressive symptoms ( $\beta = .28$ , p < .01) 01). Vicarious ORD was associated with lower levels of depressive symptoms ( $\beta = -.21$ , p < .05). Neither peer discrimination nor discrimination by adults at school was associated with any of the indicators of adjustment after accounting for other risk factors and cultural assets; yet, discrimination by nonschool adults was positively associated with externalizing problems ( $\beta = .22, p < .05$ ) and negatively associated with self-esteem ( $\beta = -.24, p < .01$ ). As for cultural assets, affirmation was positively associated with self-esteem ( $\beta = .22$ , p < .01) and academic values ( $\beta = .18$ , p < .05), and was negatively associated with externalizing problems ( $\beta = -.14$ , p < .05). Exploration was positively associated with academic values ( $\beta$ = .23, p < .01). Similarly, resolution was positively associated with academic efficacy ( $\beta = ...$ 23, p < .01), academic values ( $\beta = .19$ , p < .05), and self-esteem ( $\beta = .16$ , p < .05), and was negatively associated with depressive symptoms ( $\beta = -.20$ , p < .01) and externalizing problems ( $\beta = -.20, p < .05$ ).

Finally, five interactions between the risk factors and cultural assets and year in school were significantly predictive of outcomes in the model. First, an interaction between affirmation and year in school predicting externalizing problems emerged (see Figure 2a; b = -.35, p < .05), such that only older students experienced a negative association between affirmation and externalizing problems, t = -2.77, p < .01. Similarly, the interaction between resolution and year in school predicting depressive symptoms (see Figure 2b; b = -.14, p < .05) suggested that only older students experienced a negative association between resolution and depressive symptoms, t = -3.25, p < .001. A third interaction between individual ORD and year in school predicting externalizing problems (see Figure 2c; b = -.44, p < .05) suggested that a positive association between individual ORD and externalizing problems only occurred for younger students, t = 2.09, p < .05. Similarly, the fourth significant interaction between peer discrimination and year in school predicting self-esteem (see Figure 2d; b = ...14, p < .05), suggested that increased risk between these constructs is only present for younger students, t = -2.02, p < .05. Finally, an interaction between discrimination by adults at school and year in school predicting self-esteem emerged (b = -.13, p < .05); however, neither of the simple slopes were significant.

## Goal 2: Examining Interactions Between Cultural Assets and Risk Factors

**Ethnic identity affirmation**—Four interactions emerged with affirmation predicting indicators of adjustment, and the model had excellent fit:  $\chi^2(df=18)$  26.84, p=.08; CFI = 0.98; RMSEA = .047 (90% C.I.: .00–.083); SRMR = .013. First, students with higher levels of affirmation were buffered against the association between peer discrimination and externalizing problems (see Figure 3a; b=-.89, p<.05), such that there was only a

significant positive association among those with low levels affirmation, t = 2.02, p < .05. Second, there was an interaction between affirmation and vicarious ORD predicting depressive symptoms (see Figure 3b; b = -.23, p < .01). In this case, students with higher levels of affirmation demonstrated lower levels of depressive symptoms as experiences with vicarious ORD were higher, t = 3.15, p < .01, suggesting a protective enhancing effect whereby adjustment is augmented with increased risk. Third, there was an interaction between affirmation and discrimination by school adults predicting self-esteem (see Figure 3c; b = -.42, p < .05). In this case, students with higher affirmation actually experienced a negative association between discrimination and self-esteem, t = -2.35, p < .05, suggesting a protective but reactive effect whereby the protective factor confers advantages, but less so when risk is high. Finally, similar to the finding for vicarious ORD and depressive systems, described above, students with higher affirmation demonstrated higher levels of self-esteem as they reported more experiences with vicarious ORD (see Figure 3d; b = .28, p < .05), again suggesting that adjustment was augmented with increased risk for those who scored high on the protective factor, t = 2.42, p < .05.

Ethnic identity exploration—Two interactions emerged between exploration and risk factors in predicting adjustment, and the model had good fit:  $\chi^2(df = 18)$  35.95, p = .01; CFI = 0.97; RMSEA = .067 (90% C.I.: .034–.10); SRMR .014. First, students with higher exploration were buffered against the positive association between individual ORD and externalizing problems (see Figure 4a; b = -1.08, p < .05); a significant positive association emerged only among those with low exploration, t = 2.85, p < .01. Second, there was an interaction between exploration and discrimination by school adults predicting depressive symptoms (see Figure 4b; b = .27, p < .05); students with higher exploration experienced a positive association between discrimination and depressive symptoms, t = 2.15, p < .05.

Ethnic identity resolution—Three additional interactions emerged when resolution was examined as a moderator, and the model had good fit:  $\chi^2(df=18)$  35.18, p < .01; CFI = 0.97; RMSEA = .066 (90% C.I.: .032–.098); SRMR = .014. First, resolution buffered the positive association between vicarious ORD and depressive symptoms (see Figure 5a; b = -.11, p < .05). In this case, students with higher resolution experienced a negative association between vicarious ORD and depressive symptoms, t = -2.69, p < .01. Second, higher levels of resolution buffered the association between peer discrimination and externalizing problems (see Figure 5b; b = -.85, p < .05), such that those with lower levels of resolution experienced a positive association between these two constructs, t = 3.30, p < .001 and this association was not significant for those with higher levels of resolution. Finally, and consistent with findings for affirmation, those with higher resolution actually experienced a negative association between discrimination from school adults and self-esteem (see Figure 5c; b = -.35, p < .01; t = -2.39, p - .05), and this association was not significant among students with lower resolution.

