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Addict Behav. 2017 September ; 72: 27–32. doi:10.1016/j.addbeh.2017.03.003.**Pathway of Protection: Ethnic Identity, Self-Esteem, and Substance Use among Multiracial Youth****Sycarah Fisher, PhD,**
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University of Kentucky**Jessica Barnes-Najor, Ph.D.**
Community Outreach and Engagement, Michigan State University**Abstract**

Fifty percent of adolescents have tried an illicit drug and 70% have tried alcohol by the end of high school, with even higher rates among multiracial youth. Ethnic identity is a protective factor against substance use for minority groups. However, little is known about the mechanisms that facilitate its protective effects, and even less is known about this relationship for multiracial youth. The purpose of the present study was to examine the protective effect of ethnic identity on substance use and to determine whether this relationship operated indirectly through self-esteem, a strong predictor of substance use for among adolescent populations. Participants included 468 multiracial youth in grades six through 12 (53% female). The results found that ethnic identity was indeed related to substance use, partially through changes in self-esteem. Findings from this study contribute to our understanding and development of models of risk and protection for an understudied population.

Keywords

Ethnic Identity; Multiracial adolescents; Self-Esteem; Substance Use

Adolescents continue to use substances at alarming rates. By the end of high school, 70% of students have tried alcohol and 50% have tried an illicit substance (NIDA, 2014). Rates are even more dire for multiracial youth, with researchers finding that multiracial youth are more likely to use substances than other monoracial groups (Choi et al., 2006; Jackson and LeCroy, 2009; Udry, Li, & Hendrickson-Smith, 2003), with rates of current illicit substance use at 17.4% compared to 8.8% for Latinos, 9.5% for Whites, and 10.5% among Blacks (SAMHSA, 2013). Such use is of concern given the associated health outcomes, including school dropout (Orpinas, Lacy, Nahapetyan, Dube & Song, 2015), involvement in the

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juvenile justice system (Monahan, Rhew, Hawkins, & Brown, 2014) and suicide (Wong, Zhou, Goebert, & Hishinuma, 2013). Further, the initiation of substance use during adolescence (before age 14) is associated with substance use dependence after age 18 (SAMHSA, 2013). Therefore, it is imperative to identify factors associated with lower substance use during adolescence. Ethnic identity is one such factor that has been found to be protective against substance use among monoracial youth (Stock et al., 2013; Schwartz, Zamboanga, Luyckx, Meca, & Ritchie, 2013). Despite this fact, little research has investigated the mechanisms by which ethnic identity lowers substance use. The present study will investigate whether ethnic identity is related to lower levels of substance abuse among multiracial youth and if that relationship is mediated by self-esteem, a well-established protective factor for adolescent health outcomes.

Ethnic Identity and Substance Use

Ethnic identity is the “expression of loyalty, commitment, and belongingness towards one’s own ethnic group which is produced by the exploration, resolution, and affirmation of one’s ethnicity” (Bernal, Knight, Ocampo, Garza, & Cota, 1993). Although there are many different definitions of ethnic identity in the literature, most authors agree that ethnic identity becomes more solidified as children get older and that adolescence is a critical period in which this identity develops (Phinney, 1990; Quintana et al, 2006; Yip, Seaton, and Sellers, 2006).

