



# HHS Public Access

Author manuscript

*J Ethn Subst Abuse*. Author manuscript; available in PMC 2023 July 01.

Published in final edited form as:

*J Ethn Subst Abuse*. 2022 ; 21(3): 886–913. doi:10.1080/15332640.2020.1803780.

## Intrapersonal Psychological Empowerment Profiles on Ethnic Identity, Social Support, and Lifetime Drug Use among Hispanic Adolescent Girls

**Ijeoma Opara, PhD, LMSW, MPH,**

School of Social Welfare, Stony Brook University

**David Lardier Jr., Ph.D., L.P.C.,**

Department of Individual, Family, and Community Education, University of New Mexico

**Yohansa Fernandez, LMSW**

School of Social Work, New York University

**Robert J. Reid, Ph.D.,**

**Pauline Garcia-Reid, Ph.D., LCSW**

Department of Family Science and Human Development, Montclair State University

### Introduction

Alcohol is the most used substance among all adolescents (National Institute on Drug Abuse [NIDA], 2019), while marijuana is the most used illicit drug in the country (NIDA, 2019). Historically, adolescent girls of all racial and ethnic groups in the United States have had lower rates of alcohol and marijuana use than boys (Guthrie & Flinchbaugh, 2001; Opara, Lardier Jr., Reid, & Garcia-Reid, 2019). Recent trends seen in national data sets have shown high rates of alcohol and drug use among Hispanic adolescent girls compared to boys (Kann et al., 2018). According to the Youth Risk Behavioral Surveillance Survey (YRBSS), Hispanic adolescent girls have the highest rates of lifetime and current alcohol use and drug use compared to other adolescent girls (Kann et al., 2018). With respect to race/ethnicity and gender, 67.1% of Hispanic adolescent girls used alcohol in their lifetime compared to Black girls (57.9%), and White girls (62.8%), Hispanic adolescent boys (62.3%), Black adolescent boys (44.8%), and White adolescent boys (60.5%; Kahn et al., 2018). Hispanic adolescent girls also have the highest rate of current alcohol use among adolescents (35.9%) compared to Black adolescent girls (24.3%) and White adolescent girls (33.2%), Hispanic adolescent boys (26.8%), Black adolescent boys (16.9%), and White adolescent boys (31.6%; Kahn et al., 2018). Initiation of alcohol use generally occurs in adolescence and drinking experiences during adolescence can link to alcohol dependence in adulthood (Hodder et al., 2011). Alcohol use during adolescence aligns with numerous negative outcomes such as poor academic performance, lowered educational aspirations, sexual risk behavior, and criminal behavior (Barry et al., 2011; Peterson et al., 2010; Purcell, 2009; Walters, 2017).

---

**Corresponding author:** Ijeoma Opara, PhD, LMSW, MPH is an Assistant Professor in the School of Social Welfare. [ijeoma.opara@stonybrook.edu](mailto:ijeoma.opara@stonybrook.edu).

Alcohol use among adolescents is also associated with the use of illicit drugs such as marijuana (Barry et al., 2016; Kirby & Barry, 2012). Marijuana use has been linked to several negative consequences such as memory loss, brain impairment, reduction in cognitive functioning, and increased risk of cardiovascular disease (Hadland & Harris, 2014; Winward et al., 2014). The prevalence of ever having used marijuana is higher among Black high school-aged students nationwide than their White and Hispanic counterparts (Kann et al., 2018). However, among adolescent girls, Hispanics reported high rates of ever using marijuana (42.7%) compared to Black adolescent girls (44.9%) and White adolescent girls (32.1%; Kann et al., 2018). Other illicit drug use such as non-prescribed pain medication, is also rising among Hispanic youth, specifically adolescent girls (Banks et al., 2017). The prevalence of having ever taken prescription pain medicine without a doctor's prescription or differently than how they were prescribed was higher among Hispanics (15.1%) than Black (12.3%) adolescents and higher among Hispanic adolescent girls (16.1%) than Black (12.5%) girls and White adolescent girls (14.0%); Kann et al., 2018). For girls of color (e.g. Hispanic, Black) who engage in drug use, their health outcomes are more harmful than those of their White counterparts (Molina et al. 2016).

Discrimination, sexism, acculturation, stress, family and peer influences, and access to illicit drugs in neighborhoods may explain rising trends of substance use for Hispanic girls (Gray & Montgomery, 2012; Lorenzo-Blanco et al., 2012; Lorenzo-Blanco et al., 2013; Schinke et al., 2011). Without prevention programming to educate Hispanic adolescent girls on strategies to refuse substances and feel empowered in adverse situations, their rates of use may continue to rise and have unfavorable effects. Given such disparities, investigating strengths-based drug use prevention strategies for Hispanic adolescent girls is warranted.

### **Empowerment Theory**

Empowerment theory provides a promising framework to shape policies and prevention programs to sustain and improve developmental outcomes including reducing substance use among Hispanic girls. Psychological empowerment (PE) is a construct that is described as an individual level of empowerment analysis and defines one's beliefs about their ability to apply control and understanding of their socio-political environment (Zimmerman, 1990). Psychological empowerment as a multi-dimensional construct has been defined as having three main components: intrapersonal, interactional, and behavioral (Zimmerman, 1990; 2000). The intrapersonal component is defined as the way people perceive their own capability to influence social and political systems important to them, their self-view of control, and the level of power they possess within their environment (Zimmerman, 1990; 2000). The interactional component consists of an individuals' ability to interact with people that can prepare them to succeed in mastering socio-political systems through organizational activities (Zimmerman, 1990; 2000). The behavioral component comprises of the actions that individuals actively engage in within a community that attempts to foster systemic change (Zimmerman, 1995; 2000). The intrapersonal component is referred to as the emotional component and has been the most investigated in current psychological empowerment research (Zimmerman, 1990; 2000). In fact, the intrapersonal component has been used as an indicator to measure PE given its emphasis on emotions and capability in engaging in policy and leadership work. To be consistent with empowerment

research, intrapersonal component will be operationalized as intrapersonal psychological empowerment (PE).

Researchers developed the sociopolitical control scale for youth (SPCS-Y) to measure intrapersonal PE (Peterson et al., 2006; Zimmerman & Zahinser, 1991). Studies have shown that sociopolitical control is an indicator of psychological, behavioral, environmental, and social well-being including, though not limited to ethnic identity, self-esteem, and sense of community (Christens & Peterson, 2012; Lardier Jr et al., 2018; Opara et al., 2020; Ozer & Schotland, 2011; Watts et al., 2011). Originally, the SPCS-Y was a 17-item scale, which has been validated as a multidimensional scale (Christens et al., 2016; Lardier et al., 2018; Peterson, Agre, Christens, & Morton, 2011; Peterson, Speer, & Hughey, 2006; Smith & Propst, 2001). Peterson et al. (2006) confirmed that not only is SPCS-Y a multidimensional construct but that it designates two underlying dimensions: leadership competence and policy control. Leadership competency involves people's own perception of their ability to mobilize a group of people or groups, while policy control involves the perception and one's confidence in their ability to impact and inform policies in their environment (Cheryomukhin & Peterson, 2014). The SPCS-Y scale has been validated and used among youth populations across the United States (Christens, et al., 2016; Lardier Jr et al., 2018; Peterson et al., 2011; Peterson, et al., 2017) and internationally including Italian adolescents, (Vieno et al., 2014), Portuguese youth (Rodrigues et al., 2017), and Malaysian adolescents (Cheryomukhin & Peterson, 2014).

Recently, Lardier et al (2018) validated an eight-item abbreviated version of the SPCS-Y among urban adolescents. Even more current, Opara et al (2020) found support for the factor structure of the abbreviated eight-item scale, when compared to the original 17-item version among urban Black and Hispanic girls. Given the close relationship with intrapersonal PE and self-efficacy, which refers to one's ability to be in control, influence certain events, and engage in activities or task successfully (Bandura, 2010), the use of intrapersonal PE on understanding risky behaviors such as alcohol and drug use, is crucial in prevention work. Developers of the scale have encouraged empowerment researchers to validate the SPCS-Y on multiple populations to ensure both the validity and reliability of the measure, given that empowerment is context specific (Christens & Peterson, 2012).

### **Hispanic Adolescent Girls and Empowerment**

Among historically marginalized groups in the United States, empowerment measures and processes can provide promising results for improving outcomes among adolescents. Furthermore, there may be unique gender differences in empowerment processes and outcomes among adolescents, though these differences have not been adequately explored (e.g. Peterson & Hughey, 2004; Speer et al., 2013). Due to the multiplicative nature of being female, part of an ethnic group that has been historically marginalized (e.g. Hispanic), and living in an under-resourced, urban community, Hispanic adolescent girls are faced with a double or triple jeopardy (Clonan-Roy et al., 2016), thus contributing to poorer health and educational outcomes compared to their White counterparts. Understanding PE in the context of Hispanic adolescent girls can lead to a more critical examination of the intrapersonal component of PE—i.e., in order to assess how girls of color are able to develop

cognition of sociopolitical environments. Such an examination can further serve as a catalyst to reduce risk behaviors (e.g. substance use) that produce negative outcomes that affect this group.

