Substance Use Among Urban Adolescents of Color: Exploring the Effects of Ethnic Identity, Psychological Empowerment, and Race

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SUBSTANCE USE AMONG URBAN ADOLESCENTS OF COLOR: EXPLORING THE EFFECTS OF ETHNIC IDENTITY, PSYCHOLOGICAL EMPOWERMENT, AND RACE

A DISSERTATION

Submitted to the Faculty of
Montclair State University in partial fulfillment
of the requirements
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by
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THE GRADUATE SCHOOL

DISSERTATION APPROVAL

We hereby approve the Dissertation

SUBSTANCE USE AMONG URBAN ADOLESCENTS OF COLOR: EXPLORING
THE EFFECTS OF ETHNIC IDENTITY, PSYCHOLOGICAL EMPOWERMENT,
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ABSTRACT

SUBSTANCE USE AMONG URBAN ADOLESCENTS OF COLOR: EXPLORING THE EFFECTS OF ETHNIC IDENTITY, PSYCHOLOGICAL EMPOWERMENT, AND RACE

by David T. Lardier Jr.

Advances in the substance use literature have occurred over the last three decades. However, the research examining drug and alcohol prevention-interventions among urban youth has occurred from a deficit lens, and practitioners have not fully considered how race or ethnicity impact interventions. There is a need in the research to understand the processes and outcomes of substance use among urban youth, particularly those processes that focus on strengths and empowerment among racial-ethnic minority groups. This study investigates the mediating relationship of ethnic identity between community-based perceptions and psychological empowerment and substance use; the mediating impact of psychological empowerment; and the moderating effect of race among Black and Hispanic urban adolescents (N = 1,480). Results from this study support the role of ethnic identity as a mediator, as well as the mediating role of psychological empowerment between ethnic identity and substance use. Implications for policy, practice, theory, and future research are discussed.

Keywords: Psychological empowerment, empowerment theory, substance (ab)use, urban youth, Black and Hispanic youth, ethnic identity, prevention.
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“Wisdom is not a product of your education, but a lifelong ability to acquire it.”

—Albert Einstein

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DEDICATION

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SUBSTANCE USE AMONG URBAN ADOLESCENTS OF COLOR: EXPLORING THE EFFECTS OF ETHNIC IDENTITY, PSYCHOLOGICAL EMPOWERMENT, AND RACE

CHAPTER I

INTRODUCTION

Statement of the Problem

In the last decade, substance use trends have steadily declined; however, drug and alcohol use remain a significant social problem among urban minority youth in the United States (U.S.; Office of the National Drug Control Policy [ONDCP], 2015a). In addition, substance use prevention-interventions and research aimed at adolescents has been largely developed and implemented from a deficit lens. These studies and intervention strategies emphasize the disruptive and disorganized environments in which young people live, and perpetuate society’s negative views of urban youth (e.g., criminals and drug users; Glaude Jr., 2016). Such research and interventions have also detracted from fully understanding the breadth of community resources available (e.g., mentors, cultural resources, and community organizations) that can aid in reducing substance use and other negative behaviors (Christens, 2012b; Christens & Lin, 2014; Paiva, Amoyal, Johnson, & Prochaska, 2014). In light of these limitations, empowerment theory over the past two decades has received more attention in substance use prevention and research.

Empowerment theory, methods, and approaches provide a promising framework that moves away from risks and focuses on wellness, strengths, and environmental assets (Zimmerman, 2000). Empowerment theory is also a helpful lens for examining and
developing civic action, and for understanding the confluence of mechanisms to reduce
drug and alcohol use among adolescents, in both urban and non-urban communities
(Christens, 2012b; Christens & Peterson, 2012; Peterson, 2014). In general,
empowerment focuses on motivating citizens toward change and action, and also
reducing negative behaviors, such as sexually risky behavior and substance use (Beeker,
Guenther-Grey, & Raj, 1998; Christens & Peterson, 2012; Zimmerman, 2000). However,
additional research is needed in the substance use prevention literature that examines
empowerment-based principles, such as community participation—i.e., active
engagement in the community or school—(Christens, Peterson, & Speer, 2011a;
Wandersman & Florin, 2000) and neighborhood sense of community (SOC)—i.e.,
perceived feelings of belongingness and a belief that community members will meet one
another’s needs (McMillan & Chavis, 1986; Peterson, Speer, & McMillan, 2008b).

In addition to expanding empowerment theory and related constructs, prevention
practitioners have not fully considered how race or ethnic identity may influence
empowerment-based intervention strategies, which has impacted the success of substance
use prevention (Christens & Peterson, 2012; Molix & Bettencourt, 2010) and the further
development of empowerment theory (Christens, 2012b; Speer & Peterson, 2000).
Research surrounding adolescent substance use has also been largely examined among
White American adolescents (Paiva et al., 2014). Consequently, less attention has been
given to marginalized groups such as Black and Hispanic youth in urban communities.
This is a limitation, considering minority groups such as Hispanics are the fastest
growing population in the United States (Murphey, Guzman, & Torres, 2014). Substance use prevention has unfortunately suffered because of these oversights.

In light of these limitations, there is a need in the substance use and empowerment literatures, to understand the processes and outcomes of drug and alcohol use among racial-ethnic minority young adults in urban communities. With an eye toward addressing these limitations, this study will examine the community-level processes (i.e., neighborhood sense of community and community participation) and culturally relevant constructs (i.e., ethnic identity) on outcomes such as psychological empowerment and substance use among Black and Hispanic urban youth. By addressing these limitations, through an empowerment lens, this study will move away from deficits, and instead toward strengths and empowerment, thus contributing to the empowerment literature base (Christens, 2012b; Christens & Lin, 2014; Christens & Peterson, 2012).

Before embarking on a discussion of empowerment theory, empowerment constructs, and the relationship these concepts have to adolescent substance use, the current rates of substance use in the U.S., and within the New York (N.Y.) metropolitan area, where the sample for this study were recruited, will be addressed. In addition, the following sections will also review the elements that researchers have found contribute to adolescent substance use over the past 40 years. Moreover, a summary of the three major theories in the substance use literature (e.g., Risky and Resiliency Theory, Social Learning Theory, and Problem Behavior Theory) will be examined, along with the limitations for each. Following these discussions, an overview of the theoretical concepts and definitions for empowerment theory, the conceptual framework for the study, and the
purpose of the study will be carried out. Later chapters will include an extensive literature review that supports the hypothesized theoretical models based in empowerment theory, the design and methods of the current study, the results for this dissertation, and a discussion of the findings, which include implications for prevention, policy, and future research.

**Background and Significance**

**Substance Use Trends in the United States**

Substance use, which includes the use of alcohol, tobacco, marijuana, and other drugs (e.g., cocaine, heroin, crack, methamphetamines) is among the top health concerns for adolescents within the U.S (ONDCP, 2015a). The impact of substance use is far-reaching, disrupting individual health and well-being, school success, family life, and community well-being (ONDCP, 2015a; Reiter, 2016). The fight against drug and alcohol use is, however, not a new issue for the U.S., but one that has been occurring since at least the prohibition of alcohol from 1920 to 1933, or the initial enforcement and control of marijuana, through the Marijuana Tax Act of the late 1930s (van Wormer & Rae Davis, 2008). Despite the efforts of political initiatives such as the War on Drugs, substance use remains a critical public health concern (Hedden et al., 2015).

**National trends.** Between 1979 and 2001, alcohol, marijuana, and lifetime heroin, cocaine, and methamphetamine use declined (ONDCP, 2015b). However, since 2002 these rates have rebounded among individuals 12 years of age and older (ONDCP, 2015b). For instance, accounting for more than a decade of population growth, approximately 12 million individuals, 12 years of age and older, used marijuana in 2002,
which can be compared to the nearly 20 million using marijuana in 2014 (ONDCP, 2015b). To further illustrate, 15.9 million individuals, 12 years of age and older, used any illicit drug in 2002 (ONDCP, 2015b), versus 27.0 million in 2014 (Hedden et al., 2015). Equally alarming is that in 2002, more than 2 million individuals used heroin (Hedden et al., 2015), compared to the more than 5 million using heroin in 2014 (ONDCP, 2015b). Furthermore, in 2014, 139.7 million people 12 years of age and older used alcohol in the 30 days prior to being surveyed and 66.9 million used tobacco in the 30 days prior to being surveyed (Hedden et al., 2015).

Substance Use Disorders (SUD) are also a concern from a clinical perspective for individuals in the United States, 12 years of age and older (Reiter, 2016). Substance Use Disorders (SUD) are defined as the recurrent use of alcohol or other drugs, which causes clinically and functionally significant impairments in daily living, such as health problems, disability, and failure to meet major responsibilities at home, in school, or at work (American Psychiatric Association, 2013). Substance use disorders are shown to lead to clinical and functional impairments in a person’s everyday life; as well as, increase the probability of comorbid mental health issues such as anxiety, depression, insomnia or hypersomnia, and sexual dysfunction disorders (American Psychiatric Association, 2013; Reiter, 2016).

As of 2014, nearly 21.5 million people, or 8% of the U.S. population, 12 years of age and older, were diagnosed with a substance use disorder (Hedden et al., 2015). Among those individuals diagnosed with a SUD, 17 million had an alcohol-using disorder, 7.1 million had an illicit drug using disorder, and 2.6 million were characterized
as suffering from both disorders (Hedden et al., 2015). The number of individuals who experienced a SUD in 2014 was also similar to rates between 2011 and 2013 (Hedden et al., 2015; Kann et al., 2016). When compared to the general population of young adults (i.e., 18 to 25 years of age) and adults, adolescents (i.e., 12 to 17 years of age) have been specifically targeted as highly vulnerable to using drugs and alcohol, and as also having a diagnosis of a SUD (ONDCP, 2015b).

Adolescent substance use. Adolescents are vulnerable to using drugs and alcohol, due to a number of “risk” factors specific to this developmental period (e.g., peer substance use, access to drugs and alcohol, and a perception that no harm can come to them; Bornstein, Jager, & Steinberg, 2013; Lerner, Lerner, von Eye, Bowers, & Lewin-Bizan, 2011). In 2014, adolescents between the ages of 12 and 17 accounted for nearly 25% of the U.S. population (Federal Interagency Forum on Child and Family Statistics, 2015). However, 2.3 million, or 10%, of all U.S. adolescents used illicit substances in 2014 (Center for Behavioral Health Statistics and Quality, 2015), with youth 12 to 14 years of age exhibiting the greatest monthly use of substances (Hedden et al., 2015).

Rates of substance use among adolescents have remained relatively stagnant for more than a decade. This is evident by the 2.5 million adolescents who used illicit drugs in 2002 (ONDCP, 2015b) versus the 2.3 million in 2014 (Center for Behavioral Health Statistics and Quality, 2015). This is further exemplified by the nearly 7.4% or 1.8 million adolescents who were current marijuana users in 2014, which can be compared to the nearly equal percentage (7.2%) in 2002 (Hedden et al., 2015). Recent findings further specify that approximately 10% of adolescents used tobacco and 2% to 7% used either
heroin, cocaine, or another illicit drug (Kann et al., 2016). In addition, 23% of adolescents engaged in alcohol use, 14% participated in binge drinking behavior, and 3.4% were heavy alcohol users (Kann et al., 2016). Furthermore, although underage drinking has declined since 2002, nearly 22.8% of youth 12 to 17 years of age engaged in underage alcohol use in 2015 (Kann et al., 2016). Of those youth who used drugs and alcohol, Black and Hispanic adolescents, who primarily live in urban communities, have been disproportionately impacted (Brook et al., 2013; Federal Interagency Forum on Child and Family Statistics, 2015; Reiter, 2016). This is largely a result of having greater access to alcohol, tobacco, and other drugs (Chen, Grube, & Gruenewald, 2010; Reid, Morton, Garcia-Reid, Peterson, & Yu, 2013), and limited access to substance use treatment and quality prevention programs (Schmidt, Greenfield, & Mulia, 2006).

Minority adolescents. Black and Hispanic youth represent 15% (Federal Interagency Forum on Child and Family Statistics, 2015) and 25% (Murphey et al., 2014) of the total U.S. adolescent population (i.e., 12 to 17 years of age), respectively. As of 2014, nearly 20% of Black and 13% of Hispanic teens lived in impoverished urban communities (Federal Interagency Forum on Child and Family Statistics, 2015). As a result, a disproportionate percentage of urban minority adolescents have been found to use drugs and alcohol (Brook et al., 2013).

Although representing only 25% (Hispanic) and 15% (Black) of teens in the U.S., more than 30% of Hispanic and 25% of Black youth disclosed using marijuana and alcohol in 2014 (Kann et al., 2016). This can be compared to the 35% of Hispanic and 30% of Black youth who used marijuana in 1993, highlighting the relatively small
decline in marijuana use over the past two decades (ONDCP, 2015b). Research further suggests that urban minority youth are more likely to use drugs and alcohol later in life, when compared to White and Asian teens (Malone, Northrup, Masyn, Lamis, & Lamont, 2012; Office of the National Drug Control Policy, 2015b; Schwinn, Schinke, & Trent, 2010). As a result, ethnic and racial minority individuals are more likely to experience long-term physical and mental health consequences (Vaughan, Gassman, Jun, & Seitz de Martinez, 2015), as well as engage in higher rates of additional problem behaviors such as violence and risky sexual behavior (Center for Behavioral Health Statistics and Quality, 2015; Paiva et al., 2014; Reid, Yu, & Garcia-Reid, 2014). State-level data from the locale in which the study sample for the present study resides provides equally sobering results.

New York metro area and New Jersey trends. The New York metropolitan area of the United States is host to some of the highest substance use rates in the country, and is therefore considered a sentinel site to combat this epidemic (National Drug Early Warning System, 2015). In the N.Y. metro area, between 2005 and 2010 more than 20% of youth engaged in binge drinking, approximately 14% of adolescents used illicit drugs, and 7.5% were diagnosed with an SUD (Substance Abuse and Mental Health Services Administration [SAMHSA], 2014). In New Jersey, nearly 11% of adolescents used illicit substances in each year between 2009 and 2013 (New Jersey Department of Education [NJDE], 2013). More recent N.J. state-level data from 2014 indicates that 75% of surveyed Hispanic and 65% of surveyed Black adolescents reported lifetime alcohol use, compared to 60% of White and 50% of Asian students (NJDE, 2013). In addition, 21.8%
of Hispanic and 19.6% of Black youth drank alcohol before the age of 13 (Division for Adolescent and School Health [DASH], 2015). This is nearly double the rate of the total sample of teens (14%), and the 12% of Asian and 10% of White adolescents who drank alcohol before the age of 13 (DASH, 2015). Moreover, 9% of both Black and Hispanic youth used marijuana before the age of thirteen. This can be compared to 5% of the total sample, and the 4% of Asian and 3% of White students who used marijuana before the age of 13 (DASH, 2015).

Federal spending on substance use in the United States. The results presented previously highlight the prevalence and impact of substance use on U.S. society. Since 1975, the U.S. government has dedicated significant resources toward tracking the consequences of alcohol and drug use, as well as combatting this ongoing epidemic (Merikangas & McClair, 2012). It is estimated that the U.S. spends $600 billion annually on substance use, whether directly, through healthcare-related costs, or indirectly, due to loss of work and crime (Hedden et al., 2015; Reiter, 2016). However, despite the far-reaching impact of substance use on U.S. society, federal spending on drug and alcohol use prevention and treatment has reduced. In addition, federal spending tends to favor treatment over prevention, despite the importance of prevention.

Substance use has had a significant impact on U.S. society, and more specifically, U.S. adolescents; yet, federal spending for drug and alcohol use has steadily slowed to a 4.6% rate of increase annually since 2010, compared to 5.8% for all federal health spending (ONDCP, 2015a). In 2014, health-care-related costs reached $3.0 trillion, which amounts to roughly $9,523 per person (Centers for Medicare and Medicaid Services,
2015). However, of these trillions of dollars spent on healthcare in the U.S., $27.6 billion was dedicated to substance use prevention and treatment in the 2016 Fiscal Year (FY; ONDCP, 2015a). Moreover, of the $27.6 billion committed to substance use prevention and treatment, approximately, $1.4 billion was allocated to support prevention education and outreach (ONDCP, 2015a). What is more shocking is that only $85.7 million was earmarked to support Drug Free Communities (DFC) grant programs, which execute prevention education and macro-level policy changes to 600 local communities throughout the U.S. and Puerto Rico (ONDCP, 2015a). However, the amount spent for prevention of substance use can be compared to the much larger budget of $11 billion for substance use treatment, which was a 6.7% increase from FY 2015 (ONDCP, 2015a).

These distorted funding priorities highlight that the federal government privileges treatment opposed to prevention and evidence-based interventions (New York Drug Policy Alliance, 2015). In addition, much of these monies are dedicated to enforcement, prosecution, and incarceration of drug users, which are vestiges of the War on Drugs, opposed to appropriate prevention programming and effective treatment (New York Drug Policy Alliance, 2015). Therefore, notwithstanding some reduction in substance use overall, there continues to be a question as to the effectiveness of substance use prevention-interventions (Paiva et al., 2014), especially considering that adolescents and young adults continue to experience some of the highest rates of drug and alcohol use in the U.S. (ONDCP, 2015).

The rates of substance use discussed in this section display the scope of the problem based on prevalence and incidence data, among minority youth and the general
population of adolescents within the U.S. and in the state of New Jersey. Results also highlight the disproportionate funding priorities, and the significant impact of drug and alcohol use among adolescents of color in both the U.S. and state of N.J. These findings provide a strong argument as to why further research needs to examine the confluence of factors that influence drug and alcohol use among adolescents of color (ONDCP, 2015a, 2015b). In addition, the theoretical and practical effects that can reduce substance use, and empower these youth, demands further consideration; in particular, those mechanisms that focus on culturally sensitive and community-based resources.

**Factors Contributing to Adolescent Substance Use**

Adolescence is a critical period during the human lifespan (Bornstein et al., 2013), when numerous biological, cognitive, and socioemotional level changes occur (Gestsdottir, Urban, Bowers, Lerner, & Lerner, 2011). During this developmental period adolescents strive for autonomy, pushing limits (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004; Roth & Brooks-gunn, 2003) and negotiating their relationship between parents and peers (Bornstein et al., 2013). In addition, adolescence has been depicted as a period of risk and opportunity (Benson, Scales, Hamilton, & Sesma, 2006), where youth participate in new experiences that can either reward or hinder development (Lerner et al., 2011). One such experience that negatively affects adolescent development is substance use (Bornstein et al., 2013; Sterrett et al., 2014), which inevitably disrupts physical and mental health outcomes, as well as social relationships (Vaughan et al., 2015) and positive academic futures (Carolan & Lardier Jr., in press).
Numerous epidemiological explanations over the past 40 years are available on adolescent substance use, as this remains a critical public health concern that is comorbid with multiple physical, psychological, and social issues. For example, substance use during adolescence increases the “risk” for mental illnesses, such as depression, anxiety, and schizophrenia (Elkington, Bauermeister, & Zimmerman, 2010; Lardier Jr., Barrios, Garcia-Reid, & Reid, 2016; Sterrett et al., 2014). Substance use during these formative years also amplifies the probability of developing or contracting life threatening physical health conditions, such as heart disease, cancer, liver cirrhosis (van Wormer & Rae Davis, 2008), and HIV (Human Immunodeficiency Virus), through shared needles or risky sexual behaviors (Reid, Lardier Jr., Garcia-Reid, & Yu, 2016). In addition to the associated physical and psychological outcomes, substance use increases the probability of risky sexual behaviors (Ma, Fisher, & Kuller, 2014; Rashad & Kaestner, 2004; Reid et al., 2016; Reid et al., 2014), interpersonal violence (Kilpatrick et al., 2003; White & Lauritsen, 2012), poor academic futures (Bornstein et al., 2013; Carolan & Lardier Jr., in press), and living in poverty (Acevedo-Garcia, Osypuk, McArdle, & Williams, 2008). Many of these experiences also exist on a continuum, affecting adolescents’ development into adulthood (Schwinn et al., 2010; Vaughan et al., 2015).