Ethnic identity has shown to reduce risk for negative health outcomes among minority youth, such as substance use (Stock et al., 2013; Schwartz, Zamboanga, Luyckx, Meca, & Ritchie, 2013). Current conceptualizations around the relationship between ethnic identity and substance use center around the notion that individuals with a maladaptive identity engage in riskier behavior. The most robust effect has been observed for African American youth, with higher levels of ethnic identity associated with lower substance use (Rivas-Drake et al., 2014; Marsiglia, Kulis, & Hecht, 2001; Brook & Pahl, 2005; Pugh & Bry, 2007; Richman, Boynton, Costanzo, & Banas, 2013). Findings are mixed for individuals of Latino decent. Some studies find a protective effect (Richman et al., 2013; Kulis, Marsiglia, Kopak, Olmsted, & Crossman, 2012), while others find that higher levels of ethnic identity lead to higher levels of substance use (Zamboanga, Schwartz, Jarvis, & Van Tyne, 2009). Mixed findings among Latino youth may be due to the heterogeneity of backgrounds comprised within the label of “Latino,” such that Latino populations are almost exclusively lumped into one pan-ethnic category, although evidence suggests differences in both the prevalence of substance use (Carlton-Smith & Skeer, 2015; Unger, Thing, Soto, & Baezconde-Garbanati, 2014) and level of acculturation and ethnic identity (Carlton-Smith & Skeer, 2015; Choi, Sakamoto, & Powers, 2008; Guilamo-Ramos, Jaccard, Johansson, & Turrissi, 2004) between Latino subgroups.

Interestingly, although multiracial youth represent the fastest growing youth population in the United States (Jones & Bullock, 2012; McCubbin, 2013), research on the relationship of multiracial ethnic identity and substance use is scant. The limited research that has been conducted is mixed with some finding that ethnic identity is protective against substance use (e.g., Choi, Harachi, Gillmore and Catalano, 2006; AUTHORS, IN PRESS) for multiracial

youth and others finding no relationship (e.g., James, Kim and Armijo, 2000; Marsiglia, Kulis, & Hecht, 2001). Some researchers have speculated that because of diverging backgrounds, ethnic identity may be more challenging to achieve for multiracial youth than monoracial youth and may result in more risk-taking behavior and higher levels of psychological distress (Fisher, Reynolds, Hsu, Barnes & Tyler, 2014; Gibbs & Moskowitz-Sweet, 1991; Coleman & Carter, 2007; Lusk, Taylor, Nanney, & Austin, 2010; Udry, Li, & Hendrickson-Smith, 2003). Yet, others find that having more than one ethnicity does not have an impact on identity development and subsequent behaviors (Kato, 2000). Therefore, additional work is needed to understand the complex relationships between ethnic identity and substance use outcomes for multiracial youth.

Ethnic Identity, Self-Esteem, and Substance Use

While the research on the relationship between ethnic identity and substance use for multiracial youth is limited with mixed findings, the mechanisms related to this relationship are unknown (Neblett, Rivas-Drake, Umana-Taylor, 2012). One study conducted by AUTHORS and colleagues (IN PRESS) attempted to identify potential mechanisms by looking at attitudes towards substances as a potential mediator between ethnic identity and substance use. While this relationship was significant for other racial groups (i.e. African American and Latino), it was not significant for multiracial youth, indicating that ethnic identity does not operate through cognitive factors such as attitudes towards substances. Therefore, it is imperative to investigate other mechanisms that may mediate this relationship.

One potential mechanism is through the increase of self-esteem. This hypothesis is based on literature documenting a strong positive relationship between low self-esteem and risky behavior among adolescent and young adult populations (Tevendale et al., 2009), as well as a positive relationship between ethnic identity and self-esteem (Carlson, Uppal & Prosser, 2000; Kiang, Yip, Gonzales-Backen, Witkow & Fuligni, 2006; Phinney, 1990; Phinney, Cantu & Kurtz, 1997; Pyant, & Yanico, 1991). For example, several studies have found that adolescents from varying ethnic backgrounds with lower self-esteem report more substance use (Bitancourt, Tissot, Fidalgo, Galduroz, & Filho, 2016; Torres & Fernandez, 1995; Tiggemann, 2005; Wu, Wong, Shek, & Loke, 2014). Further, the positive relationship between ethnic identity and self-esteem has been long identified in the literature, particularly among African American youth (Wallace & Fisher, 2007; Belgrave, Brome, & Hampton, 2000; Burlew et al., 2000; Corneille & Belgrave, 2007; Townsend & Belgrave, 2000; Rivas-Drake et al., 2014). This relationship has also been found across various ethnic groups (Phinney, 1996; Sellers, Copeland-Linder, Martin, & Lewis, 2006; Umana-Taylor, Diversi & Fine, 2002). Given the positive association between ethnic identity and self-esteem, as well as between self-esteem and substance use, it is plausible that ethnic identity may influence risk for substance use indirectly through self-esteem.