### **Conceptually related variables: Social support and Ethnic Identity among Hispanic Adolescent Girls**

Within the social support construct, families (e.g., parents, guardians, and siblings) are seen as important and vital relationships. Family support can play a crucial role in positive youth development (Garcia-Reid et al., 2018). In a cultural context, families are a crucial part of Hispanic families, as they are who and from Hispanic girls learn cultural values and morals and form intimate connections (Lorenzo-Blanco et al., 2012). Positive family support makes an invaluable contribution to the lives of Hispanic adolescents (Garcia-Reid et al., 2005; Guilamo-Ramos et al., 2009). Perceived social and emotional support provided by parents and family cohesion have been associated with feelings of competence, a sense of connection to peers, positive school engagement, reduction in sexual risky behaviors, and drug-use abstinence (Li & Warner, 2015). Such supportive relationships are critical for adolescent girls who are exposed to various risk factors that can lower their self-esteem and place them in vulnerable positions to engage in negative behaviors.

Specific to Hispanic girls, *familismo* can be an essential protective factor. Strong family ties can keep Hispanic adolescents from engaging in risky behaviors (Brooks, et al., 1998). Close family ties based on cultural values between Hispanic parents, especially mothers and daughters can result in increased supervision and conversations, which may aid in reducing the likelihood of engaging in risky behaviors (e.g., substance abuse or premarital sex) and poor outcomes for girls such as HIV/STI diagnoses, addiction to substance, and exhibiting poor mental health symptoms (Garcia-Reid et al., 2018; Opara et al., 2019). Consistent with research on common protective factors among adolescents, for girls especially, strong parent–child closeness is associated with positive developmental outcomes and less sexual risk taking (Schinke et al., 2011).

Hispanic Americans that strongly identify with their country of origin and may share commonalities in experiences, language, and norms that allow them to be more connected through ethnicity (Umana-Taylor et al., 2014). For Hispanics, the concept of ethnic identity can be a strong protective factor, whereas racial identity tends to be more important for Blacks (Rivas-Drake et al., 2014). Individuals who possess or belong to marginalized identities that are empowered, tend to have a stronger connection to their ethnicity or culture which in turn aids in them to feel proud of themselves, their decisions, and their beliefs (Gutiérrez, 1995; Molix & Bettencourt, 2010). Literature supports the relationship between high intrapersonal PE, self-efficacy, and high ethnic identity (Gutiérrez, 1995; Molix & Bettencourt, 2010). For instance, researchers found that higher levels of ethnic identity align with lower rates of substance use including tobacco, alcohol, and marijuana, and with drug abstinence as well as drug free attitudes (Belgrave et al., 2000; Matsunaga et al., 2010). Specifically, among Hispanic adolescent females, high ethnic identity has a strong association with low substance use and other risky behaviors such as sexual risk taking (Garcia-Reid et al., 2018; Lorenzo-Blanco et al., 2012; 2013). The relationship between

ethnic identity and acculturation may also explain this association. Acculturation refers to a process by which two autonomous cultural groups are in contact with one another and results in culture acquisition and retention of cultures on varying levels (Barona et al., 2009). How closely a U.S. immigrant is able to retain their heritage (e.g. holding on to traditional cultural values) has a positive relationship with ethnic identity (Lorenzo-Blanco et al., 2013). Among Hispanics whom immigrate to the United States, receiving culture acquisition entails orientations toward U.S. practices relating to behaviors, language, cultural values, and ethnic identification (Lorenzo-Blanco et al., 2016). Acculturation and ethnic identity have been associated with various risk behaviors including drug use (Marsiglia et al., 2004; Lorenzo-Blanco et al., 2012; 2013; Schwartz et al., 2007), sexual risk taking (Diaz et al., 2020; Lee & Hahm, 2010). Research on Hispanic adolescent girls have found that there may be stronger sanctions against drinking among girls compared to boys that are raised in “traditional” Hispanic households (Zamboanga et al. 2014). Thus, Hispanic adolescent girls who have low-levels of acculturation in U.S. culture and high levels of ethnic identity, may not be tempted to engage in drug use, as this behavior may goes against gendered socialization experiences connected to their culture (Lorenzo-Blanco et al., 2016; Marsiglia et al., 2004). Similarly, individuals with low levels of ethnic identity are more likely to experience negative psychological emotions (e.g., low self-esteem, shame, and anxiety; Rivas Drake et al., 2014), and use drugs and alcohol – i.e., often a coping mechanism for undiagnosed and untreated mental health symptoms. Therefore, high ethnic identity may be protective against substance use, through its positive relationship with self-esteem and self-worth (Fisher et al., 2017).

## Purpose of study

Very few studies have validated the two-dimensional SPCS-Y scale among a subset of Hispanic adolescent girls. Opara et al (2020) validated the SPCS-Y among urban Black and Hispanic girls but encouraged further exploration in disseminating differences between the two distinct racial/ethnic groups. Therefore, in this study, we will first confirm the two-dimensional structure of the intrapersonal empowerment measure among Hispanic adolescent girls. We will then demonstrate concurrent validity of the scale by examining the association between of the two-factor structure of SPCS-Y and conceptually related variables: ethnic identity, social support, and life-time alcohol and drug use. Therefore, this study examines empowerment profiles to understand which components have a more significant effect on alcohol and drug use among Hispanic adolescent girls and associated protective factors such as ethnic identity and social support. Our overall goal was to demonstrate the uniqueness of administering a validated scale among a sample of Hispanic girls and provide implications for future work with similar groups.

## Method

The study design was cross-sectional. Data were acquired from two community needs assessments in a northeastern U.S. urban school district. A needs assessment for this population was conducted in response to the high rates of crime, substance use and abuse, and low educational outcomes for the target city. The target city has a total of eight public high schools and they were all selected to be a part of the study. Survey participants were

recruited through physical education and health classes, as these classes are required all four years of high school in order to obtain a racially-diverse, representative sample of the students in the city. This process allowed for an equal sampling of high school students that would be representative of the school district. All students were given parent/guardian consent forms to be signed. Students who signed a youth assent and returned signed parent/guardian consent forms were eligible to take the survey. Students were given a one-hour period (i.e., nearly 2 class periods) during health and physical education to complete the student questionnaire. Questionnaires were self-administered in English to all students.

The study's original sample included ( $N=1,639$ ) students (26% response rate). Participants were asked whether they identified primarily as Hispanic, Black/African American, Asian, or Other. The original sampling of adolescents was largely Hispanic (59.1%) and Black (30.4%), with Asian (7.3%) and White (4%) youth designating the next two demographic groups. This sample was majority female (61.8%), with 29.5% of the youth being between 13 and 15 years of age, and 70.5% being between 16 and 18 years of age. Students were near evenly split between 9th (25%), 10th (23.9%), 11th (25.9%), and 12th (24.0%) grades. The study's analytic sample was delimited to include participants who identified as a female and Hispanic only ( $N=490$ ). Participants who identified as multi-cultural (e.g. Hispanic and White) were not included in the analytic sample. Among this sample of Hispanic females, 31.2% were between 13 and 15 years of age and 68.6% were between 16 and 18 years of age. Students were near evenly distributed between 9th (24.7%), 10th (24.3%), 11th (24.9%), and 12th (25.9%) grades. Over 70% percent of the sample received free or reduced lunch, an indicator for low socioeconomic status (Harwell & LeBeau, 2010).

## Measures

**Sociopolitical control.**—Sociopolitical Control Scale for Youth (SPCS-Y) was used to measure the intrapersonal psychological empowerment (PE). Several studies support SPCS-Y as a two-factor measure, encompassing both leadership competence and policy control (e.g., Peterson et al., 2011). Recent investigations tested and validated an abbreviated version of the SPCS-Y among both youth of color (Lardier et al., 2018) and Black and Hispanic girls (Opara et al., 2020). These studies supported the multidimensional nature of this scale, encompassing both leadership competence and policy control.

For the current study, both the eight-item measure of leadership competence (Cronbach's  $\alpha = 0.83$ ; mean [M] = 3.62, standard deviation [SD] = .76) and nine-item measure of policy control (Cronbach's  $\alpha = 0.85$ ; M = 3.48, SD = .76) were combined (Cronbach's  $\alpha = 0.89$ ; M = 3.60, standard deviation [SD] = 0.62). Respondents were asked to indicate their level of agreement with statements such as "I am a leader in groups" and "I can usually organize people to get things done". Responses were recorded using a five-point Likert-type scale ranging from the *Strongly disagree* (1) to *Strongly agree* (5).

## Conceptually related variables

**Social Support.**—Social support was measured using The Social Support for Adolescents Scale, which consists of eight items (Cronbach's  $\alpha = 0.78$ ; M = 2.44, SD = .49). This measure evaluates social support among adolescents from a variety of sources, including



friends, parents, and school personnel. Cauce et al. (1982) validated this scale among a sample of high-risk adolescents and discovered three support dimensions within the scale: Family (e.g. parents, relatives), Formal (e.g. teachers, principals, state workers), and Informal (e.g. friends, peers) support. Respondents are asked to indicate the level of helpfulness provided by each source, on a Likert-type 4-point scale from (1) *not at all helpful* to (4) *very helpful*.