Various explanations for adolescent substance use have been examined over the past 40 years. Some of these influences include, but are not limited to, genetic predisposition (Holloway, 1991; Lynskey, Agrawal, & Heath, 2010; Merikangas & McClair, 2012; Newcomb, Maddahian, & Bentler, 1986; Reiter, 2016), peer and familial substance use (Bornstein et al., 2013; Komro, Tobler, Maldonado-Molina, & Perry, 2010;
Reiter, 2016; Simons-Morton & Farhat, 2010), community discord (Brook et al., 2013), alcohol outlet density (Livingston, 2008; Reid, Hughey, & Peterson, 2003; Reid et al., 2013), and mental illness (Elkington, Bauermeister, & Zimmerman, 2011; Sterrett et al., 2014). Many of the causal mechanisms attributed to adolescent substance use disproportionately affect urban youth of color; more specifically affecting Black and Hispanic adolescents (Sterrett et al., 2014; Unger, 2012; Vaughan et al., 2015). Explanations related to adolescent substance use are discussed in this section and include genetic predisposition, family and sibling effects, peer effects, and community context.

**Genetic predisposition.** Although environmental and social explanations for adolescent substance use are compelling, the role of genetics cannot be overlooked. Genetic susceptibility to addiction or substance use is complex. A genetic predisposition to addiction or substance use does not determine one’s fate, but only how their body will respond to this drug (Reiter, 2016). However, differences in gene expression or **polymorphisms** can affect the way a person responds to drugs and alcohol (Reiter, 2016). Researchers have been plagued with numerous questions over the past 40 years, related to genetic inheritance. Why does alcoholism run in families? Why does one sibling use substances, while the other does not? Is alcohol-using behavior learned or inherited?

Genetic predisposition for using substances was among the first explanations examined by researchers attempting to determine why some youth used drugs and alcohol, and others did not (Goodwin et al., 1974; Kandel, 1980; Newcomb et al., 1986). Goodwin et al. (1974) conducted one of the earliest studies to identify hereditary determinants of substance use among 133 Danish men adopted as children by non-
alcoholic parents. These authors, using health records and in-person interviews, found that biological sons of alcoholics were nearly four times more likely to be alcoholics themselves than children of non-alcoholic biological parents (Goodwin et al., 1974). More recent studies conducted among adopted children have corroborated these results. For example, Kendler et al. (2012b), using a study population born between 1950 and 1993 in Sweden (N = 18,115), found that adopted children of biological parents with an SUD were more likely to engage in drug and alcohol use, when compared to those children without a substance-using biological parent. Stressors within the adopted child’s home (e.g., death of a parent, divorce, and parent-to-child maltreatment) also increased the probability of these youth using substances later in life (Kendler et al., 2012b). These results imply that those children who were both biologically/genetically likely to use substances, and raised in high-stress homes, were at a greater “risk” of using drugs and alcohol than those with neither predictor. Such results support a gene–environment (GxE) interaction model, which posits that genes and environment play a role in addiction susceptibility (Reiter, 2016). Beyond adoption studies, twin research has provided equally interesting results and further corroborated the GxE model.

The influence of heritability on substance use tends to increase dramatically during adolescence and young adulthood (Meyers & Dick, 2010; Verweij et al., 2010). Across twin studies, SUD heritability accounted for nearly 40% to 70% of the variability in use (Kendler et al., 2012a). This reveals that a large percentage of why someone uses substances can be explained through genetic heritability (Kendler et al., 2012a). Twin studies have further highlighted that monozygotic twin sets tend to engage in similar rates
of substance use, when compared to dizygotic twins (Merikangas & McClair, 2012). This is attributed to the earlier twin set sharing nearly identical genetic coding (Merikangas & McClair, 2012). Although such results support that genetic phenotype accounts for a significant proportion of substance-using behavior, genome-wide studies have revealed that dozens of genes contribute to substance use vulnerability (Verweij et al., 2010). The variability in genetic heritability also indicates the effect of additional confounding factors such as age, sex, nationality, or socioeconomic status (Verweij et al., 2010). Therefore, twin and genome-wide studies have helped to further recognize the complex interplay between genetics and environment. Bearing in mind that confounding predictors exist beyond genetic phenotype, specifically related to the environment, additional considerations need to be given to environmental and social experiences such as family, sibling, and peer influences.

**Family and sibling influences.** Adolescents are not passive recipients of external experiences, but actively shaped by their surroundings. Thus, the family represents a principle component in adolescent development (Lerner et al., 2011). Families play an integral role in buffering children from adjustment issues and negative behavior(s); as well as contributing to negative outcomes, such as substance use (Bush & Peterson, 2013; Lerner et al., 2011). Beyond the larger family structure, siblings and the sibling relationship represent a more specific element within the family that influences adolescent development (Begun & Berger, 2010; Caspi, 2010; McHale, Updegraff, & Whiteman, 2013), with the sibling relationship, in some instances, having more influence than parents or peers (Samek, Rueter, Keyes, McGue, & Iacono, 2015).
Family cohesion, a close parent-child relationship (Bush & Peterson, 2013; Lerner et al., 2011), and a positive sibling relationship (Buist, Dekovic, & Prinzie, 2013) provides a buffer that can help youth overcome significant adversity. For instance, within the sibling subgroup, a positive relationship with one’s sibling(s) increases companionship, particularly into adulthood, and sociability outside the home (i.e., among peers and adults; Bush & Peterson, 2013; McHale et al., 2013). Older siblings who do not use drugs or alcohol can also protect their younger sibling from potentially using drugs and alcohol (Gossrau-Breen, Kuntsche, & Gmel, 2010; Pomery et al., 2005).

Within the larger family structure, positive family functioning has been associated with school success (Annunziata, Hogue, Faw, & Liddle, 2006; Behnke et al., 2008; Wagner et al., 2010) and acculturation for young people born outside the U.S. (Guilamo-Ramos et al., 2009). More specifically, among Hispanic youth, familismo, or the idea that family is central to social support and overall well-being (DiBello, Gonzales, Young, Rodriguez, & Neighbors, 2015), has been credited with academic success (Garcia-Reid, Peterson, & Reid, 2015; Garcia-Reid, Reid, & Peterson, 2005) and reducing the probability of substance use (Calzada, Tamis-LeMonda, & Yoshikawa, 2012). Similarly, within the Black community, family support has also been cited as an equally important mechanism that is associated with school success (Nasim, Fernander, Townsend, Corona, & Belgrave, 2011) and positive life futures; however, within the Black community the African proverb “It takes a village to raise a child” also takes precedence in monitoring and supporting adolescents (Bennett, 2006; Berkel et al., 2009; McAdoo, 2002; Nasim et
al., 2011). Despite these positive filial experiences, the family and sibling relationships can also have a detrimental impact during adolescent development.

Families can represent barriers to empowerment and positive youth development. Youth who are exposed to parental substance use (Elkington et al., 2011; Wong, Zimmerman, & Parker, 2010) and parent-to-child maltreatment (Norman et al., 2012) are more likely to engage in substance-using behavior and suffer from mental health-related symptoms. For instance, children of alcoholics and drug users are more likely to exhibit symptoms of depression, anxiety, and substance-using behaviors than their peers with non-substance-using parents (Hanson, Venturelli, & Fleckenstein, 2011; Reiter, 2016). This can be attributed to the high stress level within the home, due to poor familial relations and family conflict, and more poor parental monitoring (Green, Zebrak, Fothergill, Robertson, & Ensminger, 2012). Studies have also revealed that youth living in homes where they have witnessed interpersonal violence (IPV), were exposed to physical or emotional abuse (Eiden, Molnar, Colder, Edwards, & Leonard, 2009), or were sexually abused are more likely to suffer from anxiety and depression, and engage in drug and alcohol use (Sartor, Agrawal, McCutcheon, Duncan, & Lynskey, 2008).

Beyond the impact of parent-to-child maltreatment and substance-using parents, siblings offer another source of influence that is correlated with adolescent substance use.

Within the sibling subsystem, studies have revealed that sibling aggression and substance use can contribute to violent and drug- and alcohol-using behaviors (Buist, 2010; Buist et al., 2013; Caspi, 2011; Samek et al., 2015; Solmeyer, McHale, & Crouter, 2014; Whiteman, Jensen, & Maggs, 2014). For example, sibling closeness and older
sibling’s drug and alcohol use has been found to influence the other sibling’s (i.e., younger sibling) substance-using behaviors (Samek & Rueter, 2011; Samek et al., 2015; Whiteman et al., 2014). This indicates that an older sibling’s substance use operates as a contagion for a younger sibling’s substance use. In addition, proactive sibling aggression also increases the likelihood for substance-using and other delinquent behavior (Caspi, 2011; Caspi & Barrios, 2016; Feinberg, Solmeyer, & McHale, 2012; Low, Shortt, & Snyder, 2012). Within stepfamilies, children with stepsiblings are likely to exclude them from the family (Roe, Bridges, Dunn, & O’Connor, 2006), which leads to decreased family belongingness (Leake, 2007) and increased internalizing and externalizing behaviors (Harcourt, Adler-Baeder, Erath, & Pettit, 2013; van Eeden-Moorefield & Pasley, 2013). It is clear from these studies that siblings play a prominent role in the use of drugs and alcohol during adolescence.

The results from these empirical investigations point toward the critical influence families, parents, and siblings can have on adolescent development. Although families are idiosyncratic, there are processes within the family that can be universally positive or detrimental (Reiter, 2016). These studies illustrate the importance of family cohesion and support on positive behavioral outcomes among diverse groups of individuals. Toward the extreme, these investigations also display the detrimental impact of filial and sibling substance use, as well as the impact IPV and sexual abuse can have on adolescent development. Although these results are not specific to any child population, they are more likely to manifest among youth living in impoverished urban communities (Brody et al., 2003; Brody, Stoneman, Smith, & Gibson, 1999; Martinez, Gudino, & Lau, 2013).
This is largely a result of additional sociocontextual experiences that are specific to youth living in urban centers, such as violence (Shmool et al., 2015; Vaughn, Salas-Wright, DeLisi, & Maynard, 2013), increased access to alcohol and other drugs (Jennings et al., 2014; Reid et al., 2003), and limited access to prevention services and treatment centers (Acevedo-Garcia et al., 2008; Astone, Popkin, Sandstrom, & Dubay, 2015). Therefore, there are additional sources of influence beyond the family that impact adolescent development and can increase the probability of substance use.

**Peer influences.** During adolescence the peer relationship tends to take precedence over the family and, as a result, plays a critical role developmentally (Bornstein et al., 2013; Nelson & DeBacker, 2007; Vaughan et al., 2015). During adolescence, peers provide youth with support, intimacy, and norms for socialization (Benson et al., 2006), attracting one another through shared dispositions, similar family values and environments, and related interests (Rees & Pogarsky, 2010; Simons-Morton & Farhat, 2010). Adolescents that engage in positive peer relationships adopt perceptions, opinions, and behaviors that are consistent with group norms and expectations (Benson et al., 2006; Simons-Morton & Farhat, 2010). This is a result of *friendship homophily*, which is defined as interacting with individuals that share similar attitudes, behaviors, values, and even often race and ethnicity (Syed & Juan, 2012). Thus, in urban communities where a multitude of ecological and structural barriers are present, positive peer relationships can offer support by enhancing strengths (Benson et al., 2006; Evans et al., 2012). However, peers through *friendship homophily* can also function as a catalyst that increases adolescents’ odds for using drugs and alcohol, and engaging in other forms
of negative behaviors (e.g., gang activity, violence; Komro et al., 2010; McMahon, Felix, Halpert, & Petropoulos, 2009; Reiter, 2016; Simons-Morton & Farhat, 2010).

More than two decades ago, Hawkins, Catalano, and Miller (1992) argued that peers promote both positive and negative behaviors that can work toward encouraging or protecting youth and young adults from substance use. In a more recent study conducted over 25 years, Fergusson, Boden, and Horwood (2008) found that the development of illicit drug use among adolescents and young adults was due, in part, to exposure to adversity and substance using peer groups. Komro et al. (2010) also discovered that peers influenced alcohol use trajectories among low-income youth of color longitudinally; with those teens who engaged in such networks during sixth grade at a higher “risk” of monthly cigarette and marijuana use during eighth grade. Cross-sectional studies have also revealed that adolescents who were part of negative peer networks or felt rejected by their peer group(s) had higher rates of aggression, experienced poorer academic futures (Gifford-Smith, Dodger, Dishion, & McCord, 2005), and had higher rates of mental illness and substance-using behaviors (Nasim, Belgrave, Jagers, Wilson, & Owens, 2007; Ramirez, Hinman, Sterling, Weisner, & Campbell, 2012; Trucco, Colder, & Wieczorek, 2011).

Peer group networks, as with families, have a significant impact during adolescence. These studies illustrate that birds of a feather flock together (Syed & Juan, 2012), or that positive and negative peer networks have a significant influence on adolescents’ behavioral outcomes. Extant research demonstrates that peers provide both access and opportunity, and reinforce youth behaviors (Cheadle, Walsemann, & Goosby,
Due to their influence on youth development, peers who engage in substance use and have low perceptions of substance use “risk” can negatively influence adolescent behavior. However, beyond such interpersonal experiences, community and neighborhood context also shape adolescent experiences and developmental trajectories.

**Community context.** The field of substance use and drug prevention research highlights the important role of social and community context in developmental processes (Beeker et al., 1998; Botvin, 2000; Bronfenbrenner & Morris, 2006; Kumpfer, Alvarado, & Whiteside, 2009; Pentz, 1999; Pentz et al., 1989). Researchers studying the negative effects of disorganized communities have examined the influence community context has on adolescent development. These researchers have argued that community processes influence adolescents’ thoughts and behaviors, and also their access to high-quality institutions and relationships, which if present can prevent potentially harmful outcomes (Dupere, Leventhal, & Vitaro, 2012). For example, access to high-quality educational institutions (Carolan & Lardier Jr., in press; Fasang, Mangino, & Brückner, 2014; Taines, 2011) or youth-serving organizations promotes positive life futures and can offset the negative experiences present in dangerous or violent communities (Christens et al., 2011a; Peterson & Reid, 2003; Speer et al., 2003; Speer, Peterson, Armstead, & Allen, 2012; Zimmerman, Israel, Schulz, & Checkoway, 1992; Zimmerman, Stewart, Morrel-Samuels, Franzen, & Reischl, 2011). However, research on disorganized urban communities also demonstrates that exposure to high rates of violence and easy access to drugs and alcohol can increase problem behaviors.
Community violence. Community violence intersects with poverty, resource segregation, and substance use (Acevedo-Garcia et al., 2008; Putnam, 2015). Adolescents and young adults aged 15 to 25 years commit and experience many of the violent crimes reported in the U.S., with those living in urban communities being disproportionately affected (Cauce, Cruz, Corona, & Conger, 2011; Vaughn et al., 2013). The results of community violence are arguably more detrimental during adolescence than other developmental periods, given the higher levels of stress generally experienced by most adolescents, due to both biological and social changes (Chen, Voisin, & Jacobson, 2013). Youth exposed to violence are also likely to perpetrate aggressive and violent behaviors, compared to teens not exposed to violence (Benhorin & McMahon, 2008). In addition to behavioral responses, adolescents exposed to community violence also experience secondary reactions. Such reactions include, but are not limited to, post–traumatic stress disorder, depression, and substance use (Chen et al., 2013; Garbarino, 2001; Garbarino, Kostelny, & Dubrow, 1991; Shmool et al., 2015; Travis & Leech, 2014). Therefore, community violence penetrates multiple systems of oppression and perpetuates inequality between those who experience violence and those who do not (McGee, 2015). In addition to community violence, alcohol and tobacco outlet density or access to legal and illicit substances can escalate violence in the community, youth substance use, and maintain inequality (Reid et al., 2003; 2013).

Access and alcohol outlet density. The link between alcohol consumption and crime is a critical public health concern, which is why understanding the environmental and social contexts that contribute to this relationship are so important. A large body of
substantive literature has emerged that identifies the relationship between physical availability of alcohol and rates of use. In addition, access to drugs and alcohol is related to youth underage drinking, tobacco use, and illicit drug use (Chen et al., 2010).

Scribner, MacKinnon, and Dwyer (1995) conducted one of the earliest investigations on the geographical association between city-specific assaultive violence rates and alcohol outlet density in Los Angeles County. When these researchers adjusted for sociodemographic factors, such as unemployment rate, poverty, and the proportion of minority population living in the county, they were able to demonstrate that alcohol outlet density explained an additional 7% of the variability in violent crime (Scribner et al., 1995). This indicates that the number of alcohol outlets within a small or confined area contributes significantly to the rate of violent crime in that same community. This was supported by Reid et al. (2003), who found in their study of a Midwestern U.S. city that alcohol outlet density increased the associated rates of assaultive violence. More recent investigations have maintained the relationship between alcohol outlet density, youth underage drinking (Chen et al., 2010), and violent crime (Jennings et al., 2014). In addition, tobacco outlet density studies (e.g., Peterson et al., 2010b; Reid et al., 2013) have displayed similar results, demonstrating that the highest concentrations of tobacco-selling establishments were in low-income communities. Such results have provided evidence on the strength of targeted marketing campaigns of tobacco and alcohol products in urban centers.

These investigations provide empirical evidence on the relationship between alcohol outlet density and community violence, and adolescent alcohol use. In addition,
these studies reveal the presence of targeted marketing campaigns for substances, such as alcohol and tobacco, in underserved, impoverished urban communities (Chen et al., 2010; Reid et al., 2013). The results from these studies and others have also steered federal and local prevention efforts toward developing collaborative relationships with public institutions, such as schools or community organizations (McCollister, French, & Fang, 2010; Pentz et al., 1989; Wood & Alleyne, 2010). For instance, policy initiatives have included raising minimum tobacco age and minimum drinking age requirements—both at the national and municipal levels—and reducing alcohol and tobacco outlets in impoverished urban communities (Campbell et al., 2009). In addition, the advent of Geographic Information System (GIS) mapping analyses, which are used to examine outlet density, have also enabled community-based initiatives to enact effective neighborhood change. For instance, Speer et al. (2003) illustrated that organizational members in Camden, New Jersey, used GIS mapping techniques to educate policy and community members on the social realities and blight of abandoned homes, which contributed to neighborhood violence, prostitution, and substance use. Therefore, community organization members were empowered to educate and reinforce to policy makers the dire need to raze these vacant homes and execute a plan to provide new affordable housing developments (Speer et al., 2003).