# Discussion

Perceived ethnic discrimination is a significant risk factor for Latino adolescents' adjustment (e.g., Benner & Graham, 2011; DeGarmo & Martinez, 2006; Smokowski & Bacallao, 2007), and cultural assets such as ethnic identity are believed to promote adjustment and facilitate

positive outcomes in the face of risk (Neblett et al., 2012). The current study provided a more nuanced understanding of the specific mechanisms of risk and protection involved in these associations among early to late Latino adolescents.

# Main Effects Model: Salient Risk and Promotive Factors Across Early to Late Adolescence

**Risk**—Findings from the main effects model identified multiple sources of discrimination as deleterious to adolescents' adjustment, even after accounting for other risk factors and cultural assets. First, as adolescents perceived greater individual ORD, they also reported significantly higher depressive symptoms, and this was consistent across early to late adolescence. This replicated prior work with a pooled multiethnic sample of high school students, in which individual experiences with ORD were associated with psychological maladjustment after accounting for the negative impact of offline discrimination experiences (Tynes et al., 2008); our findings extended this association to early adolescence. Because Latino youth are at high risk for poorer mental health (Roberts, Roberts, & Chen, 1997), these findings identify individual ORD as a risk factor that warrants further examination, as it could provide valuable information for prevention programming focused on Latino youths' mental health.

Individual ORD also was positively associated with adolescents' externalizing problems; however, this association was moderated by year in school, such that individual ORD was linked to externalizing problems only among younger adolescents, not older adolescents. A similar pattern also emerged for experiences with discrimination from peers in school such that this risk factor was associated with lower self-esteem, but only among younger adolescents. It is possible that younger adolescents have been relatively unexposed to ethnic socialization experiences (Hughes et al., 2006) and this limited exposure may make them more vulnerable to ethnic-based derogatory experiences relative to their older counterparts whose parents may have already broached the topic of ethnic bias. These findings underscore the need for research that examines how the links between cultural risk factors and adolescents' adjustment vary by developmental period and, further, examine the specific differences across developmental periods that may explain this variability (e.g., exposure to ethnic socialization, cognitive abilities).

Across age groups, discrimination from adults outside of school emerged as a significant risk factor for youths' externalizing problems and self-esteem. Findings for self-esteem are consistent with Greene et al. (2006), in which discrimination by adults predicted lower self-esteem among high school students (including Latinos). The negative impact on externalizing problems, however, has not been identified in prior research and highlights the need to consider behavioral outcomes in the context of this source of discrimination, especially because perceived discrimination by adults increases significantly during adolescence (Greene et al., 2006).

**Promotive**—The findings demonstrating negative effects of discrimination on depressive symptoms, externalizing problems, and self-esteem also offered support for a compensatory model because all three cultural assets emerged as significant predictors of better adjustment after accounting for the negative impact of risk (see Fergus & Zimmerman, 2005). For

instance, although individual ORD and discrimination from adults outside of school significantly predicted externalizing problems, ethnic identity affirmation and resolution each simultaneously emerged as promotive factors such that higher affirmation and resolution were each associated with fewer externalizing problems. Thus, affirmation and resolution still offer benefits to youth with respect to externalizing problems despite the negative impact of these sources of discrimination on adolescents' externalizing problems. Similarly, after accounting for the negative impact of discrimination from adults outside of school on youths' self-esteem, affirmation was still positively associated with self-esteem. Given our cross-sectional design, however, future work will need to carefully examine the direction of effects.

With respect to academic adjustment, several sources of discrimination were linked with academic adjustment at the bivariate level, but when simultaneously examined with the cultural assets, no risk factors significantly predicted academic values or efficacy, while resolution, exploration, and affirmation each emerged as positively associated with academic values, and resolution also emerged as positively linked to academic efficacy. Put differently, no additional variance in the indicators of academic adjustment is explained by any source of discrimination after accounting for the variance explained by the three cultural assets. This underscores the promotive function of ethnic identity and suggests that more examined, positive, and confident ethnic identities may be relatively more informative for Latino adolescents' academic values and efficacy than experiences with discrimination in various settings. This finding is critical, given Latino youths' risk for academic maladjustment (DeGarmo & Martinez, 2006).

With respect to cultural assets functioning in a promotive fashion with nonacademic indicators of adjustment, greater affirmation was associated with higher self-esteem and lower externalizing problems; and higher resolution was associated with lower externalizing problems, fewer depressive symptoms, and higher self-esteem. Together, these findings are consistent with social identity (Tajfel & Turner, 1986) and ego identity (Erikson, 1968) theories, which suggest that positive feelings about one's membership in a social group (i.e., social identity) and a greater clarity and sense of commitment regarding one's identity that is achieved via a period of exploration (i.e., ego identity) may lead to positive adjustment. Nevertheless, in addressing the second goal of the study it became evident that the interface of *specific* risk factors and cultural assets provides a more nuanced understanding of how cultural assets may inform adjustment.

# Cultural Assets as Protective or Risk-Enhancing Factors: Variability by Source of Threat

Our findings revealed nine separate instances of moderation by an ethnic identity component in the links between risk and adjustment, with each cultural asset emerging as a moderator of at least two associations between risk factors and adjustment. The overall pattern suggested that the type of moderation that emerged depended on the source of discrimination.

**Peer discrimination and individual ORD—**Findings indicated that greater perceived peer discrimination in school was associated with greater externalizing problems among

youth with low ethnic identity resolution (Figure 4b) and affirmation (Figure 2a); when youth reported high levels of each cultural asset, peer discrimination and youth externalizing were unrelated. As noted in prior work with Latino youth, resolution has been associated with adolescents' use of proactive strategies for coping with discrimination (Umaña-Taylor et al., 2008). Thus, upon experiencing discrimination from peers, youth with high levels of resolution may cope with more adaptive behaviors, rather than engaging in rule-breaking or other externalizing behaviors as a method to cope with the negative experiences of discrimination. Similarly, youth who feel more positively about their ethnic group may be more compelled to present their group in a positive light and, thus, less likely to turn to problem behaviors in an effort to cope with cultural stressors (Umaña-Taylor, Updegraff, & Gonzales-Backen, 2011). Discrimination by peers can be particularly detrimental during adolescence given the importance placed on peer relationships during this period (Greene et al., 2006); thus, identifying cultural assets that could potentially eliminate the negative impact that this type of discrimination on externalizing problems is critical, especially given Latino youths' high risk for engagement in risk behaviors during adolescence (Romero et al., 2007).