**Ethnic identity.**—The Multigroup Ethnic Identity Measure (MEIM) is a twenty-item scale used to measure ethnic identity, in other words, how individuals identify with their identity (Phinney & Ong, 2007). Sample questions include “I have spent time trying to figure out more about my ethnic group?” The MEIM was designed and has been used among multiple ethnic groups (Phinney 1989, 2007). The MEIM has been widely validated among adolescents across the United States (Kazarian & Boyadjian, 2008), with a Cronbach alpha ranging from 0.71 to 0.92 (Ponterotto et al., 2003; Phinney & Ong, 2007). Responses were recorded using a 4-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (4). Responses were totaled to represent ordinal levels of ethnic identity (Cronbach’s  $\alpha$  0.87  $M = 53.19$ ,  $SD = 10.25$ ).

**Lifetime Alcohol and Drug Use.**—Lifetime alcohol and drug use among youth was measured using a six-point scale from the National Youth Risk Behavior Survey (Kann et al., 2016). Participants indicated how often (if ever) they drank alcoholic beverages on a six-point scale ranging from 1 (“never”) to 6 (“40 times or more”). They also completed a similar six-point scale regarding drug use including: marijuana, cocaine, heroin, methamphetamine, ecstasy, prescription drug use without a doctor’s permission, and inhalant use. Scale scores were summed and ranged from 1.00 to 5.63, with higher scores indicating greater frequency of drug and alcohol use (Cronbach’s  $\alpha = 0.85$ ;  $M = 1.36$ ,  $SD = .72$ ). This approach to combining items has been previously employed to measure lifetime drug and alcohol use among minority adolescents (Chuang et al., 2016; Opara et al., 2020; Lardier et al., 2019).

Further examination of the lifetime drug and alcohol use variable indicated that data were skewed or zero-inflated (3.21) and leptokurtic (14.73). It is common for youth to either over- or underreport certain behaviors on more sensitive questions, such as substance use (Podsakoff, MacKenzie, & Podsakoff, 2012). Data transformations were not employed. Further, while these data were non-normal, recent studies indicate that while Wilks’ Lambda may present some instability with non-normal data in multivariate analysis of covariance (MANCOVA) analyses, it does improve with larger sample sizes ( $> 200$ ) (Konietschke et al., 2015) and tends to be a reasonable estimate unless severe heterogeneity is present (Van Aelst & Willems, 2010). However, to account for potential instability, Pillai’s trace statistic was also used to interpret outcomes during MANCOVA analyses (Van Aelst & Willems, 2010).

### Analytic Approach

Prior to main analyses, missing data were examined. Little’s MCAR test indicated that among main analytic variables (e.g., intrapersonal PE, social support, ethnic identity, and lifetime alcohol and drug use) data were not MCAR ( $\chi^2 = 50.51[16] = p < .001$ ). Covariate-

dependent missingness (CDM) assumption test, an extension of Little's MCAR test when covariates are present, was also conducted to further assess if missingness were dependent on covariates (Li, 2013). CDM test results indicate that while data are not MCAR, it can be viewed as CDM based on covariates of age, grade, and free or reduced lunch ( $\chi^2 = 161.59[176] = p = .77$ ). Therefore, it is likely that data were likely missing at random (MAR; Li et al., 2013; Little & Rubin, 2014). The most amount of missing data (20%) were present for lifetime drug and alcohol use.

Numerous techniques are available to handle missing at random data (Little & Rubin, 2014). For this study, missing data were addressed using maximum likelihood (ML) estimations in AMOS SEM v. 25 software. ML is an unbiased method to accommodating missing data with less than 30% missing (McNeish, 2017). Following ML estimations, confirmatory factor analysis (CFA) was conducted using AMOS SEM software (Arbuckle, 2013) to assess the validity of the SPCS-Y as a second-order, two factor structure: *leadership and policy control* in the sociopolitical domain. Reflective models were fit, which specifies that the relationships emanate from an intrapersonal PE construct and are directed toward observed measures. This suggests that variation in the abbreviated SPCS-Y leads to variation in the two-factor structure, which leads to variation in the intrapersonal PE measures (Peterson et al., 2017). In total, three models were examined:

Model 1: Original 17-item version of the SPCS-Y as a bidimensional model

Model 2: 8-item abbreviated SPCS-Y as a bidimensional model.

Model 3: 8-item abbreviated SPCS-Y as a bidimensional, higher-order model.

To assess model fit for the CFA models several fit indices were used. Chi square ( $\chi^2$ ) was used as the primary indicator of model fit; however, because  $\chi^2$  alone may be too stringent of an indicator of goodness-of-fit thus additional indices that are considered robust, were also examined. These include: Comparative Fit Index (CFI), Tucker Lewis Index (TLI) Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), and Root Mean Square Error of Approximation (RMSEA), and Akaike Information Criterion (AIC) (West, Taylor, & Wei, 2012). A non-significant  $\chi^2$  value indicates acceptable model, higher values that are great than .95 on the GFI, AGFI, CFI, and TLI, and smaller RMSEA values that are less than 0.09 are desirable (Browne & Cudeck, 1992; West et al., 2012). Bayesian Information Criterion (BIC) and Akaike Information Criterion (AIC) were also used to assess the better fitting model between model tests. For BIC, differences larger than 10.00 provide evidence in support of the lower BIC value (West et al., 2012) and with regard to AIC, the solution closest to the saturated AIC value is considered as providing a better fit to the data (West et al., 2012).

*Age, grade, and free-or-reduced lunch status* were examined for variation with the abbreviated SPCS-Y, due to previous research suggesting that variation is likely present based on these demographic variables (Harwell & LeBleau, 2010). Results indicated a significant difference in *grade* on the *leadership competence* dimension of intrapersonal PE ( $F [4, 481] = 3.48, p = 0.008$ ). No differences were present between age and free-or-reduced lunch status.



Following CFA analyses, latent class cluster (LCC) analysis was used to examine heterogeneity on dimensions of intrapersonal PE: leadership and policy control. For the purposes of latent class analysis (LCA), these indexes were transformed into quintiles to retain ordinal response scales (Vermunt & Magidson, 2013). Analyses were conducted using Latent GOLD v5.1 (Vermunt & Magidson, 2013) statistical software. Multiple LCC were examined (1 through 10). The fit for each model was examined to assess the best model-to-data fit, using several indices: likelihood ratio chi-squared statistic ( $L^2$ ), the percentage of change in the  $L^2$  for each successive model (diff  $L^2$ ), the Bayesian Information Criterion (BIC), and the Akaike Information Criterion (AIC). Large  $L^2$ , associated degrees of freedom ( $df$ ) and a significant  $p$ -value indicate poor model-to-data fit, or more highly negative than maximum precision can identify which renders values meaningless (Vermunt & Magidson, 2013). Smaller BIC and AIC in relation to a smaller  $L^2$ , the associated  $df$ , and non-significant  $p$ -value indicate a parsimonious model or better model-to-data fit (Vermunt & Magidson, 2013). Further, any cluster with less than 10% of sample was identified as a less than meaningful cluster group (Vermunt & Magidson, 2013).

Finally, a multivariate analysis of covariance (MANCOVA) using SPSS (v.23.0) software was conducted to determine if latent class cluster groups differed on a set of conceptually related variables. These variables included: ethnic identity, social support, and life-time drug and alcohol use. Age, grade, and free reduced lunch were retained as a control variable for these analyses.

## Results

Table 1 displays the correlation matrix and descriptive statistics for all main analytic variables. Model fit results from the three CFA models are displayed in Table 2. Table 3 provides the standardized factor loadings for examined models. Figure 1 displays the standardized factor loadings for model 3. Results from model 1 included the factor loadings for the original 17-item SPCS-Y as a two-factor model (see Table 3). This showed less than adequate fit to the sample data (see Table 2) (West et al., 2012). Model 2 examined the abbreviated 8-item version of the SPCS-Y as a two-factor model, with four-items loading onto one single leadership competence construct (i.e., items 1 – 4) and four-items (i.e., items 5 – 8) loading onto a single policy control construct. Model 2 had slightly better model-to-data fit, when compared to model 1. Last, model 3 revealed the best model-to-data fit when compared to both model 1 and model 2. The GIF, AGFI, CFI, and TLI were all within the cutoff criterion for acceptable model-to-data fit (West et al., 2012). The RMSEA fell within the identified cutoff range, with the upper bound of the 90% confidence interval not exceeding 0.08 (West et al., 2012). Furthermore, the AIC for model 3 was closest to the saturated model, and the BIC (as fit indices to compare between models) was smaller and had a difference greater than 10.00 when compared to model 2 (West et al., 2012). These findings provide further evidence for acceptable model-to-data fit for model 3 (West et al., 2012). Descriptive statistics for the eight-item scale are as follows: four-item leadership competence dimension (Cronbach's  $\alpha = 0.70$ ;  $M = 3.62$ ,  $SD = 0.76$ ); the four-item policy control dimension (Cronbach's  $\alpha = 0.70$ ;  $M = 3.47$ ,  $SD = 0.75$ ); and the overall abbreviated PE scale among Hispanic girls (Cronbach's  $\alpha = 0.79$ ;  $M = 3.54$ ,  $SD = 0.68$ ).