In summary, the presented empirical investigations in this section identify the influence family, siblings, peers, and community context have on substance use during adolescence. To curb the unbalanced rates of substance use among adolescents and the social and contextual effects influencing drug and alcohol use, federal funding and
prevention efforts have steadily increased over the last two decades to reduce youth drug and alcohol use (Office of the National Drug Control Policy, 2015b). However, monies focused on prevention have increased minimally over the last decade (New York Drug Policy Alliance, 2015). Nonetheless, prevention methods to reduce drug and alcohol use include alcohol and tobacco outlet reduction (Campbell et al., 2009), the creation of community-based prevention coalitions (Community anti-drug coalitions of America, 2010a; Reid & Garcia-Reid, 2013), and parent, family, and peer-influenced prevention-interventions—i.e., Life Skills (Botvin & Griffin, 2004).

Despite the breadth of substance use research, prevention continues to have less than favorable results (Paiva et al., 2014). This is largely attributed to deficit theories that emphasize environmental discord (Travis & Leech, 2014; van Wormer & Rae Davis, 2008) and federal efforts that have focused on reducing the supply of drugs entering the United States, as opposed to reducing the demand, which is based in the 1980s and 1990s movements in the War on Drugs (Levy-Pounds, 2013; New York Drug Policy Alliance, 2015). A paucity of research also highlights the positive and culturally specific community-level strengths that can aid in reducing substance use and empower youth toward enacting community change (Christens & Peterson, 2012; Fletcher & Sarkar, 2013; Paiva et al., 2014; Peterson, 2014; Peterson & Reid, 2003; Travis & Leech, 2014; van Wormer & Rae Davis, 2008).

**Major Theories in the Adolescent Substance Use Literature**

Numerous theories focus on the causal mechanisms of adolescent substance use and methods of buffering, or reducing, drug and alcohol use. Many of the prevailing
theories take into consideration the reasons for adolescent substance use and other problem behaviors. These theories share a few assumptions: a) adolescents live in a world of “risk” that influence problem behaviors; b) substance use and other negative behaviors are learned through positive and negative experiences; and c) “risk” and “protective factors,” and learned experiences occur within multiple systems. The most prevalent substance use theories that have informed prevention programs, such as D.A.R.E. (Drug Abuse Resistance Education), and prevention-intervention programs, such as Life Skills (Botvin & Griffin, 2004), are Risk and Resiliency Theory (Garmezy & Streitman, 1974; Hawkins et al., 1992; Masten, 2011), Social Learning Theory (Bandura, 1971, 1977), and Problem Behavior Theory (Jessor, 1987a, 1987b; Jessor, Chase, & Donovan, 1980). One of the major criticisms of these theories is the limited ecological focus and overt emphasis on “risks” (Paiva et al., 2014).

Risk and resiliency theory. Risk and resiliency theory has been used as a theoretical framework since the 1970s, when researchers were drawn to the phenomena of children “at-risk” for psychopathology, due to genetic or experiential circumstances, such as living in a highly chaotic community or home environments, living with a mentally ill parent, or the sudden death of a parent or close family member (Garmezy, 1971; Garmezy & Streitman, 1974). Conceptually, risk and resiliency theory frames how and why some youth succumb to “risks” and others are resilient. More recently, researchers have examined the conditions placing adolescents “at-risk,” such as parental substance use (Elkington et al., 2011), maltreatment (Martin, Gardner, & Brooks-Gunn, 2012; Norman et al., 2012), poverty (Acevedo-Garcia et al., 2008; Marshall & Haight,
2014), and community violence (Chen et al., 2013; Fagan, Wright, & Pinchevsky, 2014), with a large proportion of the studies specifically occurring in substance (ab)use research (e.g., Arthur, Hawkins, Pollard, Catalano, & Baglioni Jr, 2002; Egan, Van Horn, Monahan, Arthur, & Hawkins, 2012; Fletcher & Sarkar, 2013; Hawkins et al., 1992; Masten, 2001; Masten, 2011; Vaughan et al., 2015; Zimmerman et al., 2013). Through the process of examining “risks,” social scientists were expecting to find those individual qualities that made resilient children (Masten, 2001; Masten, 2011).

*Resilience* is defined as “an individual’s stability or quick recovery (or even growth) under significant adverse circumstances” (Leipold & Greve, 2009, p. 41). Resiliency is theorized to occur through two mechanisms (Hawkins et al., 1992). The first are *protective mechanisms*, defined as strengthening or additive effects (Hawkins et al., 1992; Masten, 2011; Ostaszewski & Zimmerman, 2006). The second are *compensatory effects*, which promote functions in individuals’ lives and compensate for exposure to “risks” (Fergus & Zimmerman, 2005; Ostaszewski & Zimmerman, 2006). Protective and “risk” factors are, however, not stationary constructs, but change in relation to one’s context and social location (Cicchetti & Rogosch, 2002; Gibbons et al., 2012; Masten, 2011; Ostaszewski & Zimmerman, 2006). Hence, community type (e.g., suburban, urban, or rural), socioeconomic status (SES), race, ethnicity, and gender intersect with a young person’s capacity to develop resiliency (Fletcher & Sarkar, 2013; Monahan, Egan, Van Horn, Arthur, & Hawkins, 2011). As a result, researching resiliency and recommending effective prevention methods is complicated (Fergus & Zimmerman, 2005; Zimmerman, 1995). Therefore, risk and resiliency theory is not without controversy or criticism (e.g.,
Masten (2001) articulated that risk and resiliency theory is associated with many negative assumptions about children who grow up facing adversity; this minimizes its strengths-based approach. In addition, risk and resiliency theory has not fully considered the culturally specific protective mechanisms present within racial and ethnic minority adolescents’ lives (Paiva et al., 2014). Therefore, this theory falls short in conceptualizing the how and why protective mechanisms are effective, and in what way to inform prevention-interventions (Fletcher & Sarkar, 2013). Of note, there is also a developing discussion that the use of “risk” or “at-risk” is interpreted as a deficits label (Garcia-Reid, van Eeden-Moorefield, Reid, Forenza, & Lardier Jr., 2016; Kirshner, 2015). As Kirshner (2015) explains, “risk . . . acts as a proxy in urban contexts, for poor African American and Latino youth who are in need of intervention” (p. 163). Those who recognize this use quotes to identify its association with pathology and oppression (Baldridge, 2014). Therefore, the term “at-risk” and “risk” is designated in quotes when used.

**Social learning theory.** Social learning theory (SLT) is one of the most applicable theories in substance use research, as it asserts that adolescents’ involvement in substance-using behaviors results from engagement, observation, and modeling of substance-using peers or other role models (Petraitis, Flay, & Miller, 1995). This theory has also found a home in empowerment research, which will be discussed later (Rappaport, 1987). As early as 1939, criminology sociologist Edward Sutherland proposed *Differential Association Theory*, and the relationship with delinquent friends
and behavior (Short, 1958). Building upon Sutherland’s work, researchers such as Akers (1977; 1979) and Bandura (1971, 1977) postulated that social behavior is acquired through imitation or modeling others’ behavior(s). These early researchers proposed that the learning and modeling of behavior is strengthened through reward (positive reinforcement), punishment (negative reinforcement), aversive stimuli (positive punishment), or loss of reward (negative punishment); through these past and present experiences, behavior is acquired and persists (Akers et al., 1979; Bandura, 1971). The use of this theory in substance use prevention has also helped elucidate how prevention programs can assist individuals in abstaining from drugs and alcohol, and also recognize how and why they initially engaged in use (Akers & Lee, 1996).

Decades of empirical evidence has substantiated the theoretical conjectures of SLT, supporting the use of this theory as a viable lens for examining and preventing adolescent substance use. Hawkins et al. (1992) emphasized the importance of SLT in guiding prevention research and practice. Hawkins and colleagues (1992) further discussed that risk and protective prevention-interventions are guided by the social development, modeling, and bonding individuals learn from teachers, peers, parents, and others. For example, Akers and Lee (1996) found that adolescent smoking, social learning, and modeling reinforced or stabilized smoking five years later, through peers’ smoking behavior and normative definitions of smoking. Additional investigations by Akers and Lee (1999) revealed the influence of peers and social normative definitions in adolescents’ marijuana use. More recent studies have expanded upon these findings
longitudinally and illustrated that affiliation with deviant peers increases substance-using behaviors into adulthood (Fujimoto & Valente, 2015; Trucco et al., 2011).

The results of present and past studies support SLT as a viable theoretical framework for examining adolescent substance use, as well as drawing attention to the fact that adolescents are susceptible to positive and negative interpersonal experiences. However, SLT has traditionally fallen short in a few areas of inquiry: 1) why adolescents become initially involved with, for example, substance-using peers; 2) the intersections of race, gender, class, and ethnicity as equally important factors that influence behavior; and 3) the influence of personal or intrinsic motivations (Petraitis et al., 1995; Pratt et al., 2010). This is despite Bandura’s (1977) and Ozer and Bandura’s (1990) discussions on self-efficacy, as these researchers argued that individuals with greater self-efficacy have higher intrinsic motivation, a stronger personal belief in their capabilities to exercise control over the environment, and a more solidified perception of their own capabilities to access resources to succeed beyond their current life circumstances. However, empowerment-based researchers have adopted SLT and Bandura’s discussions on self-efficacy and expanded on this intrapersonal construct through psychological empowerment, which is discussed later with the theoretical framework (Rappaport, 1987; Wandersman & Florin, 2000).

**Problem behavior theory.** Problem Behavior Theory (PBT) represents a third and final theory that has been influential in examining adolescent substance use. This theory has, over the past 40 years, generated strong empirical evidence (e.g., Biglan, 2004; Jessor, 1987a, 1987b; Jessor et al., 1980; Jessor & Jessor, 1977; Lombe, Yu,
Problem Behavior Theory is primarily used to understand problem behaviors, such as risky sexual behavior, substance use, deviance (Jessor & Turbin, 2014; Seo et al., 2013; Zamboanga et al., 2004), and more recently problematic internet usage (i.e., internet addiction; De Leo & Wulfert, 2013). The basic premise of PBT is psychosocial and considers problem behaviors, similar to other learned behaviors, as being executed for a specific and functional reason (Jessor, 1987b; Jessor & Jessor, 1977). Jessor (1987b) proposed from this psychosocial perspective that adolescent problem behavior(s) rested upon psychological, social, and behavioral characteristics, while imbedded within the larger social environment, which reinforced and derailed positive behavioral outcomes.

Based in PBT, evidence has suggested that the “intention” to use drugs or alcohol is a strongly associated with substance use among both youth and adults (Jessor, 1987a, 1987b; Mobley & Chun, 2013). The norms and values youth develop, through family and peers, has an influence on their personal values and beliefs (Jessor, 1987a, 1987b; Mobley & Chun, 2013). In turn, these norms and values youth develop interprets into the active engagement in problem (e.g., alcohol or drug use) or conventional behaviors (e.g., academic motivation; De Leo & Wulfert, 2013; Guilamo-Ramos, Litardo, & Jaccard, 2005; Jessor, 1987b; Jessor & Jessor, 1977). Jessor and colleagues (1977) further argued that problem behaviors work in opposition to conventional behaviors, which are oriented toward society’s traditional standards of appropriate conduct. Thus, susceptibility to specific problem behavior(s), whether due to psychological or personality manifestations, or the environmental system, increases the odds of participating in other problem
behaviors, and less involvement in conventional behaviors, such as academic achievement (Jessor, 1987b; Jessor & Jessor, 1977). Present investigations have provided evidence on the negative relationship between problem behaviors and positive-conventional behaviors (Donovan, Jessor, & Costa, 1991; Jessor & Turbin, 2014; Jessor, Van Den Bos, Vanderryn, Costa, & Turbin, 1995; Seo et al., 2013). Despite the supporting evidence and its long history, PBT is not without criticism.

A criticism of PBT is the paucity of research among ethnic groups (Mobley & Chun, 2013; Zamboanga et al., 2004). Recently, researchers have argued that the structure of problem behaviors may vary across ethnic groups, due to heterogeneity and culturally specific “risks,” such as issues associated with acculturation among Hispanic youth (Mobley & Chun, 2013; Zamboanga et al., 2004). In addition, similar to risk and resiliency theory, PBT focuses heavily on those mechanisms that contribute to problem behaviors, as opposed to strength-based factors that reduce health-compromising behaviors.

In summary, these three theories have enriched the adolescent substance use literature. However, these theories have focused largely on those “risk” mechanisms that contribute to adolescent substance use and other negative behaviors. Although this is important, focusing on “risk(s)” is a limitation that has hindered the progress of substance use prevention. By focusing on “risks,” researchers have problematized urban youth, supporting negative social views on youth of color (e.g., gang members, violent offenders, substance users, drug dealers; Kirshner, 2015; Travis & Leech, 2014). In addition, researchers have neglected the culturally specific and positive community
contributions available among urban youth of color to reduce the probability of drug and alcohol use (Christens & Peterson, 2012; Fletcher & Sarkar, 2013; Paiva et al., 2014). Moreover, many of these theories have been largely tested among either White European American samples, Black samples, or both (Masten, 2011; Mobley & Chun, 2013; Paiva et al., 2014; Travis & Leech, 2014). In light of these critiques, more research is needed that examines substance use and related constructs among additional ethnic-racial groups, such as Hispanic adolescent samples.

The Importance of Strengths-Based Theories

To modify the views associated with “at-risk” youth, and to provide culturally sensitive substance use prevention-interventions, strengths-based research and theory has become more prevalent. These studies have embraced not only empowerment theory and empowerment-based approaches, but have also shifted the focus toward cultural experiences and environmental assets within adolescents’ communities (e.g., Chan, Ou, & Reynolds, 2014; Christens & Dolan, 2010; Christens & Peterson, 2012; Christens, Peterson, Reid, & Garcia-Reid, 2013b; Garcia-Reid, Hamme Peterson, Reid, & Peterson, 2013; Hughey, Peterson, Lowe, & Oprescu, 2008; Kilpatrick et al., 2003; Kirshner, 2015; Peterson & Reid, 2003; Peterson et al., 2008b; Peterson, Speer, & Peterson, 2011b). This shift is something that the prevailing substance use prevention-intervention theories, previously discussed, failed to fully engage.

There continues, however, to be gaps in the conceptualization and empirical research testing of those mechanisms that enhance strengths and increase empowerment among urban youth of color (Christens & Dolan, 2010; Christens & Peterson, 2012;
Christens et al., 2013b; Christens et al., 2011a; Garcia-Reid et al., 2013; Peterson, 2014; Speer & Peterson, 2000; Travis & Leech, 2014). In addition, there is a paucity of research examining the community- and culturally specific mechanisms to reduce substance use, and increase empowerment among Black and Hispanic urban adolescents (Christens & Dolan, 2010; Christens & Peterson, 2012; Christens & Speer, 2015; Kirshner, 2015; Ozer & Schotland, 2011; Ozer & Bandura, 1990; Peterson, 2014; Travis & Leech, 2014). This study will attend to these limitations in an attempt to progress empowerment and substance use research.

**Theoretical Concepts and Definitions**

In light of the most recent substance use trends and the limited success of substance use prevention (Paiva et al., 2014), more diverse, strengths-based substance use prevention theories, methods, and research are needed. These strengths-based paradigms will work toward empowering and reducing harmful behaviors among urban youth of color, particularly Black and Hispanic young adults (Christens & Peterson, 2012; Travis & Leech, 2014). In addition, substance use research needs to pursue culturally sensitive perspectives of how one’s race or ethnic identity intersect with negative health seeking behaviors, and the capacity for empowering behaviors. Although there are numerous theories to examine adolescent substance use (as discussed earlier) and related predictors and outcomes, empowerment theory is used in this study as a strengths-based, environmentally focused prevention-intervention framework. Moreover, empowerment theory will provide the lens to examine the conceptual models discussed next.
The present study examines psychological empowerment as an intrapersonal level construct of empowerment theory (Zimmerman, 1995); however, empowerment theory is a multidimensional, ecologically based theory (Rappaport, 1987; Schulz, Israel, Zimmerman, & Checkoway, 1993; Zimmerman et al., 1992). Therefore, the other aspects of empowerment are considered within the context of the individual, and through the theoretically related conjectures of neighborhood sense of community (SOC) and community participation (Christens, 2012b; Rappaport, 1987; Speer, 2000; Zimmerman et al., 1992). Moving forward, empowerment theory, organizational and community empowerment, and, lastly, psychological empowerment are defined. Furthermore, a brief discussion unpacking who an empowered person is will take place.

**Empowerment Theory**

Substance use prevention has historically utilized the social learning theory (SLT; Bandura, 1977), risk and resiliency theory (Hawkins et al., 1992), and problem behavior theory to inform and design prevention protocols (Jessor, 1987a; Jessor & Jessor, 1977). These theoretical models have proven useful in extending our knowledge of adolescent substance use (Peterson, 2014; Zimmerman, 2000) and providing novel prevention-interventions. However, the deficit focus and limited testing of these previously utilized theoretical prevention-intervention paradigms, among minority samples, has detracted from fully identifying the resources necessary to reduce drug and alcohol use. As a result, substance use prevention-intervention researchers have recently drawn on empowerment theory as a theoretical paradigm to motivate citizens toward change and action, as well as a mechanism to influence health and individual well-being (Ozer, Newlan, Douglas, &
Empowerment. Empowerment-based prevention researchers study individual and contextual factors that promote civic action and critical consciousness or awareness of community issues, and prevent drug and alcohol use among diverse minority samples. This is unlike prior substance use prevention research that focused heavily on individual-level “risk” factors. As Zimmerman (2000) stated, empowerment focuses on “enhancing wellness instead of fixing problems, identifying strengths instead of cataloging ‘risk’ factors, and searching for environmental influences instead of blaming victims,” (p. 44).

Rooted in public health discussions and prevention-interventions that extend back to the mid-1800s (e.g., efforts to improve sanitation in urban areas; and involving community members in the diagnosis and solution of health problems), empowerment has largely focused on how to engage community members to improve community and city life (Beeker et al., 1998). Over the past several decades, empowerment has been used as a main theory in multiple areas of inquiry, including community-based health education (Hughey et al., 2008), community interventions (Speer et al., 2003; Zimmerman et al., 2011), the prevention of substance use (Peterson, Peterson, Agre, Christens, & Morton, 2011a; Peterson & Reid, 2003) and HIV/AIDS (Beeker et al., 1998), community psychology (Rappaport, 1987; Wandersman & Florin, 2000; Wandersman & Florin, 2003), and education (Freire, 1968[2014]; Stanton-Salazar, 2011). The extensive research in empowerment has positioned it as both a method for practice and a conceptual framework (Christens et al., 2011a).
Definitions of empowerment vary greatly, despite the breadth of research. For example, Mechanic (1991) defined empowerment as a process where “individuals learn to see a closer correspondence between their goals and a sense of how to achieve them and a relationship between their efforts and life outcomes” (p. 639). The Cornell Empowerment Group (1989) defined empowerment as an “intentional, ongoing process centered in the local community, involving mutual respect, critical reflection, caring, and group participation, through which people lacking an equal share of valued resources gain greater access to and control over these resources” (as cited in Zimmerman, 2000, p. 43). Outlining empowerment at multiple levels of analysis, and connecting the person and environment, Rappaport, Rappaport, Swift, and Hess (1984) defined empowerment as a process by which people, organizations, and communities gain mastery over their lives. However, based on Zimmerman’s (1995, 2000) work, empowerment has been more adequately defined as the positive interaction between the individual(s) and the environment that are developed through culturally focused groups, activities, and contexts. This definition of empowerment is the most holistic to date and the definition used for this study. Moreover, to adequately define empowerment theory, a distinction needs to be made between empowerment processes and empowerment outcomes.