Interestingly, a similar protective association emerged for exploration in relation to individual ORD and externalizing problems (Figure 3a). Specifically, individual ORD and externalizing problems were unrelated among those with high exploration; however, for youth with low exploration, higher individual ORD was associated with greater externalizing problems. This finding is unique in identifying an association between individual ORD and externalizing problems, as prior work has focused exclusively on the mental health implications of ORD (e.g., Tynes et al., 2012); the current study identifies individual ORD as a risk for an additional indicator of adjustment (i.e., externalizing problems), particularly for youth who have a less examined ethnic identity. The three associations described thus far reflect protective-stabilizing functions, whereby the presence of the protective factor results in stability in the outcome despite increases in the risk factor (see Luthar, Cicchetti, & Becker, 2000). As youth feel more positively about their ethnicity, have a stronger sense of confidence in that aspect of their identity, and have explored their ethnic background, their relatively more examined and positively oriented ethnic identity may make them less likely to turn to deviant behaviors when faced with ethnic-related stress, perhaps because such a reaction would reflect negatively on their ethnic group.

Vicarious ORD—With respect to vicarious ORD, affirmation and resolution each served a protective-enhancing function, whereby competence (or adjustment) is augmented as risk increases (Luthar et al., 2000). Our findings indicated that adolescents who scored more highly on these two dimensions of ethnic identity demonstrated lower depressive symptoms when they reported greater experiences with vicarious discrimination in online settings (Figures 2a and 4a). Furthermore, adolescents who reported higher affirmation also demonstrated higher self-esteem when they reported greater experiences with vicarious ORD (Figure 2d). As described by Luthar and colleagues (2000), this pattern emerges when youth are engaging with the stressor in a manner that actually augments their competence or adjustment when the stressor is present. It is possible that the vicarious nature of these experiences may make it easier for youth to discuss these experiences with parents or

mentors (e.g., easier to raise the topic for discussion if the conversation is about something one witnessed happening to others, rather than an experience that targeted the individual), and such discussions may actually result in better psychological adjustment; however, this protection is only evident among youth who have a clear sense of their ethnicity (i.e., high resolution) and feel positively about their ethnic group. For those who score low on these indicators of ethnic identity, the enhanced protective function is not evident.

Discrimination from adults in the school setting—Turning to experiences with discrimination from adults in the school setting, the current study identified three instances in which cultural assets served a risk-enhancing function, and these all emerged in the context of discrimination by adults in school. Specifically, the negative impact of discrimination by adults in school was evident only among those with higher exploration, resolution, and affirmation; for exploration, the risk-enhancing association was seen in relation to depressive symptoms, while for resolution and affirmation the risk-enhancing association emerged for self-esteem. In each case, discrimination by adults in school was not significantly associated with the outcome variable when adolescents reported low exploration, resolution, or affirmation, respectively.

There appears to be something unique about experiencing discrimination from this source, as the risk-enhancing nature of ethnic identity only emerged in the context of discrimination by adults in school. It is possible that ethnic identity serves a risk-enhancing function when there is a significant power differential between adolescents and the perceived perpetrator. With adults in the school setting, for example, perceiving discrimination when one is more strongly connected to one's ethnic group may lead the discrimination to be perceived as a greater threat (relative to other sources), given the control that adults in school (e.g., teachers, administrators) have over the adolescent in that setting. Thus, the stronger attachment to one's group may actually exacerbate the negative effect because of an adolescent's heightened awareness that a school adult discriminates (and views negatively) his or her social group, to which he or she feels a strong connection. As noted by DeGarmo and Forgatch (2002) in discussing the identity salience and distress hypothesis, to the degree that one's identity is more important to one's sense of self, experiences that are inconsistent with one's beliefs about that identity will threaten that identity and thereby promote psychological distress. Thus, as adolescents feel more positively about their ethnic group membership, report that they have done more to explore their ethnic background, and report a stronger sense of confidence in their ethnic identity, the threats that they experience at the hand of authority figures in a developmentally salient setting (i.e., school) may be particularly harmful for their psychological adjustment and general sense of self. These ideas are speculative, given our cross-sectional design.

# **Limitations and Directions for Future Research**

Although this study makes important contributions toward understanding the relative impact of online discrimination on Latino adolescents' adjustment, there are several limitations to acknowledge. The larger study was not focused exclusively on Latinos; thus, there was limited information regarding immigration history, and the Latino analytic sample was small, which precluded examining moderation by key demographic characteristics. Future

work will benefit from direct examination of the variability that exists within Latinos. For example, given nativity differences within Latino youth regarding access to the Internet (Livingston, 2010), it is possible that experiences with discrimination in online settings are more salient to U.S.-born youth.

In addition to considering variability within the Latino population, due to the cross-sectional and nonexperimental nature of the study, we can only speculate about the direction of effects based on our theory-driven hypotheses. Furthermore, our modest sample size, coupled with the complexity of our model, precluded us from testing whether the protective nature of cultural assets varied by developmental period. For instance, the protective function may be most strongly evident among those with a more sophisticated understanding of ethnicity (which is only possible with increases in social and cognitive maturity that accompany middle to late adolescence). Thus, there is a critical need for research on ethnic identity to examine multiple pathways to adjustment across developmental periods. Finally, a couple of measures had relatively lower internal consistency (i.e., individual ORD = .64; CES-D = .68) that, combined with the relatively smaller sample size, reduced statistical power by introducing measurement error. These design limitations provide important considerations for future research.