Current Study and Hypotheses

To our knowledge, limited work has been conducted examining the direct relationship between ethnic identity and substance use among multiracial youth, with no study, to date,

examining a path model between ethnic identity, self-esteem, and substance use for multiracial youth. The purpose of the present study is to fill this important gap in the literature by investigating the relationship between ethnic identity and substance use in a sample of multiracial youth. Additionally, the study will determine if the path model operates indirectly through self-esteem. This study contributes significantly to the literature by examining mechanisms of protection for substance use in an understudied population that exhibits higher rates of substance use than other ethnic groups (Choi et al., 2006; Jackson and LeCroy, 2009; Udry, Li, & Hendrickson-Smith, 2003). Our hypotheses controlling for age and gender, are: 1) higher ethnic identity will predict lower substance use; 2) higher ethnic identity will predict higher self-esteem; 3) the pathway between higher ethnic identity and lower substance use will operate indirectly through increasing self-esteem.

Methods

Participants and Procedures

The current study involves participants drawn from a larger study examining school and health behavior outcomes among students between fourth and twelfth grade. As approved by the University IRB, participants were sampled from 159 schools (21 school districts) in a large Midwestern county. Informed consent forms were sent home to parents of potential participants. Signed consent forms were obtained from 50% of parents (approximately 12,000 each year). Retention rates for waves 2 through 5 were modest with less than one-third of the participants (27.7%) completing two waves of data (see Barnes, Almerigi & Hsu, 2009, for further information about the parent study). For the current study, all participants who provided data at the final data collection, wave 5, were included in the study. Wave 5 was chosen due to a high completion rate of study variables of interest and high number of multiracial participants, with a sample size of 468 youth. It should be noted that this sample is not generalizable to the general population due to the collection of data in one geographic location. Participants were equally divided based on gender (53% female), and the on average the students were in eighth grade ($SD = 1.96$).

Measures

Demographic Information—Participants were asked to indicate their gender, grade, birthdate, and racial/ethnic background (i.e., African American, Native American, Asian, Latino, Multiracial, White, and Other). Those participants that identified as Multiracial were included in the study. Participants who selected Multiracial are considered to identify as multiracial rather than the race of any particular group, as they opted to endorse multiracial rather than a singular race category. The Multiracial category also did not ask participants to specify the race of their parents, thus subgroups of multiracial youth could not be constructed.

Ethnic Identity—The Multi-group Ethnic Identity Measure (MEIM, Roberts et al., 1999) was used as a measure of ethnic identity that could be utilized across racial/ethnic groups (i.e. African American, Asian American, European American, Latino, Native American, and multiracial). Further, use of the MEIM with multiracial populations has been well documented (Bracey et al., 2004; Fisher et al., 2014; Huang, 2011; Spencer, 2000). The

MEIM is a 12-item scale designed to measure two components of ethnic identity: exploration and affirmation. For the exploration subscale, items included “In order to learn more about my ethnic background” and “I have often talked to other people about my ethnic group.” For the affirmation subscale, items included “I feel good about my cultural or ethnic background.” Items were rated on a 4-point Likert scale, with responses ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). The total MEIM scale was used for the current study and had high internal consistency ($\alpha = 0.91$), which is consistent with previous literature with reliability ranging from 0.81–0.92 (Ponterotto, Gretchen, Utsey, Stracuzzi, & Saya, 2003).