Empowerment processes are those in which one attempts to develop control, obtain resources, and critically understand one’s environment (Zimmerman, 2000). Empowerment processes focus on providing a critical awareness of the environmental conditions impacting individuals lives (Gutiérrez, GlenMaye, & DeLois, 1995; Stanton-Salazar, 2011). These processes also provide an orientation for prevention to understand
and mobilize citizens toward community change and reduce negative behaviors—e.g., violence and substance use (Peterson & Reid, 2003). Empowerment outcomes refer to the operationalization of empowerment, so that researchers can study the consequences of citizens’ abilities to gain control over their community, or the effects of specific interventions (Zimmerman, 2000). For example, outcomes at the individual level of analysis may well include pro-social or negative-deviant behaviors, perceived control, self-efficacy (i.e., psychological empowerment), or other aspects of resource acquisition. Through empowerment-based experiences, individuals have a lower propensity to engage in negative behaviors, and an increased capacity to participate in pro-social behaviors, such as community or civic change and action (Peterson & Reid, 2003; Speer et al., 2012). Beyond the differences between empowering processes and outcomes, a thorough definition of empowerment theory requires a description of this theory at multiple levels of analysis (Zimmerman, 2000).

Schulz et al. (1993) and Zimmerman (2000) defined empowerment as being divided into three interdependent subcategories at the psychological, organizational, and community levels. This designates empowerment as an ecologically based theory for prevention (Christens & Lin, 2014; Christens & Peterson 2012). The psychological, organizational, and community-empowerment levels are mutually independent and both a cause and consequence of each other (Christens, 2012b; Christens & Lin, 2014; Peterson, 2014; Zimmerman, 2000). For example, empowered individuals are a basis for developing empowering organizations, which in turn effect the level of empowerment within the community. However, an individual’s connection to their community will
influence their individual empowerment and likelihood of engaging at the organization level. The present study will specifically examine aspects of empowerment through psychological empowerment, a highly supported intrapersonal theoretical dimension and predictor (Christens et al., 2011a; Peterson et al., 2011a; Zimmerman, 1995). However, before embarking on a discussion of psychological empowerment, organizational and community empowerment will be examined next, as these are important aspects of the broader empowerment theory.

**Organizational and community empowerment.** Empowerment is theorized as interconnected processes and outcomes at the psychological, organizational, and community levels (Christens & Lin, 2014). Participation at the organizational- and community-empowerment levels influences psychological empowerment, community participation, and perceived neighborhood sense of community (Christens & Peterson, 2012; Peterson, Lowe, Aquilino, & Schneider, 2005; Peterson et al., 2011b; Schulz et al., 1993; Zimmerman, 2000; Zimmerman et al., 1992). Therefore, community organizations and the larger community are important contexts for psychological empowerment (Christens & Lin, 2014).

**Organizational empowerment** (OE) refers to the growth, development of competencies, and leadership opportunities within an organization (e.g., schools or religious institutions) and among its members (Hughey et al., 2008; Schulz et al., 1993; Zimmerman, 2000). Organizations themselves may not change policies or influence community change, but instead afford members of the organization the resources to empower them to make changes. Empowering organizations are participatory in nature,
permitting members active involvement in decision making and action (Hughey et al., 2008; Peterson et al., 2008a; Zimmerman, 2000). Three subcategories further conceptualize organizational empowerment: *intraorganizational*, *interorganizational*, and *extraorganizational* components of organization empowerment (Schulz et al., 1993; Zimmerman, 2000). The *intraorganizational* components of organization empowerment (OE) are the internal characteristics of the organization that develop individual or psychological empowerment, such as adult–youth relationships (Ozer & Schotland, 2011; Schulz et al., 1993). The *interorganizational* component of OE characterizes the supportive linkages and exchanges between organizations (Ozer & Schotland, 2011; Schulz et al., 1993). Lastly, the *extraorganizational* component of OE is defined as the actions, such as policy change, community activities, or advocacy mediated through the organization that impacts the larger community-environment (Hughey et al., 2008; Ozer & Schotland, 2011; Schulz et al., 1993). Organizations, as a result, provide members with opportunities to develop a collective effort of control and a positive neighborhood sense of community and psychological empowerment. This helps members work toward community empowerment and participation (Ozer & Schotland, 2011).

*Community empowerment* refers to the individuals’ and organizations’ application of skills and resources toward a collective effort of control, competence, and community change (Hughey et al., 2008; Peterson et al., 2011a; Peterson et al., 2008a; Zimmerman, 2000). The World Health Organization (2016) defined community empowerment as a process of enabling communities to regain control and power over their collective livelihoods. Community empowerment further addresses the social, cultural, political,
and economic determinants of health (WHO, 2016). In addition, empowered communities engage citizens across organizations to impact policies and local conditions (Speer & Hughey, 1995). Empowered communities are also able to make changes in the community to improve quality of life and provide opportunities for community participation (Zimmerman, 2000). This type of community and neighborhood participation contributes to an individual’s psychological empowerment and empowerment potential (Beeker et al., 1998; Peterson & Reid, 2003). Beeker et al. (1998) articulated that interventions based in community empowerment are grounded in three assumptions:

1) Individual health problems are community based.

2) Communities must contribute to the definition of these problems if they wish to solve them (i.e., starting where the people are and allowing community members to be actively involved in change efforts).

3) The success of community interventions depends on the capacity of residents and stakeholders to address the defined problems.

However, the drive to engage in community change and empowerment-based activities varies because of organizational availability, community involvement, and psychological or intrapersonal empowerment experiences (Peterson et al., 2011b; Speer & Hughey, 1995; Zimmerman, 2000). This implies that empowered communities have accessible resources for all community residents such as recreational facilities, health and mental health care facilities, and protective services (e.g., police, fire; Zimmerman, 2000). Yet, urban communities have been more recently described as “opportunity deserts” (Glaude
This is largely due to social isolation (Christens, Speer, & Peterson, 2011b; Peterson & Reid, 2003; Young Jr., 2004) and limited resources and organizations available to youth, and other urban community members, which inevitably effects psychological empowerment and the ability to take action toward community change (Christens & Lin, 2014; Levinson, 2012; Speer et al., 2012).

**Psychological empowerment.** Early definitions of psychological empowerment focused on personal perceptions of control and poorly accounted for community context (Cattaneo & Chapman, 2010). Recently, researchers have grounded psychological empowerment in Bandura’s (1977; Ozer & Bandura, 1990) conjectures on self-efficacy. Therefore, psychological empowerment has been adequately defined as perceptions of control, an active approach to living, and an awareness of the sociopolitical system (Peterson et al., 2011a). Christens et al. (2011a) further articulated that psychological empowerment refers to community members’ abilities to cope. Therefore, psychological empowerment extends to ecological and structural influences, which in the field of substance use prevention has meant examining the community contexts individuals live in and utilizing these resources to help citizens cope with community issues, and empower them toward change (Christens et al., 2011a). Hence, empowering processes at the individual level of analysis are achieved through participation in community-based organizations or activities and working with others toward a common goal (Christens & Lin, 2014; Zimmerman, 2000).

Psychological empowerment is divided into four interrelating principles: *intrapersonal, interpersonal, and behavioral* empowerment, (Zimmerman, 1995, 2000)
and more recently, a fourth dimension, identified as relational empowerment (Christens, 2012b). These four interrelating principles shape psychological empowerment as a multidimensional construct (Christens & Lin, 2014; Peterson, 2014). Intrapsychic, or emotional empowerment, is defined as perceptions of influence, efficacy, and control within the social context, or the motivation to gain control over the environment (Christens & Peterson, 2012; Zimmerman, 2000). Intrapsychic empowerment describes how people think about themselves, and the beliefs about one’s ability to exert influence within their community or social context (Zimmerman, 1995, 2000). Those individuals who do not perceive they are capable of achieving goals are more likely to feel powerless, socially isolated, and at a higher “risk” of engaging in deviant behaviors (Rappaport, 1987; Zimmerman, 2000). Interpersonal, or cognitive empowerment describes an awareness of the social and community context that is developed through mentors, peers, and, or parents (Christens & Peterson, 2012). These bridging relationships provide sociocultural and contextual resources that increase an individual’s empowerment, understanding of social inequalities (i.e., critical consciousness), and the drive to engage actively at the organizational (e.g., school or church) and community levels (Christens, 2012b; Christens & Peterson, 2012; Speer et al., 2012). The interpersonal component also emphasizes leadership skills, mastery, and self-efficacy, which helps continue the bridge toward actively engaging in the community, or organization, and exerting influence over the environment. Behavioral empowerment highlights the active engagement at the organization and community levels, or community participation (Christens et al., 2011a). For adolescents, behavioral
empowerment may involve participating in school clubs, athletic teams, or outside-school organizations, such as the local YMCA (Young Men’s Christian Association; Christens & Lin, 2014). Importantly, behavioral empowerment emphasizes civic action and community engagement (Zimmerman, 1995, 2000). Behavioral empowerment is often measured through community participation (see Speer & Peterson, 2000), which is used in the present study. Lastly, Christens (2012b) theorized a fourth dimension, *relational empowerment*, which recognizes the extent different relationships facilitate empowerment, the means by which individuals are mobilized, and whether mentor-based relationships sustain empowerment-based activities.

Overall, the four interconnecting relationships of psychological empowerment illustrate the ways in which a person feels capable of influence (intrapersonal component), how the system works to assert and develop influence (interpersonal component), who people engage with to develop influence and action (relational component), and the actual engagement in the community context (behavioral component). Theoretically, individuals higher in psychological empowerment are likely to achieve goals, have a greater sense of community or community connection, and develop awareness for their contextual environment; in turn this increases empowerment and decreases negative behaviors, such as substance use (Christens & Peterson, 2012; Peterson & Reid, 2003). However, what does an empowered person look like?

**Empowered individuals.** Psychological empowerment is characterized as individual empowerment, or the dialectical relationship between individual characteristics (i.e., efficacy and assertiveness) and contextual processes (i.e., community
participation) that increase an individual’s sense of empowerment (Speer & Peterson, 2000; Zimmerman, 2000). This idea is based in systems theory, which articulates that individuals are shaped by social interactions within their external social world or that we live in relational worlds for which we both contribute to and are impacted by (Reiter, 2016; Smith & Hamon, 2013). Citizens are empowered through supportive activities and community organizations, which in turn increases psychological empowerment, an individual’s sense of community, and community empowerment (Christens & Peterson, 2012; Peterson, 2014; Peterson et al., 2011b; Speer et al., 2012; Zimmerman et al., 2011).

Empowered individuals also possess critical consciousness or the ability to critically analyze their environmental circumstances to better understand the root causes of inequality and oppressive conditions (Christens, Collura, & Tahir, 2013a). Through critical consciousness development individuals work toward achieving greater social justice, as well as personal efficacy or perceived capacity to make changes (Watts, Diemer, & Voight, 2011).

Empowered individuals possess a personal competence to exert control over the conditions affecting their lives (Rappaport, 1987; Zimmerman & Zahniser, 1991). For instance, through active engagement in positive and supportive community activities, such as beautification projects or mentor-based relationships, empowered individuals are able to develop a positive self-concept, self-efficacy, and the necessary skills and actions to impact their environment (Christens & Speer, 2015; Freire, 1968[2014]; Zimmerman, 2000). As another example, Speer et al. (2003) illustrated in their study out of Camden, New Jersey, that community members who had tacit knowledge of community needs,
access to adequate tools (i.e., research data), and contact with individuals who had power over change (i.e., policy makers) felt empowered or encouraged to make community-level changes, such as demolishing abandoned homes in their community. Speer and colleagues (2003) interpreted that empowered persons in this project had a strong connection to their community and felt competent in executing community change initiatives. In yet another study, Zimmerman et al. (2011) displayed how youth in an empowerment-based youth program—i.e., YES [Youth Empowerment for Peaceful Solutions]—were viewed. Zimmerman and colleagues (2011) emphasized that empowered adolescents in this program were more likely to engage in positive health seeking behaviors, as well as have greater leadership competence and self-efficacy to contribute beyond the program toward their community’s well-being, which was through specific community-based projects (e.g., community gardens, murals, and community forums). From a social work perspective, Gutiérrez et al. (1995) emphasized that clients can gain control over their lives and increase self-efficacy, or feel empowered, through participation in empowering neighborhood organizations. Similar emphasis has also been given to the importance of community mental health housing, foster care supportive housing (Forenza & Lardier Jr., 2017, in press; Gattino, Piccoli, Fassio, & Rollero, 2013), and battered women shelters as empowering locations (Busch & Valentine, 2000).

These studies begin to illustrate that an empowered person has greater self-efficacy, leadership, competence, and policy control (Zimmerman & Zahniser, 1991). Hence, empowered community members perceive greater control over their environmental circumstances and may also be less inclined to engage in negative
behavioral outcomes (Christens & Peterson, 2012; Zimmerman & Zahniser, 1991; Zimmerman et al., 2011). Studying empowerment is, however, context-specific, suggesting that empowerment takes different forms for different people in different contexts (Zimmerman, 2000). More recently, studies have presented that empowered citizens of color are more likely to engage in groups with similar racial-ethnic identities, as they feel these racially and ethnically similar groups will help them not only achieve their personal goals, but also the goals of their group and community (Hipolito-Delgado & Zion, 2015; Zimmerman & Zahniser, 1991). Therefore, how we understand empowerment should be examined in ways that are context-specific and integrate leadership competence, self-efficacy, policy control, and perceived competence (Zimmerman & Zahniser, 1991).

**Conceptual Framework of the Study**

Using empowerment theory as a theoretical lens, the conceptual frameworks presented in Figure 1 and Figure 2 (see Appendix A) illustrate the hypothesized relationships between perceptions of community belongingness (neighborhood sense of community), community action (community participation or action), ethnic identity, psychological empowerment, and substance use. The purpose of these models is to provide a theoretical and conceptual basis to the literature and an empirical framework to the analysis, which is examined in greater detail in Chapter 2. These frameworks extend the current literature by examining the mediating influence of ethnic identity (Figure 1) and psychological empowerment, and by adding race as a moderator (Figure 2). Mediation will explain the effects of the independent variables on outcome variables,

Figure 1 illustrates the mediating influence of ethnic identity on psychological empowerment, which builds toward testing the influence of ethnic identity on substance use. This conceptual model emphasizes the theoretical relationship between neighborhood sense of community (SOC) and community participation (i.e., engaging in community endeavors), while also examining the effects of ethnic identity—i.e., measured using the Multi-group Ethnic Identity Measure (MEIM; Phinney, 1989; Phinney & Ong, 2007)—on psychological empowerment and substance use. This theoretical model extends the current empowerment research by examining the influence of ethnic identity between perceived community experiences, psychological empowerment, and substance use (e.g., Garcia-Reid et al., 2013; Hipolito-Delgado & Zion, 2015). Proposing ethnic identity as a mediator magnifies the importance of examining culturally and context specific variables to inform both empowerment and substance use research. If ethnic identity mediates the effects between perceived community constructs, psychological empowerment, and substance use, it would demand that empowerment-based substance use prevention-intervention research and theory give ethnic identity more thoughtful attention.
The second conceptual model, presented in Figure 2, considers the mediating influence of psychological empowerment between ethnic identity and substance use, while also examining the moderating influence of race. This model extends the research on psychological empowerment as a mediating construct, and substantiates the theoretical relationship between ethnic identity, psychological empowerment, and substance use (e.g., Christens & Peterson, 2012). In addition, this model expands our knowledge of race as a demographic moderator in empowerment (e.g., Christens et al., 2013a; Christens et al., 2011a), ethnic identity (e.g., Umana-Taylor, 2010) and substance use research (e.g., Chen & Jacobson, 2012; Dahne et al., 2014). If psychological empowerment mediates the relationship between ethnic identity and substance use, it would support theoretical conjectures hypothesizing psychological empowerment as a mediating variable. Should race perform as a moderator, researchers would be encouraged to further explore these constructs between Black and Hispanic adolescents (e.g., Molix & Bettencourt, 2010; Ostaszewski & Zimmerman, 2006).

**Purpose of the Study**

In large part, the purpose of this study is to effectively understand the individual and available community-based resources that will both empower youth (i.e., increasing psychological empowerment, efficacy, and assertiveness to engage in community change) and reduce substance use. This dissertation will examine the effects of empowerment-based constructs on ethnic identity, substance use, and psychological empowerment. In addition, the mediating effect of ethnic identity and psychological
empowerment will be examined, as well as the moderating influence of race, among a cohort of urban Black and Hispanic adolescents.

Figure 1 illustrates, conceptually, the mediating relationship of ethnic identity between neighborhood sense of community (SOC), community participation, psychological empowerment, and substance use. This conceptual model is important because there is still a debate among researchers (Garcia-Reid et al., 2013; Gullan, Power, & Leff, 2013; Hipolito-Delgado & Zion, 2015) as to the role of ethnic identity among empowerment-based constructs (i.e., community participation, SOC, and psychological empowerment). If these analyses identify that ethnic identity mediates these effects, it is then reasonable to make recommendations for substance use prevention and future empowerment research, where ethnic identity has a more robust role for urban minority adolescents.

Figure 2 displays conceptually the mediating role of psychological empowerment, and the moderating effects of race on ethnic identity, psychological empowerment, and substance use. This model attends to the limited analyses in community prevention research that has examined the mediating influence of psychological empowerment (e.g., Christens & Peterson, 2012). This model also expands the limited and varying research in the empowerment, substance use, and ethnic identity research that has studied race as a moderator (e.g., Chen & Jacobson, 2012; Christens et al., 2013a; Christens & Peterson, 2012; Molix & Bettencourt, 2010; Ostaszewski & Zimmerman, 2006; Umana-Taylor et al., 2014). If these analyses identify that psychological empowerment mediates the relationship between ethnic identity and substance, it would support: 1) theoretical
conjectures emphasizing psychological empowerment as a mediating variable; and 2) the theoretical relationship between ethnic identity, psychological empowerment, and substance use. In addition, should race moderate these results, it would support theoretical assumptions that ethnic identity (Cokley, 2005, 2007; Schildkraut, 2010; Umana-Taylor et al., 2014), psychological empowerment (Cattaneo & Chapman, 2010; Christens & Dolan, 2010; Peterson, Hamme Peterson, & Speer, 2002), and substance use vary because of race (Dahne et al., 2014; Marsiglia, Kulis, Hecht, & Sills, 2004).