In closing, despite its limitations, the current study advances the field in three important ways. First, findings highlight the compensatory effects that ethnic identity affirmation, exploration, and resolution offer for various indices of adolescent adjustment (and especially for academic adjustment) in the context of experiences with ethnic-based threat, and suggest that the promotive benefits of ethnic identity may become stronger as youth progress through adolescence. Second, to our knowledge, this study is the first to examine the negative impact of discrimination in online settings specifically among *Latino* adolescents, and to examine how online discrimination is linked to multiple outcomes while accounting for other experiences of discrimination during adolescence. Finally, findings identified multiple potential mechanisms of risk and resilience when discrimination was perceived in online and offline settings, and provide researchers with important new directions to explore with larger samples in which variability by developmental period can be more systematically examined. Because discrimination can undermine successful developmental and academic adjustment (Garcia Coll et al., 1996), it is critical to have a more comprehensive understanding of the impact of discrimination across settings and the cultural assets that may protect Latino youth from the negative impact of these risks. The current study provides important insights in this regard.

# **Acknowledgments**

This work was supported by the Eunice Kennedy Shriver National Institute of Child Health & Human Development of the National Institutes of Health under Award R01HD061584 (Brendesha M. Tynes, PI). The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

## References

Achenbach, TM. Integrative guide for the 1991 CBCL/4–18, YSR, and TRF profiles. Burlington, VT: University of Vermont; 1991.

Alfaro EA, Umaña-Taylor AJ, Gonzales-Backen M, Bámaca MY, Zeiders K. Latino adolescents' academic success: The role of discrimination, academic motivation, and gender. Journal of Adolescence. 2009; 32:941–962. http://dx.doi.org/10.1016/j.adolescence. 2008.08.007. [PubMed: 18973937]

- Ary DV, Duncan TE, Biglan A, Metzler CW, Noell JW, Smolkowski K. Development of adolescent problem behavior. Journal of Abnormal Child Psychology. 1999; 27:141–150. http://dx.doi.org/10.1023/A:1021963531607. [PubMed: 10400060]
- Benner AD, Graham S. Latino adolescents' experiences of discrimination across the first 2 years of high school: Correlates and influences on educational outcomes. Child Development. 2011; 82:508–519. http://dx.doi.org/10.1111/j.1467-8624.2010.01524.x. [PubMed: 21410910]
- Benner AD, Kim SY. Experiences of discrimination among Chinese American adolescents and the consequences for socioemotional and academic development. Developmental Psychology. 2009; 45:1682–1694. http://dx.doi.org/10.1037/a0016119. [PubMed: 19899924]
- DeGarmo DS, Forgatch MS. Identity salience as a moderator of psychological and marital distress in stepfather families. Social Psychology Quarterly. 2002; 65:266–284. http://dx.doi.org/10.2307/3090123.
- DeGarmo DS, Martinez CR Jr. A culturally informed model of academic well-being for Latino youth: The importance of discriminatory experiences and social support. Family Relations. 2006; 55:267–278. http://dx.doi.org/10.1111/j.1741-3729.2006.00401.x. [PubMed: 19554210]
- Eccles, J. Expectancies, values and academic behaviors. In: Spence, JT., editor. The development of achievement motivation. Greenwich, CT: JAI; 1983. p. 283-331.
- Erikson, EH. Identity: Youth and crisis. New York, NY: Norton; 1968.
- Fergus S, Zimmerman MA. Adolescent resilience: A framework for understanding healthy development in the face of risk. Annual Review of Public Health. 2005; 26:399–419. http://dx.doi.org/10.1146/annurev.publhealth.26.021304.144357.
- Fisher CB, Wallace SA, Fenton RE. Discrimination distress during adolescence. Journal of Youth and Adolescence. 2000; 29:679–695. http://dx.doi.org/10.1023/A:1026455906512.
- García Coll C, Lamberty G, Jenkins R, McAdoo HP, Crnic K, Wasik BH, Vázquez García H. An integrative model for the study of developmental competencies in minority children. Child Development. 1996; 67:1891–1914. http://dx.doi.org/10.2307/1131600. [PubMed: 9022222]
- Glaser, J.; Kahn, KB. Prejudice, discrimination, and the internet. In: Amichai-Hamburger, Y., editor. The social net: Human behavior in cyberspace. New York, NY: Oxford University Press; 2005. p. 247-274.
- González, D.; Nowicki, D. Latino votes key to Obama's victory. The Republic/azcentral.com. 2012 Nov 7. Retrieved from http://www.azcentral.com/news/politics/free/20121107latino-votes-key-obamas-victory.html
- Graber, JA. Internalizing problems during adolescence. Handbook of adolescent psychology. 2nd. Lerner, RM.; Steinberg, L., editors. Hoboken, NJ: Wiley; 2004. p. 587-626.
- Greene ML, Way N, Pahl K. Trajectories of perceived adult and peer discrimination among Black, Latino, and Asian American adolescents: Patterns and psychological correlates. Developmental Psychology. 2006; 42:218–236. http://dx.doi.org/10.1037/0012-1649.42.2.218. [PubMed: 16569162]
- Hughes D, Rodriguez J, Smith EP, Johnson DJ, Stevenson HC, Spicer P. Parents' ethnic-racial socialization practices: A review of research and directions for future study. Developmental Psychology. 2006; 42:747–770. http://dx.doi.org/10.1037/0012-1649.42.5.747. [PubMed: 16953684]
- Jones LM, Mitchell KJ, Finkelhor D. Trends in youth internet victimization: Findings from three youth internet safety surveys 2000–2010. Journal of Adolescent Health. 2012; 50:179–186. http://dx.doi.org/10.1016/j.jadohealth.2011.09.015. [PubMed: 22265114]
- Kahn, KB.; Spencer, K.; Glaser, J. Online prejudice and discrimination: From dating to hating. In: Amichai-Hamburger, Y., editor. The social net: Understanding our online behavior. 2nd. New York, NY: Oxford University Press; 2013. p. 201-219.http://dx.doi.org/10.1093/acprof:oso/9780199639540.003.0011

Kline, RB. Principles and practice of structural equation modeling. 3rd. New York, NY: Guilford Press; 2011.