## Latent Class Analysis and Multivariate Analysis of Covariance

Following CFA, LCA and MANCOVA were conducted to examine variation on observed indicators of intrapersonal PE – i.e., *leadership competence* and *policy control*. LCA as a person-centered analysis, and MANCOVA are useful follow-up analyses to CFA. LCA allows researcher to categorize and uncover participation within subgroups and generate outcomes that align theory and how groups of individuals function relative to others within the same population (Howard & Hoffman, 2017). LCA takes a set of survey items as dependent variables and determines if respondents are similar or different across items to assign each participant to an alike subgroup or latent class, which helps progress our empirical and theoretical understanding of constructs (Vermont & Magidson, 2013). Such analyses also provide some support for the predictive validity of a measure on conceptually related outcomes (Aneshensel, 2013). Previous studies (e.g., Lardier et al., 2018; Opara et al., 2020; Peterson et al., 2011) have used similar techniques to extend our theoretical understanding of the intrapersonal PE (measured through SPCS-Y) as well as aligned empowerment measures (e.g., Cognitive Empowerment Scale) on various conceptually related variables including substance use, ethnic identity, and social support. These analyses have also helped determine variations in groups based on measures of empowerment and the ways that these groups perform on conceptually similar variables, providing some utility of the results for practical and theoretical purposes.

Model fit was assessed (see Table 4) for each of the LCA models to determine the most parsimonious and best fitting cluster model to the sample data, and the model that captured the largest amount of total association between observed indicators. Based on the above criterion, the five-cluster model provided the best model-to-data fit. Bootstrap procedures were performed to identify optimal fit estimates (Vermunt & Magidson, 2013). The bootstrap difference in log-likelihood value ( $-2LL$  – difference statistic), which compares models with different numbers of LCA (Vermunt & Magidson, 2013), yielded a significant  $p$ -value ( $p = .05$ ) between the five-cluster model and the four-cluster model indicating a difference between models. The  $-2LL$  – difference statistic yielded a significant  $p$ -value of  $.01$  between the six-cluster model and the five-cluster model, also indicating a significant difference between models. Given these findings, with the associated model-fit criterion, we retained the five-cluster model for subsequent analyses as the more parsimonious model. Fit statistics were:  $L^2 = 121.05$  (144), bootstrap  $p$ -value =  $.92$ ; BIC = 3035.90; AIC = 2931.89. The standard entropy  $R^2$  value of  $.64$  indicates that the five cluster mode accounts for a larger (64%) proportion of the variance in the scales used.

Cases from the sample were assigned using modal classification, which is standard procedure in Latent Gold v5.1 (Vermunt & Magidson, 2013). Only cases with complete data were included in the model ( $N = 490$ ). A total of 184 (37.7%) were in cluster group 1, labeled: “Moderate leadership competence and policy control”, which reflects moderate scores on leadership competence ( $M = 15.61$ ,  $SD = 2.15$ ) and moderate scores on policy control ( $M = 14.03$ ,  $SD = 2.05$ ). A total of 146 participants (29.9%) were in cluster group 2, labeled: “Low PE”, which reflects lower scores on leadership competence ( $M = 11.11$ ,  $SD = 2.15$ ) and lower scores on policy control ( $M = 11.57$ ,  $SD = 2.43$ ) – that is compared to all cluster groups, cluster group 2 had lower scores on leadership competence

and policy control. A total of 49 participants (10%) were in cluster group 3, labeled: “Moderate leadership competence and low policy control”, which reflects moderate scores on leadership competence ( $M = 15.45$ ,  $SD = 1.30$ ) and lower scores on policy control ( $M = 12.31$ ,  $SD = 1.94$ ) – this is compared to cluster group 5 that has higher scores in leadership competence and policy control and cluster group 1 that has slightly higher scores in policy control. A total of 54 participants (11.1%) were in cluster group 4, labeled: “Moderate leadership competence and high policy control”, which reflects moderate scores on leadership competence ( $M = 15.10$ ,  $SD = 2.05$ ) and higher scores on policy control ( $M = 16.92$ ,  $SD = .99$ ) – this is compared to cluster group 5 that has higher scores in leadership competence and similarly higher scores in policy control. Last, a total of 54 participants (11.1%) were in cluster group 5, labeled: “High PE”, which reflects higher scores on leadership competence ( $M = 18.12$ ,  $SD = 1.38$ ) and higher scores on policy control ( $M = 18.19$ ,  $SD = 1.36$ ) – compared to all cluster groups examined, cluster group 5 has the highest mean scores in leadership competence and policy control.

Membership of the five cluster groups were tested for meaningful differences on demographic characteristics including age, grade, and free or reduced lunch. A significant difference was noted between cluster groups and participant grade-level:  $\chi^2(16) = 160.09$ ,  $p < 0.001$ . No significant differences were identified between participant cluster group identification and other demographic variables (i.e., age or free or reduced lunch). *Grade* was retained as a covariate for subsequent analyses.

Differences between groups were examined according to the intrapersonal PE latent classes on a set of conceptually related variables: *ethnic identity*, *social support*, and *lifetime drug and alcohol use*. Table 5 displays results of a MANCOVA with intrapersonal PE cluster as the grouping factor and ethnic identity, social support, and lifetime drug and alcohol use as the dependent variables, with participant *grade* as the covariate. MANCOVA results indicated that after controlling for *grade*, significant heterogeneity was present between intrapersonal PE LCC groups and social support, ethnic identity, and lifetime drug and alcohol use.

Using pairwise univariate comparisons, post-hoc analyses were conducted next to assess differences between intrapersonal PE (leadership competency and policy control) and conceptually related variables (i.e. ethnic identity and social support). Participants in “High PE” (cluster group 5) reported higher mean scores on social support when compared to “Moderate leadership competence and policy control” (cluster group 1), “Low PE” (cluster group 2), and “Moderate leadership competence and low policy control” (cluster group 3). For ethnic identity, both “High PE” (cluster group 5) and “Moderate leadership competence and high policy control” (cluster group 4) had greater mean composite scores than “Low PE” (cluster group 2). “Moderate leadership competence and policy control” (cluster group 1) also had higher mean scores on ethnic identity, when compared to “Low PE” (cluster group 2). Regarding lifetime drug and alcohol use, “Low PE” (cluster group 2) had higher mean scores of use, when compared to “Moderate leadership competence and low policy control” (cluster group 3), “Moderate leadership competence and high policy control” (cluster group 4), and “High PE” (cluster group 5).

## Discussion

Psychological empowerment is emerging as a key construct in understanding outcomes and processes related to empowerment among adolescents. This study not only adds to the limited literature on empowerment, but also adds to strengths-based research on Hispanic adolescent girls. Furthermore, this study examines the associations between the concept of empowerment and ethnic identity among Hispanic adolescent girls, a multiply marginalized group. To date, there have been few studies that explore ethnic-racial group identity and its association with a political related concept such as social awareness and leadership abilities (Gutierrez, 1988; Gutiérrez et al., 1995; Hipolito-Delgado & Zion, 2015; Lardier, 2018).

Using a strengths-based and person-centered approach, we tested the association latent profile groups of social support, ethnic identity and lifetime alcohol and drug use had on other indicators of sociopolitical development, specifically leadership and policy control—subcomponents of SPC. Findings provide insights into the conceptual overlap of the heterogeneity of these components among Hispanic adolescent girls and how it may contribute to certain risk behaviors (e.g. alcohol and drug use). Results also revealed distinct differences among the SPC-Y profile groups on measures of social support, ethnic identity, and lifetime alcohol and drug use. For example, higher composite scores of SPC-Y domains: *policy control* and *leadership competency*, were associated with higher mean scores on social support and ethnic identity, as well as lower mean scores on lifetime alcohol and drug use. Opara et al (2020) found similar results when comparing cluster mean differences between high PE, social support, ethnic identity, and sense of community on 30-day drug use among a sample of girls of color. However, one distinct difference in the previous study was that girls of color whom had moderate policy control and limited leadership competence had higher mean scores on drug use. This current study found opposite results, whereas among this sub-set of Hispanic adolescents who had moderate leadership competence and low policy control appeared to be associated greatly with lower levels of alcohol and drug use. Results indicate the importance of leadership competence among adolescent girls as it may be seen to be a significant factor in engagement of drug use. While some variation was noted, nearly 60% of the sample were considered to be in the moderate to high levels of both leadership and policy control of intrapersonal PE and observed high mean composite scores on both ethnic identity and social support and lower mean composite on lifetime alcohol and drug use. This may indicate that to foster *policy control* and *leadership competency* in the sociopolitical domain together, connection with, and support from, ethnically-rationally-like adult allies may be critical for youth of color (Lardier et al., 2018; Opara et al., 2019), and Hispanic adolescent girls, specifically (Clonan-Roy et al., 2016). Having supportive adults whom have the ability to inspire and serve as role models and/or allies, has the potential to allow adolescent Hispanic females feel more connected to their ethnicity and community simultaneously (Lardier et al., 2018). Consistent with literature on ethnic identity and empowerment, youth whom have higher levels of ethnic identity as more likely to feel supported and empowered (Opara et al., 2020).