Through these analyses and using a sample of Black and Hispanic urban adolescents, this study will extend the research in empowerment and substance use prevention. This is taking into consideration that empowerment and the connection with ethnic identity and substance use is still largely understudied (Peterson, 2014). The results of this research will also increase our familiarity with the processes and outcomes that increase youth psychological empowerment (i.e., improved efficacy, drive to engage in community change, active engagement in community) and reduce substance use. To accomplish these tasks this study will discuss first, moving forward, the relevant literature surrounding the conceptual models. Second, this paper will review the research design, methodology, and plan for analysis. Following this review, the preliminary and main analytic results based on the hypothesized models will be discussed. Lastly, a detailed discussion of the results from this study will be conducted, along with the limitations of the study. In addition, implications for prevention, policy, theory, and future research will be put forth.
CHAPTER II

LITERATURE REVIEW

Empowerment is a distinct lens for developing interventions, creating social change, and testing strengths-based theoretical paradigms on positive and negative outcome behaviors. An empowerment-based approach highlights the cultural and community-based resources that empower youth and reduce negative outcome behaviors, such as substance use. To support the conceptual models in Figures 1 and 2, a thorough discussion will take place on: 1) neighborhood sense of community and community participation; 2) ethnic identity, as a related construct to empowerment, and an important developmental mechanism that positively effects well-being; 3) psychological empowerment, along with its relationship to ethnic identity and substance use; and 4) race as a moderator of ethnic identity, psychological empowerment, and substance use.

Neighborhood SOC and Community Participation: Predictors of Ethnic Identity, Psychological Empowerment, and Substance Use

Studies have demonstrated the important relationships between neighborhood sense of community (SOC), community participation, ethnic identity, psychological empowerment, and substance use (e.g., Christens & Peterson, 2012; Hughey et al., 2008; Peterson & Reid, 2003; Speer & Hughey, 1995; Speer & Peterson, 2000; Speer et al., 2012). While these concepts have been investigated separately among urban populations, no studies, to date, have examined these constructs simultaneously (Christens et al., 2011a; Peterson, 2014; Peterson et al., 2014). Therefore, there is an existing need to test these effects together, particularly among urban adolescent groups. Doing so will help
inform both prevention science and empowerment research. The existing research theorizes neighborhood SOC and community participation as related constructs (Christens & Lin, 2014; Peterson et al., 2008a; Schulz et al., 1993), and as having positive effects on ethnic identity (Anglin, Johnson-Pynn, & Johnson, 2012; Garcia-Reid et al., 2013) and psychological empowerment (Hughey et al., 2008; Speer et al., 2012), and a negative influence on substance use (Christens et al., 2011a; Holden, Messeri, Evans, Crankshaw, & Ben-Davies, 2004).

**Neighborhood sense of community.** Researchers have proposed that a positive neighborhood sense of community (SOC) is predictive of empowerment (McMillan, Florin, Stevenson, Kerman, & Mitchell, 1995), therefore playing a key role in empowerment processes (Christens & Lin, 2014). Neighborhood SOC is theorized as both a construct and a value that “Captures the complex and subtle social processes, which lead to cohesive and supportive communities” (Cantillon, Davidson, & Schweitzer, 2003, p. 324). Based on concepts of collective efficacy and neighboring (i.e., sharing among neighbors and mutual assistance; Perkins & Long, 2002), neighborhood SOC is further defined as perceived feelings of belongingness and a shared belief that community members will meet one another’s needs through these relationships (McMillan & Chavis, 1986; Peterson et al., 2008b; Sarason, 1974). Scholars agree that neighborhood SOC positively influences communities and individuals, whose lives are shaped by participation within their neighborhood or organizational environment (Elfassi, Braun-Lewensohn, Krummer-Nevo, & Sagy, 2016; Forenza & Lardier Jr., in press; Long & Perkins, 2003; Mammana-Lupo, Todd, & Houston, 2014).
Despite the present theoretical definitions, neighborhood SOC can be difficult to define and operationalize. This is due to the complexity and the multiple intersections present in individuals’ everyday lives in communities. McMillan and Chavis’s (1986) definition and conceptualization of neighborhood SOC is the most widely used throughout the empowerment literature (Wombacher, Tagg, Bürgi, & MacBryde, 2010). McMillan and Chavis (1986) emphasized four dimensions of neighborhood SOC:

1) *Membership* - feeling of belongingness or relatedness to the organization or community.
2) *Influence* - the perception of making a difference in the group and mattering as a member.
3) *Needs fulfillment* - the perception that members will meet one another’s needs, and resources will be shared through these relationships.
4) *Emotional connection* - a shared emotional connection or experience, through history or common places.

*Membership* emphasizes the sense of belonging to a group with a shared history, sense of safety, and personal commitment to the community. *Influence* considers how individuals make decisions collectively, and the effect the larger group has on one’s decision-making, which is crucial in how one develops psychological empowerment and positive behavioral outcomes (Nowell & Boyd, 2014). For example, as youth engage in their social networks the influence of peers, mentors, and local neighborhood organizations positively affects their personal beliefs about their group, other groups, and their ability to contribute to their community. *Needs fulfillment* is the belief that one’s community
will meet their needs. This suggests that youth who engage collectively with adults and peers in positive social networks are able to pass on sociocultural resources that not only meet one another’s needs, but also fulfill the needs of the larger community (Elfassi et al., 2016; Nowell & Boyd, 2014; Zimmerman & Zahnis, 1991). Finally, shared emotional connection is based on common experiences that strengthen social ties among members (Mannarini, Rochira, & Talò, 2014).

Building upon these theoretical conjectures Chavis, Hogge, McMillan, and Wandersman (1986) developed the Sense of Community Index (SCI) to empirically test the SOC model. Since the development of the SCI, researchers have questioned its validity (Long & Perkins, 2003; Peterson et al., 2008a; Peterson et al., 2008b). For instance, Proescholdbell, Roosa, and Nemeroff (2006) argued that SOC, measured through the SCI, was a multidimensional construct, despite having only been tested using unidimensional instruments. Following such critiques, the Brief Sense of Community Index (BSCI) was developed.

The BSCI is an 8-item multidimensional scale developed by Peterson et al. (2008b) that corresponds to McMillan and Chavis’s (1986) original SCI and theoretical conjectures. Peterson and colleagues (2008b) provided evidence, through Confirmatory Factor Analysis (CFA), for the multidimensionality of the neighborhood SOC construct. As a result of this research, the BSCI has been tested in a variety of social settings, including residential (Peterson et al., 2008b), college or university housing (Townley, Kloos, Green, & Franco, 2011), and substance use prevention (Hughey et al., 2008). The BSCI has also been tested among diverse international groups (Nowell & Boyd, 2014),
with studies conducted in Malaysia (Christens, Krauss, & Zeldin, 2016a), the German military (Wombacher et al., 2010), and Iranian community council (Cheryomukhin & Peterson, 2014). These studies provided further support for the hypothesized multidimensionality of the BSCI scale.

**Neighborhood SOC and adolescents.** The available literature on neighborhood sense of community (SOC) notes that an individual’s relationship to her or his community plays a key role in overall well-being and empowering processes (Christens & Lin, 2014). Adolescents who are attached to their communities tend to be highly satisfied with their neighborhoods, and place value on their community to improve and contribute to it collectively (Long & Perkins, 2003; Nowell & Boyd, 2014; Perkins & Long, 2002). Recently, studies have observed that participation within the community, school, or in neighborhood organizations enhances adolescent’s SOC, and in turn predicts psychological empowerment (Christens & Lin, 2014; Nowell & Boyd, 2014). Such findings support Chavis et al.’s (1986) theoretical conjectures, which articulate that residents must participate in their community at some level, and work together, to develop a perceived neighborhood SOC. In addition, studies within schools have further revealed that inclusive school environments, which involve adolescents collectively, can promote a strong SOC among students (Albanesi, Cicognani, & Zani, 2007; Vieno, Perkins, Smith, & Santinello, 2005). This in turn effects their relationship to the school and willingness to contribute positively to the school environment (Albanesi et al., 2007; Vieno et al., 2005). Neighborhood SOC, therefore, predicts aspects of well-being, self- and collective efficacy, and strong *communitarianism* or a community orientation.
focused on belongingness, support, and connection, which influences psychological empowerment (Long & Perkins, 2003; Perkins & Long, 2002). Evidence also suggests that neighborhood SOC is a powerful perceptive experience for urban youth, especially when empowering and limiting detrimental behaviors (Nowell & Boyd, 2014).

**Neighborhood SOC and urban adolescents.** Empowerment theorists have stressed that empowerment processes differ across contexts and among groups (Speer et al., 2012; Zimmerman, 2000). For example, youth living in impoverished urban communities tend to have limited access to community-organizational resources, which hinders community connectedness (i.e., neighborhood SOC) and psychological empowerment (Christens & Lin, 2014; McMillan et al., 1995; Speer et al., 2012). Recent studies have corroborated this, revealing that income, a proxy for social class and socioeconomic status (SES), moderates the relationship between neighborhood SOC, community participation, and psychological empowerment (Christens et al., 2011b; Speer et al., 2012).

Neighborhood SOC is effected by the number and types of community organizations available to adolescents in low versus high SES communities (Christens et al., 2013b; Christens et al., 2011b; Elfassi et al., 2016; Speer et al., 2012). For instance, youth living in communities with higher incomes often report greater SOC, community participation, and psychological empowerment when compared to adolescents living in low-SES urban centers (Christens et al., 2011b; Speer et al., 2012). This indicates that the more access individuals have, based on SES, to community organizations, the more inclined they are to feel connected and be involved in their community (Christens & Lin,
2014; Speer et al., 2012). Hence, lower-SES communities may have difficulty cultivating individual and community empowerment among adolescents, due to the limited availability of organizational resources (Chan et al., 2014; Christens & Lin, 2014; Levinson, 2012; Zimmerman, 2000). Despite such outcomes, urban youth who identify a positive neighborhood SOC are less likely to engage in substance using behaviors and more likely to report empowering outcomes (Christens & Peterson, 2012; Garcia-Reid et al., 2013).

Higher composite scores on neighborhood SOC scales are associated with less violent and substance-using behaviors among urban adolescents of color (Garcia-Reid et al., 2013; Holden et al., 2004; Hughey et al., 2008; Lardier Jr., MacDonnell, Barrios, Garcia-Reid, & Reid, 2017). For instance, Lardier Jr. et al. (2017) found that neighborhood SOC moderated and reduced the influence violent behavior and living in a socially disorganized community had on substance use among Hispanic urban youth. As a mechanism of social support, individuals, through neighborhood SOC, perceive that their needs are being met and supported within their particular social network (Hughey et al., 2008; Long & Perkins, 2003; Perkins & Long, 2002). Findings suggest that urban youth who participate in voluntary organizations, such as prevention coalitions, are not only more likely to interact in positive social networks, but may also experience improved neighborhood SOC and, in turn, psychological empowerment (Christens & Lin, 2014; Elfassi et al., 2016; Speer, 2000). In a recent study, Elfassi et al. (2016) illustrated that low-income adolescents who had a stronger perceived SOC were less likely to engage in alcohol, tobacco, marijuana, and other drug use, and more likely to participate
in community organizations. Therefore, neighborhood SOC performs as a catalyst between participating in neighborhood organizations, developing psychological empowerment, and reducing the probability of using drugs and alcohol. Such results also have practical implications for community building initiatives and other empowering community organizing activities, as they pinpoint the importance of involving youth in the community and neighborhood organizations (Hughey et al., 2008; McMillan et al., 1995; Peterson & Reid, 2003). Taken together, these findings offer evidence that neighborhood SOC is an important mechanism and experience for urban youth. However, more research is needed to sufficiently unpack these processes.

In summary, the reviewed literature indicates that neighborhood SOC is a principal component toward youth empowerment and reducing negative behavioral outcomes among urban community members. These investigations support that a positive SOC increases a community member’s drive to reduce common problems and contribute back to the community environment (Christens & Lin, 2014; Elfassi et al., 2016; Speer, 2000), while those with lower composite scores of neighborhood SOC experience poorer psychological and social well-being (Mannarini et al., 2014; Peterson & Reid, 2003). Results from these studies also challenge policy makers to make substantive changes in how they fund organizations in urban communities, which have been characterized as opportunity deserts due to the lack of monetary resources for community organizations (Glaude Jr., 2016). However, despite the present empirical outcomes, there is a growing need to examine neighborhood SOC among more diverse groups of individuals and human experiences (Townley et al., 2011).
**Community participation.** Empowerment is a multifaceted ecologically based theory (Rappaport, 1987; Schulz et al., 1993; Zimmerman et al., 1992), with community participation theorized as the *behavioral* component of psychological empowerment (Speer & Peterson, 2000), or the active engagement in the community (Christens et al., 2011a). This designates community participation, through *behavioral empowerment*, as an aspect of psychological empowerment, which is understood through the context of the individual (Christens, 2012b; Speer, 2000; Zimmerman, 2000). Theorizing community participation through *behavioral empowerment* demonstrates the relationship this construct holds to the larger psychological empowerment paradigm, and its importance to empowerment theory (Schulz et al., 1993).

Community participation, a component of civic engagement (Chan et al., 2014; Christens et al., 2011a; Zimmerman, 2000), recognizes how citizens are empowered to take control over the conditions affecting their lives (Christens & Lin, 2014; Christens et al., 2011a; Wandersman & Florin, 2000). Community participation comes in many forms, which include volunteering, engaging in school activities, or taking part in other organizational or civic activities, such as writing a letter to a newspaper (Chan et al., 2014) or improving the physical conditions of the environment (Wandersman & Florin, 2000). Studies as early as the 1970s identified that participants involved in community or school organizations were more likely to report competence, self-efficacy, active citizenry, and a decrease in alienation (Levens, 1968; Zurcher, 1970), with alienation found as having the potential to increase negative behavioral responses such as drug and alcohol use (Christens et al., 2011b; Colby, 1997; Peterson & Reid, 2003). Social
network theorists have also suggested that active and involved community members engage with persons who have similar beliefs and interests in making positive community changes (Young Jr., 2004). As a result, these individuals experience great social inclusion and report more efficacious and competent behaviors (Peterson & Reid, 2003; Young Jr., 2004). Community participation, therefore, has the potential to promote healthy and successful developmental trajectories, as it reduces social isolation, and promotes meaningful participatory activity that increases youth empowerment (Christens et al., 2011b).

**Youth participation in the community and school.** Youth community participation, as a form of pro-social capital behavior, not only impacts physical and social conditions, but also interpersonal relationships within the community (Wandersman & Florin, 2000) and neighborhood organizations (Long & Perkins, 2003). In addition, community participation enhances active citizenry, which manifests into empowered individuals and communities, creating healthier and more hopeful neighborhood environments (Smock, 1997). Longitudinal investigations have also revealed that community and civic participation during adolescence translates into improved participatory outcomes (Chan et al., 2014; Johnson, Beebe, Mortimer, & Snyder, 1998; Johnson, Crosnoe, & Elder, 2011) and positive developmental trajectories, such as higher self-esteem (Obradović, Burt, & Masten, 2009) and limited drug and alcohol use during emerging adulthood (Finlay & Flanagan, 2013). Beyond community-level participatory activities, community participation also extends into the school
environment, as this is an important community space during adolescent development (Chan et al., 2014; Checkoway, 2013).

Youth participation is not only important to the larger community, but also to schools and related civic organizations (Chan et al., 2014; Levinson, 2012; Putnam, 1993a; Speer & Peterson, 2000). Schools that utilize the energy and knowledge of adolescents by involving them actively in their community, or neighborhood organization(s), are likely to have teens with stronger leadership skills, higher self-efficacy, and greater community connectedness, as opposed to alienated or lonely young adults (Chan et al., 2014). Studies have further revealed that community participation and collective efficacy within the school contributes to meaningful and positive change within the school and the larger community environment (Foster-Fishman, Cantillon, Pierce, & Van Egeren, 2007). This suggests that participatory activity within the school creates a more inclusive and active school environment, which reduces structural holes (i.e., allowing for the acquisition and passing of sociocultural resources), and helps foster psychological empowerment and positive youth development (Christens et al., 2011b; Rappaport, 1987; Rappaport et al., 1984; Vieno et al., 2005).

As an important form of pro-social engagement, school involvement is also associated with lower rates of health-threatening behaviors, such as substance use (Christens & Peterson, 2012; Fredricks & Eccles, 2010). For example, Denault, Poulin, and Pedersen (2009) found that students who participated in youth-based school clubs reported lower rates of depression and substance use when compared to individuals who were not actively involved in their school. Active school involvement, therefore, has a
positive effect on social and emotional development (Albanesi et al., 2007). However, despite these results, a paucity of research has explored community participation among ethnically, racially, and economically diverse populations (Chan et al., 2014). Existing research does illustrate the important role of community participation for urban youth of color in economically and racially marginalized communities (Chan et al., 2014; Speer et al., 2012).

_Urban youth participation in the community._ Community participation is increasingly important for urban youth of color, who are afforded fewer opportunities to engage in community-based activities due to limited funding for community organizations within these low SES communities (Christens & Lin, 2014; Glaude Jr., 2016). As a result, ethnic and racial minority urban adolescents have limited access to the necessary sociocultural resources meant to prevent health-compromising behaviors, such as drug and alcohol use (Chan et al., 2014; Levinson, 2012; Putnam, 1993a; Putnam, 2015; Speer et al., 2012). In addition, urban ethnic and racial minority youth are often hesitant to engage within their community or neighborhood organization(s) due to fear of retaliation from gangs, or even being designated as social outcasts within their communal environment (Foster-Fishman et al., 2007). As a result, urban adolescents are placed in an unfortunate predicament that socially isolates them from empowering circumstances to achieve successful futures (Christens, 2012b; Wandersman & Florin, 2000; Young Jr., 2004). However, urban youth with access to community activities are likely to experience positive developmental futures (Chan et al., 2014).
Racial and ethnic minority urban youth benefit from community participatory activities and experiences, when given the opportunity (Camino & Zeldin, 2002; Chan et al., 2014; Kirshner & Ginwright, 2012). Urban youth who participate in community change activities, such as community beautification projects, experience positive developmental outcomes (Chan et al., 2014). For example, in a participatory study conducted with urban Black and Hispanic youth, Zimmerman and colleagues (2011) revealed that adolescents who participated in community-based activities, such as beautification projects (e.g., developing a community garden and creating a mural against community violence) and violence-prevention efforts with adult mentors, reported higher levels of empowerment and greater community connectedness. As a result, these youth experienced limited social isolation and a lower probability of participating in negative behavioral outcomes, such as substance use (Zimmerman et al., 2011). Additional investigations have further revealed that low income racial and ethnic minority youth, who were involved in school and community activities, had more leadership qualities (Peterson et al., 2011b), higher GPAs (Grade Point Average; Fredricks & Eccles, 2010), greater academic self-esteem, a desire to attend college or other institutions (Chan, 2011), and a lower probability of engaging in substance-using behaviors (Elfassi et al., 2016). Longitudinal studies have corroborated such results, and emphasized the importance of community participation and civic action (e.g., involvement in clubs at school or talking with adults about community issues) in predicting psychological empowerment (Christens et al., 2011a), positive academic futures, and positive behavioral outcomes into emerging adulthood for youth of color (Chan et al., 2014).
The results from these studies highlight community participation as a socialization process that transpires through one’s involvement in organizational and school activities. Through these social interactions, adolescents are less likely to experience social isolation and more likely to engage in positive social networks that will enhance their educational futures and overall well-being (Chan et al., 2014; Christens et al., 2011). In addition to these experiences, researchers have also highlighted the important role of community participation in public health prevention, specifically substance use (Holden, Evans, Hinnant, & Messeri, 2005; Holden et al., 2004; Hughey et al., 2008; Peterson & Reid, 2003) and HIV/AIDS prevention (Beeker et al., 1998), for urban youth of color.