Self Esteem—The self-esteem measure was adapted from items included in various national studies conducted among youth (e.g., Monitoring the Future, YRBSS). Participants were asked to respond to a number of questions on a 4-point likert scale (1=*strongly disagree* to 4 = *strongly agree*). Items include questions such as “I think I am good looking” and “I like who I am.”

Substance Use—The drug use measure was also adapted from items included in various national studies conducted among youth (e.g., Monitoring the Future, YRBSS). Participants were asked to indicate how many days in the past 30 days had they had used marijuana, cigarettes, half a pack or more cigarettes, smokeless tobacco, inhalants, other drugs, had one drink of alcohol, or had 5 drinks of alcohol. Responses choices were provided on a 7-point Likert scale, with 1 (0-days), 2 (1 or 2 days), 3 (3–5 days), 4 (6–9 days), 5 (10–19 days), 6 (20–29 days) and 7 (everyday). Responses were dichotomized into drug use and non-use categories.

Data Analyses

All analyses were performed using SPSS 24. While students are nested within schools, preliminary analyses revealed no significant contribution by school, with interclass correlations ranging from 0.023 for ethnic identity to 0.028 for self-esteem and substance. Thus, analyses were analyzed at the individual level. However, gender and grade were included as covariates in our analysis, as consistent with previous literature, drug use was higher for males (Chen & Jacobson, 2012) and significantly increased with age (NIDA, 2014).

Path analyses were performed using the PROCESS macro (Hayes, 2013) to explore the relationship between ethnic identity and substance use, with self-esteem as the mediator (Model 4 specified by Hayes, 2013). This analysis was run controlling for grade and gender. The PROCESS macro provides estimates for each path within the mediation model, thus provides estimates on the effect of ethnic identity on self-esteem, as well as the effect of self-esteem on substance use. Additionally estimates are provided for the total and direct effect of the independent variable on the dependent variable and indirect effect of the independent variable through the mediator. The PROCESS macro uses bootstrapping to generate bias-corrected confidence intervals for the indirect effect and various indices of effect size for the indirect effect (Hayes, 2013). For all mediation analyses in the current

study, we used 5,000 bootstrap samples. Only participants who provided complete data were included in current study, thus no imputation of missing data was required.

Results

Descriptive statistics are presented in Table 1. A correlation matrix was constructed to assess the association between the study variables (Table 2). Because gender is dichotomous, correlations between these two variables are point-biserial coefficients, and correlations among other variables are Spearman correlations. Ethnic Identity was significantly negatively correlated with substance use ($r = -.224, p < .01$) and significantly positively correlated with self-esteem ($r = .310, p < .01$). Self-Esteem was significantly negatively correlated with substance use ($r = -.155, p < .01$). Grade differences were observed. Older youth reported greater substance use ($r = 0.293, p < .01$) and lower ethnic identity than younger participants ($r = -.220, p < .01$).

Path Model: Ethnic Identity, Self-Esteem, and Substance Use

A path model was estimated to test the hypothesized direct protective effect of ethnic identity on past-month drug use and whether the pathway operated indirectly through self-esteem. Given the significant correlation between gender and grade on drug use, they were controlled for within the path models. Findings indicated that higher ethnic identity was associated with lower drug use ($b = -.028, p < .05$). The pathways between ethnic identity and self-esteem ($b = .156, p < .001$), and between self-esteem and drug use (effect estimate = $-.066, p = .01$) were also significant, indicating that higher ethnic identity was associated with higher self-esteem and higher self-esteem was protective against drug use. When assessing the total indirect path model including self-esteem, the protective effect ethnic identity on past month drug use through self-esteem was significant (point estimate of indirect effect = $-.010$, 95% Boot CI = $-.021, -.003$) youth. The direct effect between ethnic identity and drug use became non-significant once accounting for the indirect effect of self-esteem (point direct effect estimate = $-.0185, p = .181$). See Table 3 and Figure 1 for all path coefficients.