- Lenhart, A.; Madden, M.; Smith, A.; Purcell, K.; Zickuhr, K.; Rainie, L. Teens, kindness and cruelty on social network sites. Pew Internet Research. 2011. Retrieved from http://www.pewinternet.org/Reports/2011/Teens-and-social-media/Part-1.aspx?view=all
- Livingston, G. The Latino digital divide: The native born vs foreign born. Pew Hispanic Center. 2010. Retrieved from http://www.pewhispanic.org/files/reports/123.pdf
- Lopez, MH.; Morin, R.; Taylor, P. Illegal immigration backlash worries, divides Latinos. Washington, DC: Pew Research Center; 2010. Pew Hispanic Center ReportRetrieved from www.pewhispanic.org
- Luthar SS, Cicchetti D, Becker B. The construct of resilience: A critical evaluation and guidelines for future work. Child Development. 2000; 71:543–562. http://dx.doi.org/10.1111/1467-8624.00164. [PubMed: 10953923]
- Malamuth, N.; Linz, D.; Yao, M. Aggression and the internet. In: Amichai-Hamburger, Y., editor. The social net: Human behavior in cyberspace. New York, NY: Oxford University Press; 2005. p. 163-190.
- Marín G, Gamba RJ. A new measurement of acculturation for Hispanics: The bidimensional acculturation scale for Hispanics (BAS). Hispanic Journal of Behavioral Sciences. 1996; 18:297–316. http://dx.doi.org/10.1177/07399863960183002.
- Masten AS, Coatsworth JD. The development of competence in favorable and unfavorable environments. Lessons from research on successful children. American Psychologist. 1998; 53:205–220. http://dx.doi.org/10.1037/0003-066X.53.2.205. [PubMed: 9491748]
- Masten, AS.; Cutuli, JJ.; Herbers, JE.; Reed, MJ. Resilience in development. In: Lopez, SJ.; Snyder, CR., editors. Oxford handbook of positive psychology. 2nd. New York, NY: Oxford University Press; 2009. p. 117-131.
- Midgley, C.; Maehr, ML.; Hicks, L.; Roeser, R.; Urdan, T.; Anderman, EM.; Kaplan, A. Patterns of Adaptive Learning Survey (PALS) manual. Ann Arbor, MI: University of Michigan; 1996.
- Muthén, LK.; Muthén, BO. MPlus user's guide. 6th. Los Angeles, CA: Muthén & Muthén; 2010.
- Neblett EW Jr, Rivas-Drake D, Umaña-Taylor AJ. The promise of racial and ethnic protective factors in promoting ethnic minority youth development. Child Development Perspectives. 2012; 6:295–303. http://dx.doi.org/10.1111/j.1750-8606.2012.00239.x.
- Okamoto J, Ritt-Olson A, Soto D, Baezconde-Garbanati L, Unger JB. Perceived discrimination and substance use among Latino adolescents. American Journal of Health Behavior. 2009; 33:718–727. http://dx.doi.org/10.5993/AJHB.33.6.9. [PubMed: 19320620]
- Palfrey, J.; Gasser, U. Born digital: Understanding the first generation of digital natives. New York, NY: Basic Books; 2008.
- Pew Research Center. Trend data (teens). 2012a. Retrieved from http://www.pewinternet.org/Trend-Data-%28Teens%29/Whos-Online.aspx
- Pew Research Center. Millennials: A portrait of Generation Next. 2012b. Retrieved from http://pewresearch.org/millennials/teen-internet-use-graphic.php
- Phinney JS. Ethnic identity in adolescents and adults: Review of research. Psychological Bulletin. 1990; 108:499–514. http://dx.doi.org/10.1037/0033-2909.108.3.499. [PubMed: 2270238]
- Phinney, JS. A three-stage model of ethnic identity development in adolescence. In: Bernal, MEP.; Knight, GP., editors. Ethnic identity: Formation and transmission among Hispanics and other minorities. Albany, NY: SUNY Press; 1993. p. 61-79.
- Preacher, KJ.; Coffman, DL. Computing power and minimum sample size for RMSEA [Computer software]. 2006 May. Retrieved from http://quantpsy.org/
- Preacher KJ, Curran PJ, Bauer DJ. Computational tools for probing interaction in multiple linear regression, multilevel modeling, and latent curve analysis. Journal of Educational and Behavioral Statistics. 2006; 31:437–448. http://dx.doi.org/10.3102/10769986031004437.
- Quintana SM. A model of ethnic perspective-taking ability applied to Mexican-American children and youth. International Journal of Intercultural Relations. 1994; 18:419–448. http://dx.doi.org/10.1016/0147-1767(94)90016-7.

Radloff LS. The CES-D Scale: A self-report depression scale for research in the general population. Applied Psychological Measurement. 1977; 1:385–401. http://dx.doi.org/10.1177/014662167700100306.