Youth community participation and prevention. The current research on community participation in urban centers argues the impact these activities have in prevention. Community participation, as it relates to prevention efforts, is defined as “Both a manifestation of empowerment processes and the direct cause of empowerment outcomes” (Holden et al., 2004, p. 551). This suggests that youth who participate in community-based activities specifically related to substance use prevention develop stronger capacities in psychological empowerment, and a greater connection to their community, than those not involved in neighborhood activities (e.g., beautification projects or participating on a substance use coalition; McMillan et al., 1995; Peterson & Reid, 2003).

Speer and Peterson (2000) validated the most recent iteration of the community participation measure and found that urban youth who were actively involved in community civic prevention efforts identified greater community membership (i.e.,
neighborhood SOC) and psychological empowerment. Moreover, studies have revealed that urban youth who participate in the community are not only more likely to engage in prevention efforts (Peterson & Reid, 2003), but also participate in future community-based activities (Metz, McLellan, & Youniss, 2003) and volunteer in additional organizations throughout the community (McFarland & Thomas, 2006). Community participation in any capacity, therefore, creates a cycle of positive behaviors and social interactions. As a result, prevention researchers have been urged to involve youth in their studies, through action-based research initiatives, such as youth participatory action research (yPar) and community-based participatory research (CBPR). Adolescents involved in yPar and CBPR studies tend to experience higher levels of community connection and psychological empowerment, and lower rates of drug and alcohol use (Anglin et al., 2012; Kohfeldt, Chhun, Grace, & Langhout, 2011; Zimmerman et al., 2011).

To summarize the available literature, community participation positively effects empowerment processes and additional developmental outcome behaviors, such as academic achievement and attending higher education. Participation in community activities, whether through involvement in community or neighborhood organizations, produces important benefits, which can invoke collective empowerment among those involved. In addition, adolescent community members who participate in positive community activities are exposed to social networks that enable them to interact in social relationships that can then transfer beneficial sociocultural resources and reduce the chances of negative behavioral outcomes (Burt, 2009; Langhout, Collins, & Ellison,
Hence, community participation is important for reducing the probability of negative behaviors, such as substance use, and increasing the capacity for youth empowerment. Extant research, however, calls for more empirical investigations on community participation among urban teens, who have fewer opportunities for community engagement, but respond positively when given the opportunity.

The relationship between neighborhood SOC and community participation.

Communities, as Newbrough (1973) defines them, are “A habitat for the development of its residents and as a support system for improving quality of life” (p. 210). This definition of community indicates an ecological view of human experiences, and that active community involvement significantly influences community and developmental experiences (Christens & Lin, 2014). The confluence of positive community experiences, therefore, shapes individual behaviors and perceptions (i.e., neighborhood SOC; Christens & Lin, 2014; Newbrough, 1973; Wandersman & Florin, 2000; Zimmerman, 2000), providing an indication of the relationship between neighborhood sense of community (SOC) and community participation.

Over two decades ago, McMillan et al. (1995) emphasized that community involvement not only increases one’s psychological empowerment (i.e., due to perceived control over the environment), but also their perceived connection to their community, or neighborhood SOC. The reciprocating relationship between community participation and neighborhood SOC is well established in the empowerment literature (e.g., Christens & Lin, 2014; Christens et al., 2011a; Christens, Speer, & Peterson, 2016b; Elfassi et al.,
2016; Holden et al., 2005; Holden et al., 2004; Hughey et al., 2008; McMillan et al., 1995; Peterson & Reid, 2003; Peterson et al., 2011b) and cited as one of the most empirically supported bonds in empowerment research (Schulz et al., 1993). For community members, developing a strong neighborhood SOC is related to their actions, which in turn influences the perceived value received from their community and attributed to it (Christens & Lin, 2014; Nowell & Boyd, 2014). McMillan et al. (1995) further emphasized that community or neighborhood organization(s) involvement colors one’s perception of their community, neighborhood, or social context, and empowers individuals to engage in further social change. Through these community experiences, individuals are exposed to a reinforcing cycle, where community participation and neighborhood SOC feed one another in a unremitting loop (McMillan et al., 1995).

Participation in community or organizational activities guide’s behaviors or beliefs, influences psychological empowerment, and serves as a context for how individuals perceive their community (Christens & Lin, 2014; March & Olsen, 2006; McMillan et al., 1995). Theoretically, youth who have a stronger sense of purpose, a desire to connect to their communities, and drive to engage in pro-social community activities are protected from negative behavioral outcomes and are more likely to have a stronger SOC, as well as willingness to participate in community change activities (Speer et al., 2003; Speer et al., 2012). Studies have found that residents who participate in their community, local neighborhood organization, or school have a greater sense of collective efficacy and empowerment (Chavis et al., 1986; Speer & Hughey, 1995; Wandersman & Florin, 2000), neighboring and neighborhood SOC, community satisfaction, and other
positive community attachments that limit participation in negative social networks (Elfassi et al., 2016; Long & Perkins, 2003). More recent findings have equally revealed that community participation and neighborhood SOC protected urban teens from “risky” behaviors (e.g., sexual risk taking and substance use; Peterson, Buser, & Westburg, 2010a) and also amplified their leadership drive, involvement in community initiatives, and positive perceptions of the community or neighborhood SOC (Christens & Lin, 2014; Nowell & Boyd, 2014). However, these relationship are influenced by the reality that individuals living in lower SES communities do not have the same access to organizational resources, when compared to their higher SES counterparts (Christens & Lin, 2014; Elfassi et al., 2016; Speer et al., 2012), which reduces community participation (Glaude Jr., 2016; McMillan et al., 1995; Peterson & Reid, 2003), and inevitably effects community members’ perceived neighborhood SOC (Christens et al., 2011b). Therefore, it is imperative to connect youth in urban centers with public institutions and organizations that enhance community connection, psychological empowerment, and the drive to participate in community change initiatives (Christens & Speer, 2015; Christens & Lin, 2014; Peterson & Reid, 2003; Peterson et al., 2011b).

The results from these reviewed studies support the theoretical link between community perceptions (i.e., neighborhood SOC), community participation, and the influence of socioenvironmental contexts. These investigations also reveal that community participation and neighborhood SOC play a critical role in healthy communities (Christens & Lin, 2014; Christens et al., 2011a; McMillan et al., 1995; McMillan & Chavis, 1986). The findings presented in this review further argue the
significant influence these constructs have in adolescent development, particularly in discouraging substance-using behaviors. Youth who engage in their community have a greater connection to their environment, feel more empowered, have access to multiple sources of social support, and are less likely to participate in negative health seeking behaviors (Anglin et al., 2012; Chan et al., 2014; Peterson et al., 2005; Peterson et al., 2011b; Speer et al., 2012).

**Mechanisms That Empower and Reduce Substance Use: Ethnic Identity, Psychological Empowerment, and Race**

With an eye toward expanding empowerment and substance use research, and effectively understanding psychological empowerment, this section examines the existing research on ethnic identity and its relationship to community participation, neighborhood sense of community, and substance use. In addition, few studies are present that examine the relationship between community-based empowerment constructs, developmental processes, such as ethnic identity, and psychological empowerment as a developmental outcome. There is also a dearth of research investigating these effects on substance use, a negative outcome during adolescent development.

Responding to these limitations, this section reviews the literature on ethnic identity as an important developmental process that effects psychological empowerment and substance use. In addition, the presented literature review examines ethnic identity as a mediating construct in empowerment and related fields. Following these discussions, an overview of the existing studies on psychological empowerment, as an intrapersonal construct, is covered, along with its relationship to ethnic identity and substance use.
Psychological empowerment is further argued as a theoretically and empirically validated mediating variable, a limitation in current empowerment research. Lastly, the moderating effect of race as it relates to ethnic identity, psychological empowerment, and substance use is examined among Black and Hispanic young adults.

**Ethnic identity.** Ethnic identity is one type of social-group-based identity (Owens, Robinson, & Smith-Lovin, 2010) that is defined as part of the individual’s self-concept (Phinney, Horenczyk, Liebkind, & Vedder, 2001), and “a sense of people-hood” within a group, or culture, based on cultural norms and values specific to that ethnic group (Phinney & Ong, 2007). Tajfel (1981) defined ethnic identity as an aspect of social identity, and as “that part of an individual’s self-concept, which derives from [his/her] knowledge of [his/her] membership in a social group together with the value and emotional significance attached to that membership” (p. 255). Therefore, ethnic identity does not only concern self-labeling, but also self-identification, belongingness, and commitment to one’s ethnic group (Phinney, 1989; Phinney et al., 2001; Phinney & Ong, 2007). Not unlike personal identity development, ethnic identity also changes over time, due to sociohistorical, contextual, and cultural factors (Phinney, 1992; Phinney & Ong, 2007).

Sociologists distinguish ethnicity with race by defining *race* as groups who share similar physical characteristics and *ethnicity* as those groups that share similar values, customs, etc. (Gaylord-Harden, Ragsdale, Mandara, Richards, & Petersen, 2007). Yet groups such as Black Americans can designate multiple ethnic groups such as African American, African, and Afro-Caribbean (Schwartz et al., 2014), and some researchers
have further argued that ethnic and racial identity may be inseparable concepts for Black Americans (Brittian et al., 2015; Schwartz et al., 2014). However, in general researchers have maintained that Black Americans have a stronger racial identity than ethnic identity (Charmaraman & Grossman, 2010; Schwartz et al., 2014). In contrast, Hispanic citizens, due to their recent history within the U.S., can trace a linear path to their country of origin and therefore label themselves as an ethnic group, with related histories, behaviors, values, and norms (Brittian et al., 2015; Umana-Taylor et al., 2014). Owing to how these two groups self-identify, scholars have emphasized that ethnic identity serves as a stronger protective mechanism for Hispanic participants, while racial identity tends to be more important for Black participants (Charmaraman & Grossman, 2010; Schwartz et al., 2014). Researchers also reason that studying the effects of race on ethnic identity is logical and a needed area for further inquiry (Cokley, 2005; Umana-Taylor et al., 2014).

There are important cultural features associated with one’s identification within a racial group, and vice versa (Umana-Taylor et al., 2014). Despite such diverging findings, studies have found that ethnic identity significantly effects the well-being of both Black and Hispanic youth and adults (Charmaraman & Grossman, 2010; Umana-Taylor, 2010; Umana-Taylor et al., 2014). Beginning to clarify these points builds an argument as to why additional research is need on ethnic identity among Black and Hispanic individuals. These preliminary findings also point out that the impact of ethnic identity on outcome behaviors may diverge between Black and Hispanic adolescents, based on race, which is discussed in later sections.
The development of ethnic identity. Multiple theories on identity have been produced, such as personal, role-based, category-based, and group-membership-based identity (Owens et al., 2010). Early studies of ethnic identity (e.g., Erikson, 1968) were largely grounded in personal ego-based identity development (Phinney & Ong, 2007; Rivas-Drake et al., 2014). Phinney (1989, 1992), however, who focused primarily on adolescents, further conceptualized ethnic identity development to adequately understand the psychosocial meaning individuals attributed to their respective ethnic groups. Phinney’s research moved ethnic identity beyond individual development and provided a more comprehensive understanding of group connectedness and dynamics.

Phinney and Ong (2007) postulated that individuals move through four developmental phases: ethnic identity diffusion, commitment without exploration, exploration, and, lastly, firm commitment to one’s ethnic identity. The beginning stage of ethnic identity development concerns a lack of clarity about one’s self, specifically within their ethnic group, known as ethnic identity diffusion (Phinney & Ong, 2007). As in other adolescent development theories (Marcia, 1980), individuals move from ethnic identity diffusion toward commitment without exploration or the exploration period (Phinney, 1989; Phinney & Ong, 2007). During these periods, individuals engage in ethnic behaviors and practices specific to their ethnic group, which influences behaviors, beliefs, values, and norms (Phinney et al., 2001), and allows she or he to identify, and evaluate their ethnic group attachment (Phinney & Ong, 2007). The final stage is ethnic identity achievement, which is described as a firm commitment to one’s ethnic identity, and a period of time when individuals begin to develop a perceived connectedness, and positive
affirmations and perceptions of belongingness to their ethnic group (Phinney, 1992; Phinney & Ong, 2007; Rotheram & Phinney, 1987). By this developmental period individuals should be entering adulthood and have a stable sense of themselves as an ethnic group member (Phinney & Ong, 2007); although with the caveat that continued exploration and adjustment continues throughout adulthood (Phinney, 1989).

The components of an ethnic identity measure. In addition to the discussed developmental stages, Phinney (1992) also hypothesized four related components—e.g., *self-identification and ethnicity, ethnic behaviors and practices, affirmation and belonging*, and *ethnic identity achievement*—of ethnic identity that are common among a wide range of groups. These dimensions constitute the theoretical components of the MEIM (Multigroup Ethnic Identity Measure), which is used to measure ethnic identity in this study (Phinney, 1992; Phinney & Ong, 2007). These components tend to be positively correlated and empirical evidence has suggested that these dimensions constitute a single overarching concept of ethnic identity (Lee & Yoo, 2004; Phinney, 1992; Phinney & Ong, 2007; Schwartz, Luyckx, & Vignoles, 2010). Of note, these dimensions occur on a continuum and are influenced by social and contextual experiences, and therefore should be considered actively fluctuating over time (Phinney & Ong, 2007).

The first component of the MEIM to measure ethnic identity is *self-identification as an ethnic group member and ethnicity*, which refers to the ethnic label given to one’s self; and is an important condition of identifying with an ethnic group (Phinney & Ong, 2007). The second component is *ethnic behaviors and practices*, which concerns aspects
of ethnic practices common to groups, such as involvement in social activities with members of one’s group and also engagement in specific cultural traditions (Gaylord-Harden et al., 2007; Phinney, 1992). The third component is *affirmation and belonging*, which concerns the perceived feelings of belonging to an ethnic group and the attitudes associated with the group (Phinney, 1989, 1992). The last component is *ethnic identity achievement* (Phinney & Ong, 2007), which is defined as the secure sense of one’s ethnicity and one’s sense of self as an ethnic group member (Phinney, 1989, 1992).

Unsuccessful resolution of *ethnic identity achievement* results in identity diffusion (Phinney & Ong, 2007). Phinney (1992), and Phinney and Ong (2007) noted that lower composite scores on the MEIM point toward ethnic identity diffusion or limited connection to one’s ethnic group.

It is clear that ethnic identity is associated with cultural behaviors and values that are attributed toward one’s group and in response to sociocultural contexts and experiences (e.g., discrimination; Phinney & Ong, 2007). Examining ethnic identity in terms of development and its theoretical components provides insight into how individuals understand and develop their ethnic identities, based upon the meanings, values, and cultural practices derived from their specific cultural group (Rivas-Drake et al., 2014). Ethnic identity development is therefore an ongoing process throughout adolescence and adulthood, with individuals exploring their specific ethnic group throughout their lives (Phinney & Ong, 2007).

*Ethnic identity among adolescents of color.* Ethnic identity is characterized as a dynamic process during adolescence (Phinney & Ong, 2007; Rotheram & Phinney,
1987). Rotheram and Phinney (1987) stated that the crystallization of ethnic identity tends to begin around 10 years of age, highlighting the importance of examining this construct among youth during early adolescence. Ethnic identity during adolescence is also a period of increased meaning making that is associated with high levels of adult social support and positive psychosocial and mental health functioning (Rivas-Drake, 2012; Rivas-Drake et al., 2014). Therefore, youth that develop positive ethnic identities are likely to exhibit higher self-esteem and positive developmental trajectories (Phinney, 1989), which can serve as a protective function (Rivas-Drake et al., 2014). Researchers further emphasize that positive ethnic identity development (e.g., belongingness, emotional attachment, and shared beliefs of a cultural group) is especially beneficial for persons of color, who are susceptible to a host of negative outcomes including substance use (Molix & Bettencourt, 2010).

Despite evidence displaying that Black individuals tend to have a stronger racial identity than ethnic identity, there is evidence that ethnic identity is also an important determinant of positive life futures. Studies have found that for Black youth, ethnic identity is an important indicator of well-being, as it is associated with pride, positive feelings toward one’s ethnic group, and fewer feelings of internalized racism (Brook, Balka, Brook, Win, & Gursen, 1998a; Caldwell, Sellers, Bernat, & Zimmerman, 2004; Charmaraman & Grossman, 2010). Ethnic identity has also been linked to less externalizing behavior (Arbona, Jackson, McCoy, & Blakely, 1999), substance using behavior (Caldwell et al., 2004; Pugh & Bry, 2007), risky sexual behavior (Belgrave, Van Oss Marin, & Chambers, 2000), and aggressive behavior for Black adolescents.
(McMahon & Watts, 2002). For instance, Swenson and Prelow (2005) found that Black adolescents with overall higher composite scores in ethnic identity were more likely to cope with psychological problems. Mandara, Richards, Gaylord-Harden, and Ragsdale (2009) further recognized among Black adolescents that ethnic identity and ethnic group connectedness increased self-esteem and decreased the probability of depression and substance use longitudinally. Ethnic identity has also been associated with academic achievement and goal-oriented futures for Black urban youth (Adelabu, 2008). Hence, ethnic identity is an important determinant in the positive development of Black adolescents’ self-concept and well-being (Charmaraman & Grossman, 2010). Similar results have also been identified among Hispanic youth, although there appears to be more variation in the findings.

Recently, researchers have argued that Hispanics value ethnicity over race, when compared to their Black counterparts (Umana-Taylor, 2010), whereas, despite previously discussed findings, Black youth tend to have a stronger racial identity (Umana-Taylor, 2010). Empirical studies among Hispanic adolescents provide evidence that greater ethnic affirmation and belongingness are associated with higher levels of self-esteem (Garcia-Reid et al., 2013; Umana-Taylor, Gonzales, & Guimond, 2009; Umana-Taylor, Yazedijian, & Bamaca-Gomez, 2004), coping and mastery skills (Roberts et al., 1999), and prosocial behaviors later in life (Armenta, Knight, Carlo, & Jacobson, 2011; Cislo, 2008; Umana-Taylor, Zeiders, & Updegraff, 2013). Furthermore, ethnic identity formation and affirmation tend to increase as Hispanic youth move from adolescence into early adulthood (Umana-Taylor et al., 2014), with some larger growth noted as Hispanic
youth transition from elementary to middle school and middle school to high school, as these are salient transitioning periods during adolescence (French, Seidman, Allen, & Aber, 2006).

However, the relationship between ethnic identity and positive psychosocial outcomes is more inconsistent for Hispanic youth, when compared to studies examining Black participants. For example, Cislo (2008) found that ethnic identity formation was largely positive for Cuban adolescents, but detrimental for youth from Nicaragua, which was attributed to within-group discrimination and immigration status. Ethnic identity has also been shown to increase maladjustment, such as alcohol use (Zamboanga, Schwartz, Jarvis, & Van Tyne, 2009) and delinquency, among Hispanic adolescents (French et al., 2006). These results are, however, less common and attributed to additional confounding factors that are associated with socioenvironmental issues such as discrimination and immigration status (Garcia-Reid et al., 2013; Ramos, Jaccard, & Guilamo-Ramos, 2003).