Our findings are significant in that they can explain which factors within intrapersonal PE may be more beneficial to Hispanic adolescent girls. In addition, findings from this study indicate the importance of examining dimensions of empowerment as it is often

context specific (Christens & Peterson, 2012). Consistent with research on the importance of civic and political engagement (Littenberg-Tobias, & Cohen, 2016) among Hispanic adolescents, these findings can shape the way strengths-based substance use prevention programming can incorporate political activities for Hispanic adolescent girls. The findings contribute considerably to the empowerment literature by demonstrating that higher levels of intrapersonal PE and more specifically, higher levels of both *policy control* and leadership competency are key contributors to reduction in risk behaviors such as drug and alcohol use among Hispanic adolescent girls.

This study provides evidence that supportive structures (e.g. parents, teachers, and peers) are positively associated with empowering processes and can be beneficial to reducing risk behaviors among Hispanic adolescent girls. Prior studies on youth-adult partnerships suggest that youth engaged with critical and empowering adult allies may not only feel less alienation but also have more agency to engage in civic activities in their community (Christens et al., 2016). As Lardier Jr et al., (2018) further point out, this is particularly possible if “adults shift their beliefs about youth and invite space for important counter-narratives that build upon youth as equal and intelligent partners in socio-political change” (p. 1033). Research suggests that when Hispanic adolescent girls are assisted in developing their ethnic identity, through active participation with positive school and family networks, they are encouraged to consider a broader set of educational and career choices (Garcia-Reid, 2007). Within this context, ethnic identity and pride appear to also be associated with empowering processes and lower rates of alcohol and drug use thus having a positive effect on Hispanic adolescent girls. Ethnic identity has been seen to provide cultural value and promote healthier behaviors among Hispanic youth (Castro et al., 2009). Therefore, deep supportive connections can be a critical nexus point to engage in culturally competent prevention approaches that build youth-adult partnerships.

Results from the study also have policy and programming implications. In order for practitioners and researchers to effectively design and evaluate programs for Hispanic adolescent girls, adequate measurements in studying empowerment outcomes such as youth sociopolitical control are needed. The study findings support the use of the abbreviated version of SPCS-Y as an appropriate measurement tool for outcome evaluation and empowerment research among Hispanic adolescent girls. An implication from these results is that a culturally enhanced prevention intervention may be effective in preventing alcohol and drug use among Hispanic adolescent girls. In a culturally enhanced prevention intervention, the protective effects of these conventional factors might be augmented with the addition of cultural protective factors, such as ethnic pride, traditional family values, and supportive networks. Such an empowerment-based intervention or program using can also emphasize the importance of fostering leadership skills and political engagement. The authors of this study emphasize that the burden of change should not be primarily placed on Hispanic girls and their families. We encourage researchers, practitioners and community leaders to promote empowerment-based approaches that can produce positive outcomes in Hispanic adolescent girls using a culturally sensitive or humility framework. Through a culturally humble approach to research and scholarship, authentic dialogue, engagement, and social action can occur to study, address, and understand community issues (Wallerstein et al., 2018). Moreover, individuals are changed through this process – reflecting the

relational process of empowerment, of both outward and inward change (Wallerstein et al., 2018). Consequently, this work may only occur through changing and empowering organizations to take up the task of engaging and supporting at-risk girls in communities of color, specifically through the creation of mutual trust and a shared commitment to social justice and change (Wallerstein et al., 2018).

## Limitations

Although our study contributes significantly to empowerment literature, there are several limitations. First, due to the cross-sectional survey design, a causal relationship cannot be established. However, it can be presumed that the relationship between variables is significant and should be further explored through longitudinal and experimental studies. Second, Hispanic adolescent girls are not a homogenous group and have significant within group differences. Although all girls that identified as Hispanic without examining differences between the groups were included, we urge researchers to test the differences in heterogeneity among Hispanic adolescent girls in future work. Given the various ethnicities within the Hispanic population (e.g., Dominican, Mexican, Puerto Rican) the need to collect and test within group variations among distinct ethnicities which may highlight significant differences in how empowerment is operationalized remains. Third, given the significant relationship that has been revealed in the literature between acculturation, ethnic identity, and substance use among Hispanic youth, the survey did not include acculturation measures, which is a limitation in our study. We encourage researchers to further explore the role of acculturation, social support, and ethnic identity on empowerment and substance use among Hispanic adolescent females. Fourth, given the small sample size, our study only applies to a small sample of Hispanic adolescent girls living in an urban community which limits our ability to generalize our results. Lastly, the survey questions were administered to English-speaking students only. While this may have excluded Hispanic adolescents' girls who solely speak Spanish, we encourage future research to offer bilingual surveys instruments in an effort to fully capture empowerment and associated factors among Hispanic adolescent girls as empowerment may be conceptualized differently in other languages.

## Conclusion

As rates of drug use rise among Hispanic adolescent girls, it is imperative for researchers to develop culturally appropriate and strengths-based programming that can be tailored to this group. It is critical to support the advancement of Hispanic adolescent girls and their families, whose backgrounds have been historically marginalized on multiple levels, to engage in roles that not only support leadership and political engagement but participation in organizational activities where they are supported by family, peers, and adult mentors, who can assist in nurturing their needs. Empowerment researchers can begin to highlight this view using empirical evidence to encourage programming on Hispanic adolescent girls and engage in participatory methods that foster critical consciousness, which can support resilience, bolster confidence, and instill pride (i.e. ethnic pride) in Hispanic adolescent girls, thus improving developmental outcomes (Castro et al., 2009; Garcia-Reid, 2007; Marsiglia, et al., 2004; Rivas-Drake et al., 2017). Furthermore, strengthening ethnic identity among Hispanic adolescent girls has consistently been noted as a buffer in the engagement of risk



behaviors (Opara et al., 2020; Zapolski et al., 2017). Engaging in organizational activities that foster empowerment should be embedded in deep cultural values and principles that allow for girls to simultaneously become more attached to their community and self-identity, while challenging systemic factors that have placed them at risk.

## Acknowledgements:

This study was supported by the Drug Free Communities Grant (DFC) Initiative (Grant #SP022-19-01), funded through the Substance Abuse and Mental Health Services Administration (SAMHSA). The first author and third author were supported as a pre-doctoral fellows in the Behavioral Sciences Training in Drug Abuse Research program with funding from the National Institute on Drug Abuse T 32 Training Grant (5T32 DA07233). Points of view, opinions, and conclusions in this paper do not necessarily represent the official position of the U.S. Government.