- Rideout, V.; Lauricella, A.; Wartella, E. Children, media and race: Media use among White, Black, Hispanic and Asian American children. Evanston, IL: Center on Media and Human Development, Northwestern University; 2011. Retrieved from http://web5.soc.northwestern.edu/cmhd/wp-content/uploads/2011/06/SOCconfReportSingleFinal-1.pdf
- Rivas-Drake D, Seaton EK, Markstrom C, Quintana S, Syed M, Lee RM, the Ethnic and Racial Identity in the 21st Century Study Group. Ethnic and racial identity in adolescence: Implications for psychosocial, academic, and health outcomes. Child Development. 2014; 85:40–57. http://dx.doi.org/10.1111/cdev.12200. [PubMed: 24490891]
- Roberts RE, Roberts CR, Chen YR. Ethnocultural differences in prevalence of adolescent depression. American Journal of Community Psychology. 1997; 25:95–110. http://dx.doi.org/10.1023/A: 1024649925737. [PubMed: 9231998]
- Roberts RE, Sobhan M. Symptoms of depression in adolescence: A comparison of Anglo, African, and Hispanic Americans. Journal of Youth and Adolescence. 1992; 21:639–651. http://dx.doi.org/10.1007/BF01538736. [PubMed: 24264167]
- Rodriguez, CY. Latino vote key to Obama's re-election. CNN Politics. 2012 Nov 9. Retrieved from http://www.cnn.com/2012/11/09/politics/latino-vote-key-election/index.html
- Romero AJ, Martinez D, Carvajal SC. Bicultural stress and adolescent risk behaviors in a community sample of Latinos and non-Latino European Americans. Ethnicity & Health. 2007; 12:443–463. http://dx.doi.org/10.1080/13557850701616854. [PubMed: 17978943]
- Romero AJ, Roberts RE. The impact of multiple dimensions of ethnic identity on discrimination and adolescents' self-esteem. Journal of Applied Social Psychology. 2003; 33:2288–2305. http://dx.doi.org/10.1111/j.1559-1816.2003.tb01885.x.
- Rosenberg, M. Society and the adolescent self-image. Princeton, NJ: Princeton University Press; 1965.
- Rosenbloom SR, Way N. Experiences of discrimination among African American, Asian American, and Latino adolescents in an urban high school. Youth & Society. 2004; 35:420–451. http://dx.doi.org/10.1177/0044118X03261479.
- Rutter M. Psychosocial resilience and protective mechanisms. American Journal of Orthopsychiatry. 1987; 57:316–331. http://dx.doi.org/10.1111/j.1939-0025.1987.tb03541.x. [PubMed: 3303954]
- Ryan AM. The peer group as a context for the development of young adolescent motivation and achievement. Child Development. 2001; 72:1135–1150. http://dx.doi.org/10.1111/1467-8624.00338. [PubMed: 11480938]
- Schlomer GL, Bauman S, Card NA. Best practices for missing data management in counseling psychology. Journal of Counseling Psychology. 2010; 57:1–10. http://dx.doi.org/10.1037/a0018082. [PubMed: 21133556]
- Seaton EK, Caldwell CH, Sellers RM, Jackson JS. An intersectional approach for understanding perceived discrimination and psychological well-being among African American and Caribbean Black youth. Developmental Psychology. 2010; 46:1372–1379. http://dx.doi.org/10.1037/a0019869. [PubMed: 20822246]
- Sellers RM, Copeland-Linder N, Martin PP, Lewis RH. Racial identity matters: The relationship between racial discrimination and psychological functioning in African American adolescents. Journal of Research on Adolescence. 2006; 16:187–216. http://dx.doi.org/10.1111/j. 1532-7795.2006.00128.x.
- Smokowski PR, Bacallao ML. Acculturation, internalizing mental health symptoms, and self-esteem: Cultural experiences of Latino adolescents in North Carolina. Child Psychiatry and Human Development. 2007; 37:273–292. http://dx.doi.org/10.1007/s10578-006-0035-4. [PubMed: 17103301]
- Spencer MB, Fegley SG, Harpalani V. A theoretical and empirical examination of identity as coping: Linking coping resources to the self processes of African American youth. Applied Developmental Science. 2003; 7:181–188. http://dx.doi.org/10.1207/S1532480XADS0703\_9.
- Tajfel, H.; Turner, J. The social identity theory of intergroup behavior. In: Austin, W.; Worchel, S., editors. Psychology of intergroup relations. 2nd. Chicago, IL: Nelson-Hall; 1986. p. 7-24.

Torres L, Ong AD. A daily diary investigation of Latino ethnic identity, discrimination, and depression. Cultural Diversity and Ethnic Minority Psychology. 2010; 16:561–568. http://dx.doi.org/10.1037/a0020652. [PubMed: 21058819]