**Ethnic identity and neighborhood sense of community.** Existing research establishes ethnic identity as an important determinant in the developmental trajectories of Black and Hispanic adolescents. Moreover, the relationship between ethnic identity and well-being, and positive developmental outcomes, is present both cross-sectionally and longitudinally among Black and Hispanic samples, which points toward the causal relationship between ethnic identity and outcome behaviors. Despite the extensiveness of present research on ethnic identity, there are a limited number of studies examining the relationship between ethnic identity and neighborhood sense of community (SOC). This is in spite of the theoretical connection between ethnic identity and neighborhood SOC.
Sarason (1974) discussed that individuals who perceive they are more similar to one another have a greater SOC and membership. McMillan (1996) also stated, “If one can find people with similar ways of looking, feeling, thinking, and being, then it is assumed that one has found a place where one can safely be oneself” (p.321). Ethnic identity development research establishes that through group membership and shared experiences (Phinney & Ong, 2007), history, culture, and ethnic origin, individuals are likely to develop a stronger SOC and connection to their ethnicity (Kandel, 1978; Rivas-Drake, 2012). In addition, specific aspects of ethnic identity development, such as affirmation and belongingness, are concomitant with perceiving a positive SOC and engaging in community activities (Phinney, 1992). This is because a strong perceived ethnic identity is associated with ethnic pride, positive feelings and belongingness toward one’s ethnic group (Phinney, 1992), emotional attachment to one’s ethnic group, and a shared belief that the ethnic group one associates with will meet their needs (Molix & Bettencourt, 2010; Putnam, 1993b; Sarason, 1974).

Studies have further revealed that individuals involved in racially homogenous networks have a greater SOC and a stronger connection to their cultural group (Caughy, O'Campo, & Muntaner, 2003; Zimmerman & Zahniser, 1991). This again is a result of identifying a strong sense of belongingness and attachment to one’s ethnic group. For example, Harper and Quaye (2007) found that Black students who engaged in primarily Black organizations experienced greater connections to the Black community. Furthermore, Anglin et al. (2012) discovered that Hispanic adolescents who participated in more civic action activities for their specific cultural group felt a greater connection to
their community and cultural group, when compared to White participants. These results provide insight into the importance of ethnic neighborhoods and organizations, as well as engaging with ethnically and racially similar individuals to not only strengthen social networks, but pass on important cultural resources (Lin et al., 2001; Putnam, 2015; Stanton-Salazar, 2011; Syed & Juan, 2012).

Studies examining the relationship between neighborhood SOC and ethnic identity have also suggested that these two mechanisms effect additional components of adolescent well-being. For instance, neighborhood SOC positively effects ethnic identity development, and in turn reduces the probability for negative outcomes, such as depression and substance use. In a study of Black youth from Harlem in New York City, teens were less likely to engage in drug-using behaviors if they had higher ethnic identity composite scores and a greater perceived SOC (Brook et al., 1998a). In the same study, ethnic identity and community belongingness also enhanced family, peer, and community relationships (Brook et al., 1998a). In a more recent study among Hispanic urban youth, Garcia-Reid et al. (2013) uncovered that neighborhood SOC positively effected adolescent’s ethnic identity, which in turn reduced negative mental health indicators such as depression. Longitudinal studies have corroborated these results, and emphasized that youth with a greater neighborhood SOC and ethnic identity have higher self-esteem and lower levels of depression into adulthood (Rivas-Drake, 2012; Rivas-Drake et al., 2014). Therefore, a strong connection to one’s community corresponds to a greater internalization of one’s ethnic identity (Phinney, 1989), as well as having positive effects on well-being and in additional life domains such as home or school (Garcia-Reid et al.,
These studies display the empirical and theoretical association between neighborhood SOC and ethnic identity. Recent investigations (e.g., Garcia-Reid et al., 2013; Rivas-Drake, 2012; Rivas-Drake et al., 2014; Umana-Taylor et al., 2014) have urged that future studies examine ethnic identity and aspects of neighborhood SOC among adolescents of color, specifically Black and Hispanic youth. Nonetheless, the prevailing investigations display a positive relationship between neighborhood SOC and ethnic identity, and the positive effects these constructs have on adolescent well-being.

**Ethnic identity and community participation.** Another important component of ethnic identity development is community participation. A limited number of studies have examined the influence community participation has on ethnic identity. The existing studies investigating ethnic identity and community participation argue the importance of community participation in ethnic identity development during adolescence (e.g., Anglin et al., 2012; Gutiérrez, 1995; Hipolito-Delgado & Zion, 2015).

Youth involved in community activities are empowered to develop a sense of purpose, pro-social behaviors, and higher-self-esteem (Christens et al., 2011a; Christens et al., 2016b; Damon, Menon, & Bronk, 2003; Speer & Peterson, 2000). As a result, these youth experience healthier and more successful developmental trajectories (Balsano, 2005; Christens et al., 2011a; Guest & Schneider, 2003; Harper & Quaye, 2007; Kirshner, 2015). Community participation, just as ethnic identity, produces feelings of acceptance, support, and connectedness (Anglin et al., 2012; Guest & Schneider, 2003).
Through community participation, individuals begin to integrate social experiences into beliefs, values, and goals, which influences their identity formation (Crocetti, Jahromi, & Meeus, 2012). Researchers argue that the relationship between community participation and identity is context specific, which suggests that participating in organizations with members who are of a similar race, ethnicity, and class, impacts how strongly one internalizes their ethnic identity (Guest & Schneider, 2003; Gutiérrez, 1995).

Ethnically homogenous organizations and groups are particularly important for youth of color (Gutiérrez, 1995; Hipolito-Delgado & Zion, 2015), who are often devalued by dominant society (e.g., White, male, western values; Boucher & Helfenbein, 2015; Hipolito-Delgado & Zion, 2015; Warren, 2005). As a result, individuals of color require empowering identities that give them value and validate their existence (Guest & Schneider, 2003; Stanton-Salazar, 2011). Researchers emphasize that youth of color who engage in ethnically homogenous groups and organizations have stronger ethnic identities, greater self-efficacy (Hipolito-Delgado & Zion, 2015), an awareness of power and inequality within their social system, and a perceived ability to make changes and achieve goals (Gutiérrez, 1995). For example, Black students who engaged in predominantly Black student organizations had a greater inner comfort with their “Blackness” and Black identity, and also formed alliances with members of other organizations outside their racial group (Harper & Quaye, 2007). Anglin et al. (2012) further noted that Hispanic youth who participated in their community had positive attitudes about their cultural group and other cultural groups, were expected to score higher in community participation, and were likely to engage in activities specific to their
ethnic group. Therefore, participating in community organizations with individuals of like racial and ethnic background, or identity, reinforces one’s ethnic identity, creating a cycle in which ethnic identity promotes community participation and participation fosters identity (Crocetti et al., 2012).

Despite such findings there is some variation between ethnic identity and community participation. For example, in one study, youth who were newly immigrated (i.e., when compared to native or children of immigrants) or experiencing racism engaged in fewer community activities and had a lower perceived ethnic identity (Lopez & Marcelo, 2008). In a qualitative study, Campbell and McLean (2002) observed among a cohort of Afro-Caribbean participants that ethnic identity served an important role in participating in interpersonal networks at the level of family or friends. However, ethnic identity did not serve to unite people at the local community level (Campbell & McClean, 2002). This was largely attributed to the racism or exclusion participants perceived from the dominant White and Asian ethnic groups present within the target city where the research was conducted (Campbell & McLean, 2002). These results reveal that ethnic identity serves as a structure that binds like members together, but has little bearing on whether individuals engage within the larger community, particularly in the presence of racism or discrimination. As a result of such inconsistencies, and the paucity of current research, there is a need to examine the effects between community participation and ethnic identity (Christens et al., 2011a).

*Ethnic identity and adolescent substance use.* There is a large body of cross-sectional and longitudinal research examining the relationship between ethnic identity
and positive developmental outcomes during adolescence. Among minority groups, studies have revealed the protective function of ethnic identity against adverse life events (Galliher, Jones, & Dahl, 2011) and health-compromising behaviors, such as substance use (Brook et al., 1998a; Brook, Whiteman, Balka, Win, & Gursen, 1998b; Burrow-Sanchez, 2014; Garcia-Reid et al., 2013; Pugh & Bry, 2007). For example, investigators have found that ethnic and racial minority youth with stronger ethnic identities used drugs and alcohol at lower rates (Anglin et al., 2012; Garcia-Reid et al., 2013; Marsiglia et al., 2004; Williams, Aiyer, Durkee, & Tolan, 2014), particularly when these substances were viewed as dissimilar to their ethnic group norms (Corneille & Belgrave, 2007). Among Hispanic adolescents specifically, ethnic identity has also served as a buffering mechanism that reduced the probability of drug use (Garcia-Reid et al., 2013), while enhancing additional protective mechanisms, such as viewing drugs as risky (Brook et al., 1998b). Similarly, among Black teens, ethnic identity buffered the effects of drug use, and reduced the probability of alcohol and marijuana use, even when controlling for grade, gender, and peer network usage (Brook et al., 1998a; Pugh & Bry, 2007; Stevens-Watkins, Perry, Harp, & Oser, 2012). However, youth with lower composite scores on ethnic identity scales (i.e., lower group belongingness, limited connection to culture) may experience additional negative psychological outcomes (Schwartz, Zamboanga, & Jarvis, 2007; Williams et al., 2014), and use substances at higher rates, which is theorized to result from social exclusion and isolation (Marsiglia et al., 2004).

There is also evidence that ethnic identity promotes substance-using behaviors, although these results are less common and often due to more complex explanations
For instance, ethnic identity has been associated with cigarette, alcohol, and marijuana use among diverse populations of Hispanic adolescents (Zamboanga et al., 2009), and also in studies with multi-ethnic group members (James, Kim, & Armijo, 2000; Scheier, Botvin, Diaz, & Ifill-Williams, 1997). However, these results are less common and those that do find such effects examine “ethnic labeling,” which fails to capture the complexity of ethnicity (Kulis et al., 2012). These results are also contingent on specific intersections, such as gender, immigration, and/or generational status, and the specific ethnic group to which the individual belongs (Garcia-Reid et al., 2013; Kulis et al., 2012). Despite these inconsistencies, the reviewed literature puts forth that ethnic identity buffers Black and Hispanic youth from substance-using behaviors. However, further research is needed to examine these effects among ethnic and racial urban minority youth (Rivas-Drake et al., 2014).

**Ethnic identity as a mediator.** Ethnic identity is also theorized to mediate the relationship between community participation/neighborhood sense of community and psychological empowerment and substance use (Figure 1). Mediation refers to when the relationship between a predictor \(X\) and outcome \(Y\) variable can be explained by the relationship to a third variable \(M\), the mediator (Field, 2013). Over the past decade, ethnic identity has served a mediating function in numerous studies (see Table 1 for review of studies examined in this section). In a recent meta-analysis, several research studies postulated that a positive ethnic identity serves as a buffering mechanism against
distress and other problem behaviors, such as violence and substance use, among ethnic minority groups (Smith & Silva, 2011).

The mediating function of ethnic identity has been examined on various influences, such as supportive parenting (Swenson & Prelow, 2005), social support (Gaylord-Harden et al., 2007), cultural socialization, and academic and behavioral outcomes (Hughes, Witherspoon, Rivas-Drake, & West-Bey, 2009). For example, Swenson and Prelow (2005) found that for Black youth, ethnic identity mediated the relationship between supportive parenting and depressive symptomology. In addition, Smith, Walker, Fields, Brookins, and Seay (1999) revealed that ethnic identity mediated the link between prosocial behaviors and perceived self-efficacy, which in turn effected self-esteem and the ability to achieve academically. Many of these earlier studies largely examined, however, Black and White populations (Smith & Silva, 2011). More recent investigations have corroborated these earlier results, and further argued the importance of ethnic identity as a mediator for ethnic and racial minority groups over European and White American populations (Hughes et al., 2009; Kim, Hogge, & Salvisberg, 2014; Lopez, Antoni, Fekete, & Penedo, 2012; Ponterotto & Park-Taylor, 2007; Rivas-Drake et al., 2014; Schwartz et al., 2010; Williams et al., 2014).

More recently, ethnic identity has been reported as an important mediator on positive and negative outcome behaviors (Smith & Silva, 2011), such as academic achievement and substance use, among ethnic and racial minority adolescents (Rivas & Drake, 2014). For instance, Gaylord-Harden et al. (2007) examined the mediating effect of self-esteem and ethnic identity between social support and depression, among Black
adolescents. These authors identified that ethnic identity accounted for a greater proportion of the overall effect between social support and depression than self-esteem, and that this effect was larger for males than females (Gaylord-Harden et al., 2007). They attributed this outcome to males having more socialization in the community that would facilitate ethnic identity development (see discussions from Phinney, 1992; Phinney et al., 2001; Phinney & Ong, 2007), whereas females were socialized more within the home (Gaylord-Harden et al., 2007). There is also evidence that ethnic identity mediates the relationship between ethnic-racial socialization and academic and behavioral outcomes (Hughes et al., 2009); as well as the association between cognitive development and self-esteem, and cognitive development and in-group attitudes (Corenblum & Armstrong, 2012). This indicates that identifying more with one’s ethnic group is associated with positive in-group attitudes, friendship choice, and positive academic futures. Most recently, ethnic identity mediated the relationship between social disorganization and outcomes, such as substance use, violence, and self-esteem (Garcia-Reid et al., 2013), and also between ethnic group discrimination and depression, among youth of color (Brittian et al., 2015). Hence, as youth identify more with their ethnic group identity, disorganization and discrimination have a smaller impact on adolescent mental and behavioral well-being. Ethnic identity, therefore, has a potentially important buffering effect during adolescence for Black and Hispanic youth.

These studies demonstrate the mediating function of ethnic identity among a host of predictor and outcome relationships. Yet, a limitation of many of these studies is the varying measures (e.g., The CRIS, The WRCDS-R, or The MEIM) used to assess ethnic
identity (Ponterotto & Park-Taylor, 2007). As a result, researchers have called for studies to investigate the mediating function of ethnic identity among diverse samples of adolescents both within the United States and abroad, and use validated ethnic identity measures (Brittian et al., 2015; Garcia-Reid et al., 2013; Rivas-Drake et al., 2014). Despite these limitations, the existing literature supports the mediating function of ethnic identity.

A review of the literature presented in this section on ethnic identity argues the important influence ethnic identity has in adolescent development, by enhancing well-being (Armenta et al., 2011; Swenson & Prelow, 2005; Umana-Taylor, 2010) and reducing the probability of using substances, and engaging in other problems behaviors (Brook et al., 1998b; Garcia-Reid et al., 2013; Molix & Bettencourt, 2010). In addition, there is a growing theoretical and empirical basis supporting the association between ethnic identity, community participation, neighborhood sense of community (SOC), and empowerment. These studies highlight that individuals with stronger ethnic identities have a greater connection to their communities (Anglin et al., 2012; Caughy et al., 2003; Garcia-Reid et al., 2013), are more inclined to engage in their community and in community-based organizations (Anglin et al., 2012; Hipolito-Delgado & Zion, 2015), and are less likely to participate in health-compromising behaviors, in turn participating in more empowering or positive behavioral outcomes (Garcia-Reid et al., 2013; Kulis et al., 2012; Marsiglia et al., 2004). Despite these results, more research is needed to flesh out these effects.
Psychological empowerment. Over the past two decades, empowerment theory and methods have received considerably more attention in research, prevention, and practice; however, psychological empowerment remains largely untested among racial-ethnic minorities and those living in urban communities (Christens & Lin, 2014; Peterson, 2014). Despite limited testing, empowerment theory has been applied to multiple areas of inquiry. These areas include racial and ethnic group identification (Gutiérrez, 1995; Hipolito-Delgado & Zion, 2015), critical consciousness (conscientização; Gutiérrez, 1995), public health, HIV/AIDS research and prevention (Beeker et al., 1998), and substance use prevention (Peterson & Reid, 2003; Peterson et al., 2011b). Studies suggest that the presence of resources and engaging in the community decreases negative behaviors such as substance use, and increases psychological empowerment (Christens & Peterson, 2012; Peterson & Reid, 2003).

Psychological empowerment conceptualized as sociopolitical control. Drawing upon Bandura’s (1977; Ozer & Bandura, 1990) conjectures of efficacy (i.e., perceived ability to produce results) and Levenson’s (1974) discussions on locus of control (i.e., ability to control events effecting them), Zimmerman and Zahniser (1991) conceptualized and developed the sociopolitical control scale (SPCS) to measure psychological empowerment. These authors argued that perceived control and psychological empowerment involve cognitive components, personality, and motivational aspects; and that empowered persons report greater control over key aspects in their lives (Zimmerman & Zahniser, 1991). Through Zimmerman and Zahniser’s (1991) work, two underlying subscales were identified for psychological empowerment, leadership
competence (i.e., community member’s perceived ability to organize a group of people) and policy control (i.e., community member’s perception of their ability to influence policy decisions within an organization or in the larger community).

The sociopolitical control scale (SPCS) by Zimmerman and Zahniser (1991) has been largely tested among adult samples; however, Peterson and colleagues (2006, 2011a) and Ozer and Schotland (2011) more recently tested the SPCS among diverse adolescent samples (e.g., urban and rural communities). Using two separate samples, one group from a Midwestern community (N = 316), and the second from a large Northeastern city (N = 750) in the United States, Peterson and colleagues (2006) performed confirmatory factor analysis (CFA) on the items in the SPCS and removed negatively worded items. The results of this study confirmed that the two-factor model (i.e., policy control and leadership) and removing negatively worded items improved model fit, which supported Zimmerman and Zahniser’s (1991) original framework.

In another study, Peterson et al. (2011a) further examined the SPCS among urban youth, who were largely Hispanic (55%). These authors renamed the SPCS the Sociopolitical Control Scale for Youth (SPCS-Y), which is utilized in the current investigation. This study empirically supported the validity of the SPCS-Y and confirmed that this scale was also based in two underlying dimensions, policy control and leadership (Peterson et al., 2011a), corroborating previous examinations of the SPCS (e.g., Peterson et al., 2006; Zimmerman & Zahniser, 1991). These authors also illustrated that those youth with greater neighborhood SOC had higher composite scores in policy control, due to greater community involvement (Peterson et al., 2011a). Elsewhere, Ozer and
Schotland (2011) further examined the validity of the SPCS against previously validated measures of psychological empowerment. Ozer and Schotland (2011) found that their scale was correlated and had high sociometric reliability and validity against prior measures of psychological empowerment scales developed by Zimmerman and Zahniser (1991), and reexamined by Peterson et al. (2006, 2011a). As a result of these studies, researchers have been able to use this scale to examine empowering interventions and work toward expanding psychological empowerment in substance use prevention.