## References

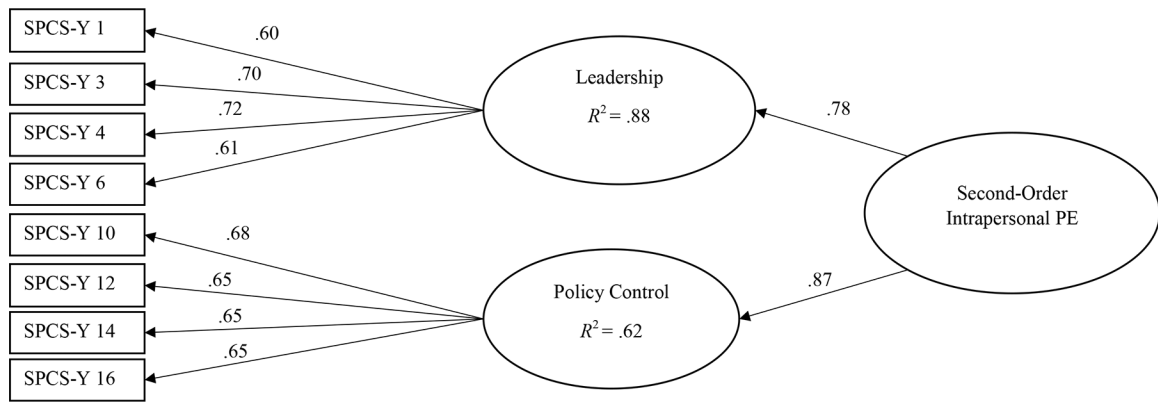
- Aneshensel CS (2013). *Theory-Based Data Analysis for the Social Sciences* (Second ed.). Thousand Oaks, CA: Sage.
- Arbuckle JL (2013). *Amos 22 user's guide*. Chicago, IL: SPSS.
- Bandura A (2010). Self-efficacy. *The Corsini encyclopedia of psychology*, 1–3.
- Banks DE, Rowe AT, Mpofu P, & Zapolski TC (2017). Trends in typologies of concurrent alcohol, marijuana, and cigarette use among US adolescents: An ecological examination by sex and race/ethnicity. *Drug and alcohol dependence*, 179, 71–77. [PubMed: 28756102]
- Barona A, Miller JA, Cavazos-Rehg PA, & DeLucia-Waack JL (2009). Short Acculturation Scale for Hispanics--Youth. *Journal of Counseling and Development*, 87, 47–54.
- Barry AE, Chaney B, & Chaney JD (2011). The impact of truant and alcohol-related behavior on educational aspirations: A study of US high school seniors. *Journal of School Health*, 81, 485–492. doi:10.1111/j.1746-1561.2011.00618.x [PubMed: 21740434]
- Barry AE, King J, Sears C, Harville C, Bondoc I, & Joseph K (2016). Prioritizing alcohol prevention: Establishing alcohol as the gateway drug and linking age of first drink with illicit drug use. *Journal of School Health*, 86, 31–38. doi:10.1111/josh.12351 [PubMed: 26645418]
- Belgrave FZ, Brome DR, & Hampton C (2000). The contribution of Africentric values and racial identity to the prediction of drug knowledge, attitudes, and use among African American youth. *Journal of Black Psychology*, 26, 386–401. doi:10.1177/0095798400026004003
- Brooks AJ, Stuewig J, & Lecroy CW (1998). A family-based model of Hispanic adolescent substance use. *Journal of Drug Education*, 28(1), 65–86. [PubMed: 9567581]
- Browne MW, & Cudeck R (1992). Alternative ways of assessing model fit. *Sociological methods & research*, 21(2), 230–258.
- Castro FG, Stein JA, & Bentler PM (2009). Ethnic pride, traditional family values, and acculturation in early cigarette and alcohol use among Latino adolescents. *Journal of Primary Prevention*, 30(3–4), 265–92. [PubMed: 19415497]
- Cauce A, Felner RD, & Primavera J (1982). Social support in high risk adolescents structural components and adaptive impact. *American Journal of Community Psychology*, 10, 417–428. doi:10.1007/BF00893980 [PubMed: 7137129]
- Cheryomukhin A, & Peterson NA (2014). Measuring relational and intrapersonal empowerment: Testing instrument validity in a former Soviet country with a secular Muslim culture. *American Journal of Community Psychology*, 53, 382–393. doi:10.1007/10464-014-9649-z [PubMed: 24737007]
- Christens BD & Peterson NA (2012). The role of empowerment in youth development: A study of sociopolitical control as mediator of ecological systems' influence on developmental outcomes. *Journal of Youth and Adolescence*, 41, 623–635. doi:10.1007/s10964-011-9724-9 [PubMed: 22038436]
- Christens BD, Winn LT, & Duke AM (2016). Empowerment and critical consciousness: A conceptual cross-fertilization. *Adolescent Research Review*, 1(1), 15–27.

- Chuang C-WI, Chan C, & Leventhal AM (2016). Adolescent Emotional Pathology and Lifetime History of Alcohol or Drug Use With and Without Comorbid Tobacco Use. *Journal of Dual Diagnosis*, 12(1), 27–35. doi:10.1080/15504263.2016.1146557 [PubMed: 26829183]
- Clonan-Roy K, Jacobs CE, & Nakkula MJ (2016). Towards a model of positive youth development specific to girls of color: Perspectives on development, resilience, and empowerment. *Gender Issues*, 33, 96–121. doi:10.1007/s12147-016-9156-7
- De La Rosa M, Dillon FR, Rojas P, Schwartz SJ, & Duan R (2010). Latina mother–daughter dyads: Relations between attachment and sexual behavior under the influence of alcohol or drugs. *Archives of Sexual Behavior*, 39, 1305–1319. doi:10.1007/s10508-009-9498-2 [PubMed: 19399605]
- Diaz JE, Schrimshaw EW, Tieu HV, Nandi V, Koblin BA, Frye V (2020). Acculturation as a Moderator of HIV Risk Behavior Correlates Among Latino Men Who Have Sex with Men. *Archives of Sexual Behavior*, 49, 6, 2029–2043. doi:10.1007/s10508-019-01604-x [PubMed: 31858309]
- Enders CK and Bandalos DL (2001) The relative performance of full information maximum likelihood estimation for missing data in structural equation models, *Struct. Eqn. Model*, 8, 430–457.
- Enders CK (2001) A primer on maximum likelihood algorithms available for use with missing data, *Struct. Eqn. Model*, 8, 128–141.
- Fisher S, Zapolski TC, Sheehan C, & Barnes-Najor J (2017). Pathway of protection: Ethnic identity, self-esteem, and substance use among multiracial youth. *Addictive behaviors*, 72, 27–32. [PubMed: 28343088]
- Galanti GA (2003). The Hispanic family and male-female relationships: An overview. *Journal of Transcultural Nursing*, 14, 180–185. doi:10.1177/1043659603014003004 [PubMed: 12861920]
- Garcia-Reid P, Reid RJ, & Peterson NA (2005). School engagement among Latino youth in an urban middle school context: Valuing the role of social support. *Education and urban society*, 37(3), 257–275.
- Garcia-Reid P (2007). Examining social capital as a mechanism for improving school engagement among low income Hispanic girls. *Youth & Society*, 39(2), 164–181.
- Gómez CA, & Marin BV (1996). Gender, culture, and power: Barriers to HIV-prevention strategies for women. *Journal of Sex Research*, 33, 355–362. doi:10.1080/00224499609551853
- Gray CM & Montgomery MJ (2012). Links between alcohol and other drug problems and maltreatment among adolescent girls: Perceived discrimination, ethnic identity, and ethnic orientation as moderators. *Child Abuse & Neglect*, 36(5), 449–460. doi:10.1016/j.chiabu.2012.03.002 [PubMed: 22608406]
- Gutiérrez DG (1995). *Walls and mirrors: Mexican Americans, Mexican immigrants, and the politics of ethnicity*. Univ of California Press.
- Guthrie BJ, & Flinchbaugh LJ (2001). Gender-specific substance prevention programming: Going beyond just focusing on girls. *The Journal of Early Adolescence*, 21(3), 354–372.
- Hadland SE, & Harris SK (2014). Youth marijuana use: State of the science for the practicing clinician. *Current Opinion in Pediatrics*, 26, 420–427. doi:10.1097/MOP.0000000000000114 [PubMed: 24914878]
- Harwell M, & LeBeau B (2010). Student eligibility for a free lunch as an SES measure in education research. *Educational Researcher*, 39, 120–131. doi:10.3102/0013189X10362578
- Hodder RK, Daly J, Freund M, Bowman J, Hazell T, & Wiggers J (2011). A school-based resilience intervention to decrease tobacco, alcohol and marijuana use in high school students. *BMC Public Health*, 11, 722–734. doi:10.1186/1471-2458-11-722 [PubMed: 21942951]
- Howard MC, & Hoffman ME (2017). Variable-centered, person-centered, and person-specific approaches: Where theory meets the method. *Organizational Research Methods*, 21(4), 846–876
- Kann L, McManus T, Harris WA, et al. Youth Risk Behavior Surveillance — United States, 2017. *MMWR Surveill Summ* 2018;67(No. SS-8):1–114. DOI: 10.15585/mmwr.ss6708a1externalicon.
- Kirby T, & Barry AE (2012). Alcohol as a gateway drug: A study of US 12th graders. *Journal of School Health*, 82, 371–379. doi:10.1111/j.1746-1561.2012.00712.x [PubMed: 22712674]
- Konietschke F, Bathke AC, Harrar SW, & Pauly M (2015). Parametric and nonparametric bootstrap methods for general MANOVA. *Journal of Multivariate Analysis*, 140, 291–301.