- Torres L, Yznaga SD, Moore KM. Discrimination and Latino psychological distress: The moderating role of ethnic identity exploration and commitment. American Journal of Orthopsychiatry. 2011; 81:526–534. http://dx.doi.org/10.1111/j.1939-0025.2011.01117.x. [PubMed: 21977938]
- Tynes BM, Giang MT, Williams DR, Thompson GN. Online racial discrimination and psychological adjustment among adolescents. Journal of Adolescent Health. 2008; 43:565–569. http://dx.doi.org/10.1016/j.jadohealth.2008.08.021. [PubMed: 19027644]
- Tynes B, Reynolds L, Greenfield PM. Adolescence, race and ethnicity on the internet: A comparison of discourse in monitored and unmonitored chat rooms. Journal of Applied Developmental Psychology. 2004; 25:667–684. http://dx.doi.org/10.1016/j.appdev.2004.09.003.
- Tynes BM, Rose CA, Williams DR. The development and validation of the Online Victimization Scale for adolescents. Cyberpsychology: Journal of Psychosocial Research of Cyberspace. 2010; 4(2) article 1. Retrieved from http://cyberpsychology.eu/view.php?cisloclanku=2010112901&article=1.
- Tynes BM, Umaña-Taylor AJ, Rose CA, Lin J, Anderson CJ. Online racial discrimination and the protective function of ethnic identity and self-esteem for African American adolescents. Developmental Psychology. 2012; 48:343–355. http://dx.doi.org/10.1037/a0027032. [PubMed: 22369340]
- Umaña-Taylor, AJ. Ethnic identity. In: Schwartz, SJ.; Luyckx, K.; Vignoles, VL., editors. Handbook of identity theory and research. New York, NY: Springer; 2011. p. 791-809.http://dx.doi.org/ 10.1007/978-1-4419-7988-9\_33
- Umaña-Taylor AJ, Quintana SM, Lee RM, Cross WE Jr, Rivas-Drake D, Schwartz SJ, Ethnic and Racial Identity in the 21st Century Study Group. Ethnic and racial identity during adolescence and into young adulthood: An integrated conceptualization. Child Development. 2014; 85:21–39. http://dx.doi.org/10.1111/cdev.12196. [PubMed: 24490890]
- Umaña-Taylor AJ, Updegraff K. Latino adolescents' mental health: Exploring the interrelations among discrimination, ethnic identity, cultural orientation, self-esteem, and depressive symptoms. Journal of Adolescence. 2007; 30:549–567. http://dx.doi.org/10.1016/j.adolescence.2006.08.002. [PubMed: 17056105]
- Umaña-Taylor AJ, Updegraff KA, Gonzales-Backen MA. Mexican-origin adolescent mothers' stressors and psychosocial functioning: Examining ethnic identity affirmation and familism as moderators. Journal of Youth and Adolescence. 2011; 40:140–157. http://dx.doi.org/10.1007/s10964-010-9511-z. [PubMed: 20148359]
- Umaña-Taylor AJ, Vargas-Chanes D, Garcia CD, Gonzales-Backen M. An examination of Latino adolescents' ethnic identity, coping with discrimination, and self-esteem. The Journal of Early Adolescence. 2008; 28:16–50. http://dx.doi.org/10.1177/0272431607308666.
- Umaña-Taylor AJ, Yazedjian A, Bámaca-Gómez MY. Developing the Ethnic Identity Scale using Eriksonian and social identity perspectives. Identity: An International Journal of Theory and Research. 2004; 4:9–38. http://dx.doi.org/10.1207/S1532706XID0401\_2.
- U.S. Census. An older and more diverse nation by midcentury. Washington, DC: U.S. Census Bureau; 2008. CB08-123, U.S Census Newsroom brief
- U.S. Census. Median age by sex. 2011 American Community Survey 1-year estimates. 2011. Retrieved from http://factfinder2.census.gov
- Way N. Adult and peer discrimination measure. 1997 Unpublished document.
- Zeiders KH, Umaña-Taylor AJ, Derlan CL. Trajectories of depressive symptoms and self-esteem in Latino youths: Examining the role of gender and perceived discrimination. Developmental Psychology. 2013; 49:951–963. http://dx.doi.org/10.1037/a0028866. [PubMed: 22686175]
- Zimmerman MA, Stoddard SA, Eisman AB, Caldwell CH, Aiyer SM, Miller A. Adolescent resilience: Promotive factors that inform prevention. Child Development Perspectives. 2013; 7:215–220. http://dx.doi.org/10.1111/cdep.12042.

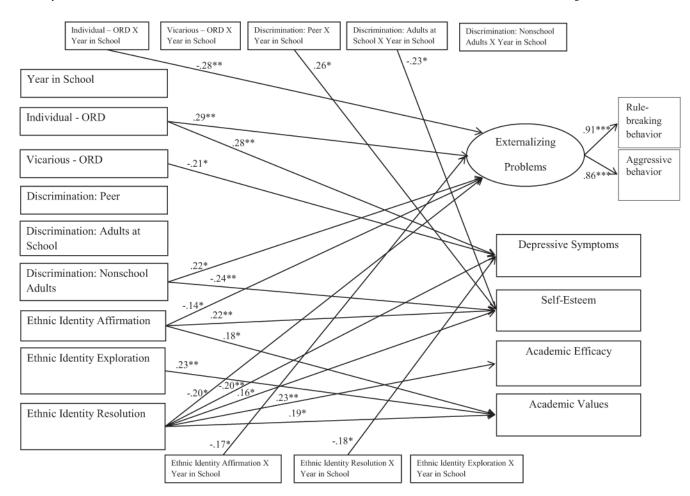


Figure 1. Main Effects Structural Equation Model. Standardized estimates are shown. Nonsignificant paths and control variables (i.e., gender, acculturation) are not shown for ease of illustration. \*p < .05. \*\*p < .01. \*\*\*p < .001.

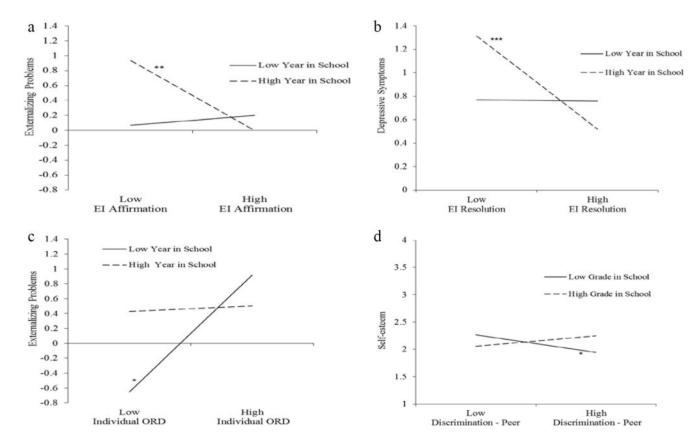


Figure 2. Year in school as a moderator of the associations between (a) EI affirmation and externalizing problems, (b) EI resolution and depressive symptoms, (c) individual ORD and externalizing problems, and (d) peer discrimination and self-esteem. *Note*. EI = Ethnic Identity; ORD = Online Racial Discrimination. \*p < .05. \*\*p < .01.