Discussion

Multiracial individuals are the fastest growing population in the United States (U.S. Census Bureau, 2012), and have one of the highest rates of substance use (SAMHSA, 2013; Choi et al., 2006; Jackson and LeCroy, 2009; Udry, Li, & Hendrickson-Smith, 2003). Despite this fact, little research exists on factors related to their substance use and potential protective mechanisms. The purpose of the present study was to investigate the relationship between ethnic identity and substance use for multiracial youth and the indirect effect of self-esteem within the protective pathway.

The present study found that ethnic identity was indeed protective against substance use among our sample of multiracial youth. This indicates that the higher the ethnic identity, the less substances adolescents reported using. This finding supports the notion that ethnic identity is an important part of development that is related to positive health outcomes among adolescents (AUTHORS, IN PRESS). While ethnic identity was indeed protective for

subgroups (Bracey, Bámaca, & Umana-Taylor, 2004), multiracial youth are a heterogeneous group. Therefore, future research should identify if there are differences in these relationships based on the ethnic makeup of the individual.

Conclusion

The current study extends the literature by looking at protective mechanisms related to substance use in an understudied population of multiracial adolescents. The results indicated that ethnic identity was indeed protective against substance use, partially through changes in self-esteem. While additional research is needed, these results indicate that interventionists should incorporate factors related to ethnic identity and psychological factors such as self-esteem into their intervention efforts.

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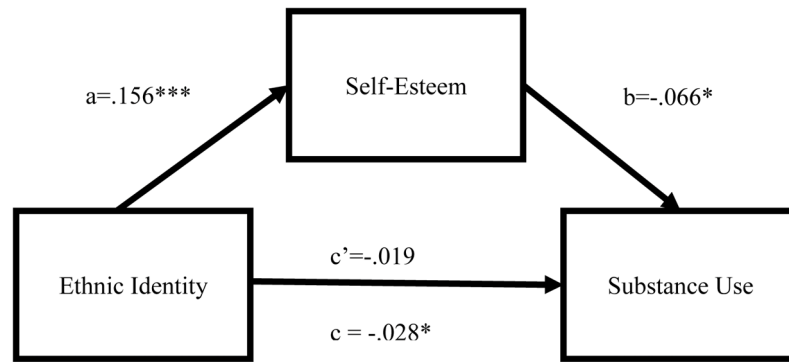


Figure 1. Depiction of structural model representing the pathways to substance use for multiracial youth based on levels of ethnic identity and self-esteem. Only hypothesized pathways are presented. Not included in the figure, for ease of presentation, are disturbance terms and error terms. * $p < .05$, *** $p < .001$.

Table 1

Percentages (n) and Means (S.Es.) for Multiracial Participants

	Male	Female
Substance Use	29.6 (63)	28.6 (73)
Ethnic Identity (high=good)	2.55 (0.070)	2.67 (0.059)
Self-Esteem (high=good)	3.320 (0.033)	3.27 (0.032)

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Table 2

Rank Correlation Coefficient (Spearman) Matrix

	Gender	Grade	Substance Use	Ethnic Identity	Self-Esteem
Gender [†]	-	.038	-0.010	0.026	-0.038
Grade		-	.28**	-.069**	-.065
Substance Use [†]			-	-.117*	-.147**
Ethnic Identity				-	.301**
Self-Esteem					-

Notes: $n = 468$. Gender: male = 0, female = 1;

* $p < .05$;

** $p < .01$;

*** $p < .001$.

[†] Point-Biserial correlation coefficients.

Table 3
The indirect and direct effects of ethnic identity on substance use through self-esteem

	Direct Effect			Indirect Effect		
	Estimate	SE	Bootstrap 95% CI	Estimate	SE	Bootstrap 95% CI
EI → SE (a)	.156	.023	(.110, .201)			
SE → DU (b)	-.066	.027	(-.118, -.014)			
EI → DU (c')	-.028	.013	(-.054, -.002)			
EI → SE → DU (c)				-.010	.005	(-.021, -.003)