- Lardier DT Jr, Herr KG, Garcia-Reid P, & Reid RJ (2018). Adult youth workers' conceptions of their work in an under-resourced community in the United States. *Journal of Youth Studies*, 21(8), 1029–1044.
- Lardier DT Jr, Lee CYS, Rodas JM, Garcia-Reid P, & Reid RJ (2020). The Effect of Perceived College-Related Stress on Depression, Life Satisfaction, and School Satisfaction: The Coping Strategies of Hispanic College Students From a Hispanic Serving Institution. *Education and Urban Society*, 0013124519896845.
- Lee J, & Hahm HC (2010). Acculturation and sexual risk behaviors among Latina adolescents transitioning to young adulthood. *Journal of Youth and Adolescence*, 39(4), 414–427. [PubMed: 20020189]
- Li C (2013). Little's test of missing completely at random. *The Stata Journal*, 13(4), 795–809.
- Li Y, & Warner LA (2015). Parent–adolescent conflict, family cohesion, and self-esteem among Hispanic adolescents in immigrant families: A comparative analysis. *Family Relations*, 64, 579–591. doi:10.1111/fare.12158
- Littenberg-Tobias J, & Cohen AK (2016). Diverging paths: Understanding racial differences in civic engagement among White, African American, and Latina/o adolescents using structural equation modeling. *American journal of community psychology*, 57(1–2), 102–117. [PubMed: 27217315]
- Lorenzo-Blanco EI, Unger JB, Baezconde-Garbanati L, Ritt-Olson A, Soto D. (2012) Acculturation, Enculturation, and Symptoms of Depression in Hispanic Youth: The Roles of Gender, Hispanic Cultural Values, and Family Functioning. *Journal of Youth and Adolescence*, 41(10), 1350–1365. doi:10.1007/s10964-012-9774-7 [PubMed: 22627624]
- Lorenzo-Blanco EI, Unger JB, Ritt-Olson A, Soto D, Baezconde-Garbanati L(2013). A longitudinal analysis of Hispanic youth acculturation and cigarette smoking: the roles of gender, culture, family, and discrimination. *Nicotine & tobacco research*, 15(5), 957–968. doi:10.1093/ntr/nts204 [PubMed: 23109671]
- Lorenzo-Blanco EI, Schwartz SJ, Unger JB, Zamboanga BL, Des Rosiers SE, Baezconde-Garbanati L, Huang S, Villamar JA, Soto D, & Pattaroyo M (2016). Alcohol use among recent immigrant Latino/a youth: acculturation, gender, and the Theory of Reasoned Action. *Ethnicity & Health*, 21(6), 609–627. <https://doi-org.ezproxy.montclair.edu/10.1080/13557858.2016.1179723> [PubMed: 27220730]
- Matsunaga M, Hecht ML, Elek E, & Ndiaye K (2010). Ethnic identity development and acculturation: A longitudinal analysis of Mexican-heritage youth in the Southwest United States. *Journal of cross-cultural psychology*, 41(3), 410–427. [PubMed: 20740051]
- Marsiglia FF, Kulis S, Hecht ML, & Sills S (2004). Ethnicity and ethnic identity as predictors of drug norms and drug use among preadolescents in the US Southwest. *Substance use & misuse*, 39(7), 1061–1094. [PubMed: 15387204]
- McNeish D (2017) Missing data methods for arbitrary missingness with small samples, *Journal of Applied Statistics*, 44, 24–39. doi: 10.1080/02664763.2016.1158246
- Molix Lisa, and Bettencourt B. Ann. Predicting well-being among ethnic minorities: Psychological empowerment and group identity. *Journal of Applied Social Psychology* 40.3 (2010): 513–533.
- National Institute of Drug Abuse [NIDA] (2019). Miech Richard A., Johnston Lloyd D., Bachman Jerald G., O'Malley Patrick M., and Schulenberg John E. *Monitoring the Future: A Continuing Study of American Youth (8th- and 10th-Grade Surveys)*, 2017. Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributor], 2018-10-29. 10.3886/ICPSR37183.v1
- Opara I, Rodas EIR, Lardier DT, Garcia-Reid P, & Reid RJ (2020). Validation of the Abbreviated Socio-Political Control Scale for Youth (SPCS-Y) Among Urban Girls of Color. *Child and Adolescent Social Work Journal*, 37(1), 83–95. [PubMed: 32982036]
- Opara I, Lardier DT Jr, Reid RJ, & Garcia-Reid P (2019). “It All Starts With the Parents”: A Qualitative Study on Protective Factors for Drug-Use Prevention Among Black and Hispanic Girls. *Affilia*, 34(2), 199–218. [PubMed: 31341350]
- Ozer EJ, & Schotland M (2011). Psychological empowerment among urban youth: Measure development and relationship to psychosocial functioning. *Health Education & Behavior*, 38(4), 348–356. [PubMed: 21606379]

- Peterson NA, Peterson CH, Agre L, Christens BD, & Morton CM (2011). Measuring youth empowerment: Validation of a sociopolitical control scale for youth in an urban community context. *Journal of Community Psychology*, 39, 592–605. doi:10.1002/jcop.20456
- Peterson NA, & Reid RJ (2003). Paths to psychological empowerment in an urban community: Sense of community and citizen participation in substance abuse prevention activities. *Journal of Community Psychology*, 31, 25–38. doi:10.1002/jcop.10034
- Peterson NA, & Hughey J (2004). Social cohesion and intrapersonal empowerment: gender as moderator. *Health education research*, 19(5), 533–542. [PubMed: 15150135]
- Peterson CH, Buser TJ, & Westburg NG (2010). Effects of familial attachment, social support, involvement, and self-esteem on youth substance use and sexual risk taking. *Family Journal*, 18, 369–376. doi:10.1177/1066480710380546
- Peterson NA, Speer PW, Peterson CH, Powell KG, Treitler P, & Wang Y (2017). Importance of auxiliary theories in research on university-community partnerships: The example of psychological sense of community. *Collaborations: A Journal of Community-Based Research and Practice*, 1(1), 5.
- Phinney JS (1989). Stages of ethnic identity development in minority group adolescents. *The Journal of Early Adolescence*, 9, 34–49. doi:10.1177/0272431689091004
- Phinney JS, Horenczyk G, Liebkind K, & Vedder P (2001). Ethnic identity, immigration, and well-being: An interactional perspective. *Journal of Social Issues*, 57, 493–510. doi:10.1111/0022-4537.00225
- Phinney JS, & Ong AD (2007). Conceptualization and measurement of ethnic identity: Current status and future directions. *Journal of Counseling Psychology*, 54, 271–281. doi:10.1037/0022-0167.54.3.271
- Podsakoff PM, MacKenzie SB, & Podsakoff NP (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual review of psychology*, 63, 539–569.
- Purcell D (2009). Examining racial differences in the effects of substance abuse on high school students' academic achievement. *Sociological Focus*, 42, 20–38. doi:10.1080/00380237.2009.10571341
- Rivas-Drake D, Seaton EK, Markstrom C, Quintana S, Syed M, Lee RM, ... & Ethnic and Racial Identity in the 21st Century Study Group. (2014). Ethnic and racial identity in adolescence: Implications for psychosocial, academic, and health outcomes. *Child development*, 85(1), 40–57. [PubMed: 24490891]
- Schinke SP, Fang L, Cole KC, & Cohen-Cutler S (2011). Preventing substance use among Black and Hispanic adolescent girls: Results from a computer-delivered, mother–daughter intervention approach. *Substance use & misuse*, 46(1), 35–45.
- Schwartz SJ, Zamboanga BL, & Jarvis LH (2007). Ethnic identity and acculturation in Hispanic early adolescents: Mediated relationships to academic grades, prosocial behaviors, and externalizing symptoms. *Cultural Diversity and Ethnic Minority Psychology*, 13(4), 364. [PubMed: 17967105]
- Smith PD, & Propst DB (2001). Are topic-specific measures of socio-political control justified? Exploring the realm of citizen participation in natural resource decision making. *Journal of Community Psychology*, 29, 179–187. doi:10.1002/1520-6629(200103)29:2<179::AID-JCOP1012>3.0.CO;2-A
- Speer PW, Peterson NA, Armstead TL, & Allen CT (2013). The influence of participation, gender and organizational sense of community on psychological empowerment: The moderating effects of income. *American Journal of Community Psychology*, 51(1–2), 103–113. [PubMed: 22847224]
- 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. (2014). Ethnic and racial identity during adolescence and into young adulthood: An integrated conceptualization. *Child development*, 85(1), 21–39. [PubMed: 24490890]
- Van Aelst S, & Willems G (2011). Robust and efficient one-way MANOVA tests. *Journal of the American Statistical Association*, 106(494), 706–718.
- Vermunt JK, & Magidson J (2013). *Technical guide for Latent GOLD 5.0: Basic, advanced, and syntax* Belmont, MA: Statistical Innovations Inc.

- Vieno A, Lenzi M, Canale N, & Santinello M (2014). Italian validation of the sociopolitical control scale for youth (SPCS-Y). *Journal of Community Psychology*, 42, 463–468. doi:10.1002/jcop.21621
- Wallace JM Jr., Bachman JG, O'Malley PM, Schulenberg JE, Cooper SM, & Johnston LD (2003). Gender and ethnic differences in smoking, drinking and illicit drug use among American 8th, 10th and 12th grade students, 1976–2000. *Addiction*, 98, 225–234. doi:10.1046/j.1360-0443.2003.00282.x [PubMed: 12534428]
- Wallerstein N, Duran B, Oetzel JG, & Minkler M (2018). *Community-based participatory research for health*. San Francisco, CA: John Wiley.
- Walters GD (2017). The drug–crime connection in adolescent and adult respondents: Interaction versus addition. *Journal of Drug Issues*, 47, 205–216. doi:10.1177/0022042616681274
- Watts RJ, Diemer MA, & Voight AM (2011). Critical consciousness: Current status and future directions. *New directions for child and adolescent development*, 2011(134), 43–57. [PubMed: 22147600]
- West SG, Taylor AB, & Wei W (2012). Model fit and model selection in structural equation modeling. In Hoyle RH (Ed.), *Handbook of structural equation modeling* (pp. 209–231). New York, NY: Guilford Press.
- Winward JL, Hanson KL, Tapert SF, & Brown SA (2014). Heavy alcohol use, marijuana use, and concomitant use by adolescents are associated with unique and shared cognitive decrements. *Journal of the International Neuropsychological Society*, 20, 784–795. doi:10.1017/S1355617714000666 [PubMed: 25241623]
- Zamboanga BL, Tomaso CC, Kondo KK, and Schwartz SJ. 2014. “Surveying the Literature on Acculturation and Alcohol use among Hispanic College Students: We’re not all on the Same Page.” *Substance Use and Misuse* 49: 1074–1078. [PubMed: 24779508]
- Zapolski TC, Fisher, S. B, Banks DE, Hensel DJ, & Barnes-najor J (2017). Examining the protective effect of ethnic identity on drug attitudes and use among a diverse youth population. *Journal of Youth and Adolescence*, 46(8), 1702–1715. doi:<http://dx.doi.org.ezproxy.cul.columbia.edu/10.1007/s10964-016-0605-0> [PubMed: 27830403]
- Zimmerman MA (1995). Psychological empowerment: Issues and illustrations. *American Journal of Community Psychology*, 23, 581–599. doi:10.1007/BF02506983 [PubMed: 8851341]
- Zimmerman MA (2000). Empowerment theory. In Rappaport J & Seidman E (Eds.), *Handbook of community psychology* (pp. 43–63). Boston, MA: Springer. doi:10.1007/978-1-4615-4193-6\_2
- Zimmerman MA, & Zahniser JH (1991). Refinements of sphere-specific measures of perceived control: Development of a sociopolitical control scale. *Journal of Community Psychology*, 19, 189–204. doi:10.1002/1520-662