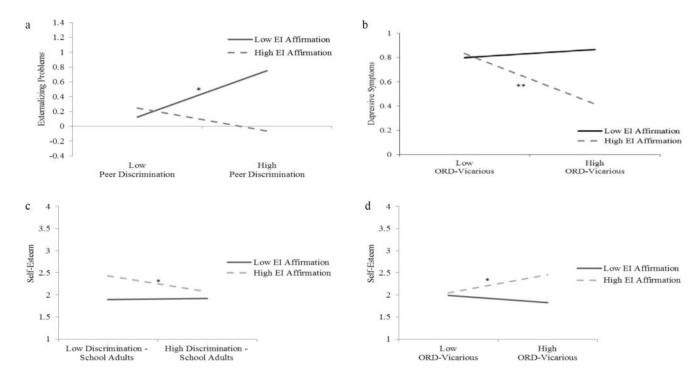
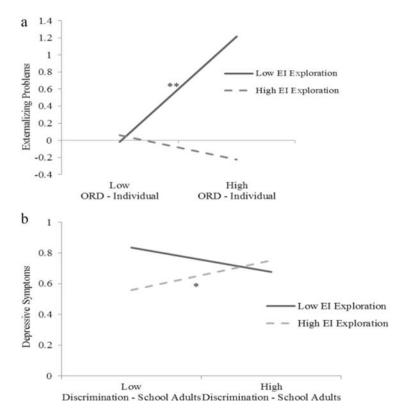


Figure 3. Ethnic identity affirmation as a moderator of the associations between (a) peer discrimination and externalizing problems, (b) vicarious ORD and depressive symptoms, (c) discrimination-adults in school and self-esteem, and (d) vicarious ORD and self-esteem. *Note*. EI = Ethnic Identity; ORD = Online Racial Discrimination. \*p < .05. \*\*p < .01.



**Figure 4.** Ethnic identity exploration as moderator of the associations between (a) individual ORD and externalizing problems, and (b) discrimination-adults in school and depressive symptoms. *Note*. EI = Ethnic Identity; ORD = Online Racial Discrimination. \*p < .05. \*\*p < .01.

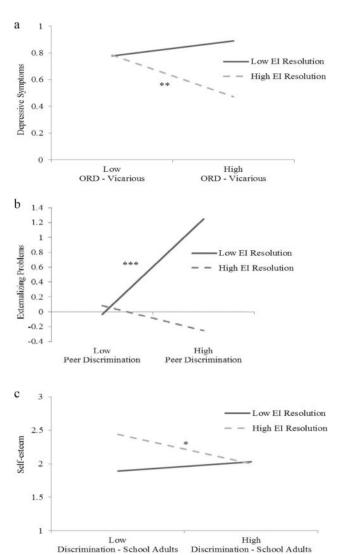


Figure 5. Ethnic identity resolution as moderator of the associations between (a) vicarious ORD and depressive symptoms, (b) peer discrimination and externalizing problems, and (c) discrimination-adults in school and self-esteem. *Note*. EI = Ethnic identity; ORD = Online Racial Discrimination. \*p < .05. \*\*p < .01. \*\*\*p < .001.

**Author Manuscript** 

**Author Manuscript** 

Table 1

Descriptive Information and Bivariate Correlations for All Study Variables

	-	5	6	4	w	9	7	∞	6	10	=	12	13	41	15	16
1. Female																
2. Year in school	15*															
3. Acculturation	90.	05	I													
4. EI Affirmation	.13	.18**	.01	l												
5. EI Exploration	11.	.07	09	.11												
6. EI Resolution	.13*	.16*	*41	.30***	.54***	1										
7. Disc-Peer	*81	.15*	.10	37***	.10	11										
8. Disc-AdSch	*41	*41.	.12	36***	90.	19**	***09.	1								
9. Disc-Adults	11	.24**	.13	16*	.13	04	.56***	.55								
10. Individual-ORD	*41	.10	.02	28	.07	07	.59***	.56***	.45***	I						
11. Vicarious-ORD	02	.31***	09	10	.14	60:	***	.41	.38**	.70***	I					
12. Externalizing	.00	90.	03	29***	09	23**	.40***	.34***	.36***	.43***	.36***	I				
13. Dep Symptoms	.16*	04	.12	26***	90	23***	.29***	.28***	.23	.30***	.13	.38***				
14. Self-esteem	11	60:	15*	.29***	60:	.25***	16*	18**	16**	14	03	25	62***	I		
15. Acad Values	.16*	.01	09	.31	.33***	.37***	21**	25***	10	22**	05	45***	27***	.21**		
16. Acad Efficacy	01	.12	14	.14	.27***	.37***	08	16*	.00	06	80:	29***	24***	.33***	.64	I
Mean	0.53	8.44	1.31	3.68	2.62	3.00	0.34	0.21	0.49	0.31	0.87	0.30	0.84	2.01	3.83	3.80
SD		1.63	0.46	0.47	99.0	0.84	0.56	0.49	0.74	0.52	1.11	0.26	0.44	0.56	96.0	0.90
N	219	219	199	216	216	216	212	214	212	178	178	180	203	201	177	178

Note. EI = Ethnic identity; Disc-Peer = Discrimination from students at school; Disc-AdSch = Discrimination from adults at school; Individual-ORD = Individual online racial discrimination; Vicarious = Vicarious online racial discrimination; Dep = Depressive; Acad = Academic.

<sup>\*</sup> p <.05.

<sup>\*\*</sup> *p* < .01.

p < .001.