**Figure 1.** Second-order CFA of the Abbreviated Intrapersonal Psychological Empowerment Scale of PE among Hispanic Girls.



**Table 1.**

Correlations and descriptive statistics for study variables (N = 490)

	1	2	3	4	5	6	7
1. Intrapersonal PE	---	.87**	.86**	.28**	.33**	-.19**	.10*
2. Leadership Competence		---	.51**	.21**	.30**	-.12**	.08
3. Policy Control			---	.31**	.27**	-.10**	.09*
4. Social Support				---	.35**	.08	.01
5. Ethnic Identity					---	.04	.02
6. Life-time Drug and Alcohol Use						---	.06
7. Grade							---
<i>Mean</i>	3.54	3.62	3.47	24.28	53.00	10.92	---
<i>SD</i>	.66	.76	.75	6.66	10.32	5.73	---
<i>α</i>	.79	.70	.70	.78	.88	.85	---

Note. PE = Psychological Empowerment;

\*  $p < .05$ ,

\*\*  $p < .01$

Confirmatory Factor Analysis Model Fit statistics for Original 17-item SPCS-Y and Abbreviated 8-item SPCS-Y among Hispanic Girls

**Table 2.**

Measures of Fit	Models		
	Model 1 Two-Factor 17-item SPCS-Y Model	Model 2 Abbreviated 8-item Two-Factor SPCS-Y Model	Model 3 Abbreviated 8-item Higher order Two-Factor SPCS-Y Model
$\chi^2$	182.64	26.59	22.49
df	101	22	21
p-value	.005	.25	.37
GFI	.95	.98	.99
AGFI	.94	.97	.97
CFI	.97	.97	.99
TLL	.97	.97	.99
RMSEA	.04 [.036, .08]	.02 [.001, .04]	.01 [.001, .04]
AIC Model	286.62	82.39	85.49
AIC Saturated	306.00	90.00	90.00
BIC	512.32	225.38	171.15

Note. df=degree of freedom; GFI= Goodness of Fit Index; AGFI = Adjusted Goodness of Fit Index; CFI=comparative fit index; TL=Tucker-Lewis index; RMSEA= root mean square error of approximation; CI=confidence interval; AIC = Akaike Information Criterion ; BIC = Bayesian Information Criterion.

**Table 3.**

Standardized Item Loadings for Confirmatory Factor Analysis of the original 17-item SPCS-Y and Abbreviate 8-item SPCS-Y among Hispanic Girls (N = 490).

Item	Model 1 Two-Factor 17-item SPCS-Y Model		Model 2 Abbreviated 8-item Two-Factor SPCS-Y Model		Model 3 Abbreviated 8-item Higher order Two- Factor SPCS-Y Model	
	Lead Comp.	Policy Cont.	Lead Comp.	Policy Cont.	Lead Comp.	Policy Cont.
1. I am often a leader in groups.	.60		.60		.60	
2. I would prefer to be a leader rather than a follower.	.55					
3. I would rather have a leadership role when I'm involved in a group project.	.55		.60		.70	
4. I can usually organize people to get things done.	.69		.65		.72	
5. Other people usually follow my ideas.	.60					
6. I find it very easy to talk in front of a group	.65		.60		.61	
7. I like to work on solving a problem myself instead of letting someone else do it.	.50					
8. I like trying new things that are challenging to me	.60					
9. I enjoy participation because I want to have as much to say in my community or school as possible.		.60				
10. Youth like me can really understand what's going on with my community or school.		.51		.56		.68
11. I understand the important issues affecting my community or school.		.60				
12. Youth like me have the ability to participate effectively in community or school activities and decision-making.		.65		.65		.65
13. My opinion is important because it could make a difference in my community or school.		.58				
14. There are plenty of ways for youth like me to have a say in what my community or school does.		.66		.65		.65
15. It is important to me that I actively participate in local teen issues.		.60				
16. Most school or community leaders would listen to me.		.64		.65		.65
17. Many local activities are important to participate in.		.60				

*Note.* Lead comp = leadership competence; policy cont. = policy control

**Table 4.**

Latent class analysis model fit statistics for intrapersonal PE among Hispanic Girls

	LL	AIC (LL)	BIC(LL)	Npar	L <sup>2</sup>	df	p-value	Classification Error	
Model1	1-Cluster	-1498.9955	3013.9911	3047.4972	8	231.6546	160	0.00018	0.0000
Model2	2-Cluster	-1454.0972	2934.8982	2982.4536	12	141.8579	156	0.79	0.1388
Model3	3-Cluster	-1447.7773	2931.1513	2994.5668	16	129.2180	152	0.91	0.2034
Model4	4-Cluster	-1445.9286	2928.5462	3015.6225	20	125.5207	148	0.91	0.2175
<b>Model5</b>	<b>5-Cluster</b>	<b>-1443.6928</b>	<b>2931.8951</b>	<b>3035.9039</b>	<b>24</b>	<b>121.0490</b>	<b>144</b>	<b>0.92</b>	<b>0.2909</b>
Model6	6-Cluster	-1436.5159	2937.4476	3046.3031	28	106.6952	140	0.98	0.1690
Model7	7-Cluster	-1435.1497	2939.0511	3068.3239	32	103.9629	136	0.98	0.2565
Model8	8-Cluster	-1429.2613	2949.3790	3081.3002	36	92.1862	132	1.00	0.2214
Model9	9-Cluster	-1421.0062	2950.6253	3089.5430	40	75.6759	128	1.00	0.1400
Model10	10-Cluster	-1419.8665	2956.4855	3112.0166	44	73.3965	124	1.00	0.1789

Note. Bold text indicates the preferred model. BIC = Bayesian information criterion, AIC = Akaike information criterion, LL = log likelihood, L<sup>2</sup> = likelihood ratio Chi square statistic, df = degrees of freedom, Npar = Number of parameters

MANOVA Results Between Policy Control and Leadership of the SPCS-Y on Social Support, Ethnic Identity, and Life-time Drug and Alcohol Use (N = 490)

Table 5.

	Social Support		Ethnic Identity		Life-time Drug and Alcohol Use	
	Cluster Mean (95% CI)	SE	Cluster Mean (95% CI)	SE	Cluster Mean (95% CI)	SE
Cluster 1: Moderate leadership competence and policy control (37.7%)	24.60 [23.88 – 25.77]	.47	54.33 [52.60 – 55.28]	.67	10.79 [12.95 – 14.91]	.49
Cluster 2: Low PE (29.9%)	21.61 [21.32 – 23.44]	.54	50.06 [48.09 – 51.73]	.91	11.60 [13.51 – 16.05]	.64
Cluster 3: Moderate leadership competence and low policy control (10%)	23.27 [21.50 – 24.58]	.77	54.35 [42.11 – 56.58]	1.11	9.50 [8.49 – 10.50]	.79
Cluster 4: Moderate leadership competence and high policy control (11.1%)	26.63 [23.84 – 27.67]	.95	54.50 [49.37 – 56.56]	1.79	10.08 [8.70 – 11.46]	.93
Cluster 5: High PE (11.1%)	27.15 [25.27 – 29.03]	.94	56.84 [54.76 – 59.27]	1.12	10.92 [10.28 – 11.56]	.77
Univariate F (4, 487)	5.42***		3.32***		1.85*	
Cluster Mean differences, p < .05	5 > 1,2,3; 4 > 2,3		5, 4 > 2; 1 > 2		2 > 3, 4, 5	

Note. Wilks' Lambda = .90,  $F(12, 648.50) = 2.78, p < .001$ .

Control: Grade

\*  $p < .05$ ;

\*\*  $p < .01$ ;

\*\*\*  $p < .001$ .