The existing studies using the SPCS and the SPCS-Y have linked psychological empowerment with empowering interventions (Carballo-Dieeguez et al., 2005), well-being, self-esteem, beliefs of control over community change (Itzhaky & York, 2003), psychological and behavioral outcomes (Christens & Peterson, 2012), and involvement in empowering organizations (Speer et al., 2003). In addition, the SPCS and the SPCS-Y have been further tested in a variety of social and geographic contexts. For example, Wang, Chen, and Chen (2011) adapted the SPCS for participants in an urban Chinese community. In another study, based out of Poland, Kaniasty and Jakubowska (2014) used the SPCS as a measure for political self-efficacy; finding support for the scale among their Polish sample. They also noted the importance of empowerment in contributing to participants’ life satisfaction and well-being (Kaniasty & Jakubowska, 2014). Beyond international use of the SPCS and SPCS-Y, these scales have been largely tested within the United States.

Psychological empowerment among adolescents. Research conducted within the United States, using the SPCS and SPCS-Y, have examined the impact of substance use
prevention activities on adolescent psychological empowerment. These existing investigations found that those youth who engaged in prevention activities had higher rates of psychological empowerment (e.g., Holden et al., 2004, 2005; Peterson & Reid, 2003). For example, Peterson et al. (2005) revealed that those teens who participated in more community activities had higher perceived leadership competence and overall higher psychological empowerment (i.e., measured through the SPCS), when compared to those adolescents who participated in fewer community activities.

Building upon such research, more recent investigations have shown that psychological empowerment positively affected developmental outcomes, among urban youth color, by increasing mental well-being, decreasing substance use, and promoting academic achievement (Christens & Peterson, 2012). Furthermore, urban youth of color with higher composite scores of psychological empowerment have also been found to be more critically aware of their community, in control of their surroundings, and able to access sociocultural resources that would preclude them from engaging in negative behavioral outcomes (Christens et al., 2013b). From an organizational standpoint, Christens and Lin (2014) revealed that organization participation, neighborhood SOC, and perceptions of social support positively predicted psychological empowerment. These authors further identified that community organizations are an important mediator toward neighborhood SOC, social support, and improved psychological empowerment (Christens & Lin, 2014). In addition, organizational participation was particularly important for low-income individuals, as it had the greatest effect on neighborhood SOC.
and psychological empowerment when compared to those participants in the highest income bracket (Christens & Lin, 2014).

By and large, these studies suggest that a critical awareness of the environment, perceived control over surroundings, and organizational involvement can perform as catalysts to project citizens toward environmental change and psychological empowerment (Christens & Lin, 2014; Christens et al., 2013b). In addition, the reviewed research supports and extends the existing literature on the SPCS and SPCS-Y among adolescents, tested the psychometric properties among diverse samples of youth both within the United States and internationally, and supported the use of prior psychological empowerment scales (e.g., Holden et al., 2005; Peterson et al., 2006; Zimmerman & Zahniser, 1991). Research in psychological empowerment has also examined the influence on developmental, psychological, and substance use outcomes and predictors, using Peterson’s (2006; 2011a) SPCS-Y scale. Nonetheless, as Peterson (2014) notes, psychological empowerment, and the use of the SPCS and SPCS-Y, are largely untested in the substance use literature and among racial and ethnic urban adolescents, and therefore in need of further investigation.

**Psychological empowerment and ethnic identity.** A limited number of studies in empowerment research have used ethnic identity measures to examine psychological empowerment and substance use; despite the theoretical connection between ethnic identity and empowerment-related predictors, such as community participation and neighborhood sense of community (SOC). This is troublesome, as empowerment-based substance use prevention research has largely examined urban minority youth, for which
ethnic identity is a crucial developmental process (Molix & Bettencourt, 2010). The present studies connecting ethnic identity and psychological empowerment are largely theoretical (e.g., Stanton-Salazar, 2011), or focus on psychological empowerment and identity development (e.g., Fagan & Stevenson, 2002). A smaller number of empirical investigations has examined ethnic identity and psychological empowerment (e.g., Gutiérrez, 1995; Hipolito-Delgado & Zion, 2015; Molix & Bettencourt, 2010); however, no studies to date have examined the relationship these constructs hold with negative behaviors, such as substance use. Extant research argues, however, the important role of ethnic identity in promoting psychological empowerment and reducing negative behaviors (Gullan et al., 2013; Hipolito-Delgado & Zion, 2015).

Cultural group and community affiliations positively affect solidarity, individual self-efficacy, community connection, and ethnic identity (Freire, 1968[2014]; Tatum, 1997). Gutiérrez (1995) was among the first empowerment researchers to discuss the idea that for individuals to feel empowered and engaged in positive social change they must develop a connection to their cultural group. Gutiérrez (1995) ascertained that youth involved in empowering group activities had higher composite scores on ethnic engagement and identity, compared to the control group. More recently, Molix and Bettencourt (2010) found that identifying as White or ethnic minority moderated the effect that group identity had on psychological empowerment and well-being. These researchers recognized that ethnic group identity was more important for ethnic minorities, as it had the greatest effect on psychological empowerment, or leadership potential, policy control, and self-efficacy (Molix & Bettencourt, 2010). This supports the
importance of ethnic identity for socially marginalized groups and the significance of
group identity on psychological empowerment (Molix & Bettencourt, 2010). Elsewhere,
studies examining empowerment-based school programs aimed at urban minority
adolescents have demonstrated that psychological empowerment was strongly related to
ethnic identity and self-efficacy. These studies illustrated that students who had more
solidified ethnic identities were motivated to be leaders within their school program and
also to have confidence in their abilities to achieve goals (Gullan et al., 2013; Hipolito-
Delgado & Zion, 2015).

Although limited, these investigations point toward the importance of
empowerment-based interventions in augmenting psychological empowerment and ethnic
identity among marginalized youth. Moreover, these studies displayed ethnic group
connection as a compensatory mechanism that increased psychological empowerment,
and promoted physical and psychological well-being (Gutiérrez, 1995; Hipolito-Delgado
& Zion, 2015; Molix & Bettencourt, 2010). Existing research, therefore, supports the
positive and direct relationship between psychological empowerment and ethnic identity.
Due to the limited number of studies available, further research is needed that tests the
effects of ethnic identity on psychological empowerment among urban adolescents.

**Psychological empowerment and substance use.** Psychological empowerment
has a positive influence on developmental outcomes, which include academic
achievement (Christens & Peterson, 2012; Kohfeldt et al., 2011; Stanton-Salazar, 2011),
and buffering against negative behavioral outcomes, such as violence (Zimmerman et al.,
2011) and substance-using behaviors (Christens & Peterson, 2012; Christens et al.,
2013b; Peterson & Reid, 2003). In the last decade, substance use researchers have developed a more pronounced interest in empowerment to provide strength-based, environmentally focused prevention-interventions. Overall, research has found that substance use and awareness of neighborhood substance use issues affect community members’ psychological empowerment, neighborhood sense of community (SOC), and drive to engage in community change (Peterson & Reid, 2003; Peterson et al., 2011b).

Peterson and Reid (2003) were among the first substance use researchers to use empowerment to understand individual and community-based substance use issues. Using the SPCS among a sample of urban youth, these researchers examined predictors of psychological empowerment and found that awareness of neighborhood substance use issues predicted psychological empowerment directly, as well as indirectly through engagement in substance use prevention activities (Peterson & Reid, 2003). Results from this study indicated that as individuals became more aware of substance use in the community they were more inclined to engage in prevention activities, which predicted aspects of psychological empowerment (i.e., leadership, policy control, and self-efficacy; Peterson & Reid, 2003). Related studies have also identified the negative influence of psychological empowerment on substance-using behaviors. For example, Holden et al. (2005) recognized that teens who participated in tobacco control efforts had higher composite scores of psychological empowerment and were less likely to engage in tobacco use and other substance-using behaviors. Elsewhere, Christens and Peterson (2012) found that psychological empowerment had a negative indirect effect on “risk” behaviors (e.g., violence and substance use), through self-esteem, thus reducing the
probability of participating in negative outcome behaviors. Recent analyses have corroborated these results, and have shown that teens with higher composite scores of empowerment—through the SPCS-Y—were not only more involved in community activities, but less likely to report substance-using behaviors (Christens et al., 2013b).

These investigations identify the important role of increasing citizens’ awareness of community issues and connecting community members with neighborhood organizations to facilitate community action and empowerment (Peterson et al., 2011a; Peterson & Reid, 2003). These studies also display the central role of psychological empowerment in reducing substance-using behaviors. Despite such findings, more research is needed to further understand the effect psychological empowerment has on substance use and related constructs, such as ethnic identity (Christens et al., 2013b; Peterson, 2014); as the specific role empowerment has in youth development remains only vaguely understood (Christens & Peterson, 2012; Peterson, 2014).

**Psychological empowerment as a mediator.** Conceptually, psychological empowerment is hypothesized to mediate the relationship between ethnic identity and substance use. The previously reviewed literature demonstrates the growing relationship between ethnic identity, psychological empowerment (Gutiérrez, 1995; Molix & Bettencourt, 2010), and substance use (Garcia-Reid et al., 2013; Umana-Taylor, 2010). Several empowerment researchers have alluded that there is still a question as to the mediating role of psychological empowerment when in the presence of ethnic identity and substance use (e.g., Christens & Peterson, 2012; Holden et al., 2005; Holden et al., 2004; Molix & Bettencourt, 2010; Peterson et al., 2005; Peterson & Reid, 2003). Yet, a
A disturbingly small number of studies have actually examined psychological empowerment as a mediator. See Table 2 for the list of reviewed studies.

Psychological empowerment has been used as a mediator in a number of research areas, including applied psychology (Liden, Wayne, & Sparrowe, 2000), organizational psychology (Avolio, Zhu, Koh, & Bhatia, 2004; Seibert, Silver, & Randolph, 2004), and community psychology (Christens & Peterson, 2012). For example, in organizational psychology, Seibert et al. (2004) found using multilevel analyses that psychological empowerment mediated the effect of workplace climate on job satisfaction and its indirect link to job performance among employees in a Fortune 100 manufacturing company. In another study, rooted in organizational psychology, Avolio et al. (2004) discovered among staff nurses in a hospital located in Singapore that psychological empowerment mediated the effects of transformational leadership (i.e., ability to influence others in their organization) on participants commitment to their organizational structure—in this case the hospital. This study recognized that those nurses who displayed more leadership qualities were not only more involved in their hospital, but also perceived greater control in their organizational setting, and had higher levels of self-efficacy (Avolio et al., 2004).

Specific to community psychology, psychological empowerment has been theorized to mediate the relationship between community participation and neighborhood SOC (Zimmerman, 2000), as well as knowledge, action, and developmental outcomes (Cattaneo & Chapman, 2010). Recent empirical investigations in community psychology have identified psychological empowerment as a mediator. For example, Molix and
Bettencourt (2010) found that the relationship between ethnic group identity and well-being was mediated by psychological empowerment longitudinally. In addition, these effects were stronger among Hispanic participants, when compared to Whites, indicating the important mediating relationship of psychological empowerment for Hispanic youth over White teens. In another study of urban Black and Hispanic adolescents, Christens and Peterson (2012) observed the important mediating role of psychological empowerment, between ecological supports, such as family cohesion and social support, on developmental outcomes (e.g., risk behaviors, psychological symptoms, self-esteem, and school importance). These results suggest that psychological empowerment is an important, although overlooked, attribute in human developmental outcomes for urban minority youth (Christens & Peterson, 2012).

These studies exemplify the important role of psychological empowerment as a mediator on outcomes ranging from work satisfaction and success to developmental outcomes. However, the studies in community psychology are few, which demand that additional research examine the mediating impact of psychological empowerment. Theoretically, the reviewed literature proposes first, perceptive experiences of empowerment (e.g., efficacy, group connection, and interest in social change) increase in the presence of ethnic identity (Gutiérrez, 1995; Molix & Bettencourt, 2010; Tatum, 1997), which is developed through interpersonal relationships and within-group interactions; allowing youth to develop a sense of identity and belongingness (Speer & Hughey, 1995; Speer et al., 2012). Second, youth with higher ethnic identity composite scores have greater psychological empowerment (Hipolito-Delgado & Zion, 2015;
Marsiglia et al., 2004; Molix & Bettencourt, 2010). Lastly, youth with greater psychological empowerment have a lower probability of using substances (Christens & Peterson, 2012; Holden et al., 2005; Holden et al., 2004; Hughey et al., 2008; Peterson & Reid, 2003). Therefore, the influence of ethnic identity on substance use decreases in the presence of psychological empowerment, establishing an empirical relationship between ethnic identity and psychological empowerment, and its effect on substance use.

The reviewed literature on psychological empowerment pinpoints the relationship it holds with developmental outcomes, such as academic achievement, substance use, and violence (Christens & Peterson, 2012; Christens et al., 2013b). In addition, the presented empirical investigations recognize the theoretical and practical relationship psychological empowerment has with ethnic identity among Hispanic and Black samples (Gutiérrez, 1995; Molix & Bettencourt, 2010; Stanton-Salazar, 2011). This is considering that youth with more solidified ethnic identities experience additional aspects of psychological empowerment, such as leadership and self-efficacy (Hipolito-Delgado & Zion, 2015).

Lastly, the present research displays the growing empirical basis for psychological empowerment as a mediating variable among a host of outcomes, which include ethnic identity and substance use (Christens & Peterson, 2012; Molix & Bettencourt, 2010). Therefore, psychological empowerment is theorized to have a positive relationship with ethnic identity, mediate the relationship between ethnic identity and substance use, and negatively influence substance using behaviors. Based upon the present review, the theorized relationships psychological empowerment holds are in need of further inquiry.
Moderating influence of race. Conceptually, Figure 2 proposes the moderating effect of race between ethnic identity, psychological empowerment, and substance use. As multicultural research continues to grow and develop, socially constructed concepts of ethnicity and race are in need of further investigation, both theoretically and empirically (Cokley, 2005, 2007; Phinney & Ong, 2007; Rivas-Drake et al., 2014; Umana-Taylor et al., 2014). Minority groups, such as Hispanic and Black citizens, have diverse historical experiences within the United States. These experiences effect how they internalize identities, based in ethnicity, and develop a sense of empowerment. Recently, researchers have questioned whether race moderates the effects of psychological empowerment (Christens & Dolan, 2010; Christens & Peterson, 2012; Christens et al., 2011a; Molix & Bettencourt, 2010), ethnic identity (Umana-Taylor et al., 2014), and substance use (Chen & Jacobson, 2012).

Moderating influence of race on ethnic identity. Race and ethnicity are often assumed as related constructs (Cokley, 2007; Schwartz et al., 2014). However, a person’s race, as measured in this study, is strictly a demographic construct based on external physical characteristics and cultural background, while ethnic identity is a subjective group membership experience that involves a sense of belonging and self-labeling (Phinney & Chavira, 1995). Gaylord-Harden et al. (2007) further discussed that ethnic identity refers to one’s belonging to a specific ethnic group, while race encompasses those people who share similar physical and cultural characteristics. However, researchers argue that race and ethnicity are in fact overlapping concepts and that these
identities may be less distinct than once believed (Candelario, 2007; Cokley, 2005; Phinney, 1996; Schwartz et al., 2014).

Ethnic identity is an important determinant of well-being for both Black and Hispanic adolescents (Brittian et al., 2015; Rivas-Drake et al., 2014; Umana-Taylor et al., 2014). This is supported through empirical results displaying that the influence of ethnic identity on well-being did not vary across racial groups (Smith & Silva, 2011). This is likely owing to the distinct racial history of the U.S., which is interwoven into young people of colors’ identity constructions (Candelario, 2007). Umana-Taylor et al. (2014) argued that “Constructs of race and ethnicity are distinct and that the long U.S. history of racializing social groups makes it particularly important to recognize that racial categories play an important role in the meaning-making process of identity formation,” (p. 23). However, researchers have maintained that ethnic identity is more important for Hispanic than Black individuals (Phinney, 1996; Umana-Taylor, 2010). This is because Hispanic U.S. citizens tend to identify largely as an ethnic group with shared culture and history, whereas Black citizens focus on their racial identity within American culture (Phinney, 1996; Umana-Taylor, 2010). In addition, researchers have argued that ethnic identity protects those groups the most that do not necessarily identify as “American,” but instead identify with their specific ethnic group (i.e., Hispanic; Schildkraut, 2010). Consequently, ethnic identity protects some groups from negative outcomes, over others, such as Black Americans (Schildkraut, 2010).

Studies among Black youth have shown that the ethnic group identification of “African American” may be lost if they consider their identity as racial (i.e., Black), as
opposed to connected to a distinct ethnic group, like African American, African, or Haitian (Cokley, 2007; Umana-Taylor et al., 2014). This was supported by Schildkraut (2010), who found that ethnic identity buffered potentially negative health seeking behaviors, such as substance use, for Hispanic teens, but not for Black youth, due to a greater ethnic group identification for Hispanics and a stronger racial identification for Black adolescents. Recently, in a study conducted among Black and Hispanic students, Brittian et al. (2015) found that the positive mediating effect of ethnic identity, between ethnic group discrimination and depressive symptoms, was only present for Hispanic students, not Black students. These authors credited this variation to perceptions of how discrimination was manifested—i.e., due to social or institutional forces for Black students, and language and immigration status for Hispanic students (Brittian et al., 2015).

Studies illustrating the importance of ethnic identity among Black samples have only showed significant moderation when Black groups were compared to White participants. For instance, among a sample of Black and White adolescents, Hughes et al. (2009) identified that the mediating effects of ethnic identity, between ethnic-racial socialization and behavioral outcomes, were more important for Black youth than their White counterparts. These authors credited this difference to the need for Black youth to have a stronger ethnic group connection when compared to Whites, due to historical disenfranchisement, segregation, and oppressive circumstances (Hughes et al., 2009), thus, supporting ethnic identity as an important buffering and compensatory mechanism for Black groups. Therefore, Black Americans may associate more with a “racialized
ethnic identity,” which signifies that Black citizens’ racial identity may be associated with a strong ethnic identity (Cokley, 2007; Schwartz et al., 2014), particularly when compared to White populations.

Considering that race, ethnicity, and ethnic identity are closely related constructs, logic would dictate to study these concepts simultaneously. In doing so, researchers may better understand if race has any influence in the development of ethnic identity and if ethnic identity effects outcomes differently between groups (Cokley, 2005; Schwartz et al., 2014; Umana-Taylor et al., 2014). Due to the limited number of studies that have examined the moderating impact of race—i.e., Black and Hispanic self-identification—on ethnic identity, and present inconsistencies in findings, further research is needed to tease out these moderating effects (Phinney & Ong, 2007; Umana-Taylor et al., 2014).

**Moderating influence of race on psychological empowerment.** There are a limited number of studies examining the moderating effect of race on psychological empowerment. Few studies in psychological empowerment have incorporated demographic characteristics, such as race, in the analysis (Christens et al., 2011b). Those studies that have included demographics characteristics have only done so as a control (Christens et al., 2011b). However, aspects of psychological empowerment, such as locus of control and self-efficacy, have been theorized to vary by race.

Theoretically, psychological empowerment is said to vary as a result of people’s experiences in their social world—i.e., groups with less social power feel empowered within their specific ethnic groups and communities (Cattaneo & Chapman, 2010; Christens & Dolan, 2010). Peterson et al. (2002) found that Black participants, when
compared to Whites, experienced higher levels of psychological empowerment, as a result of needing to understand their social system. This implies that awareness of social-environmental influences increases psychological empowerment and community participation. These researchers added that differences in Black participants’ awareness of power and in the sociopolitical system may be due to historical disenfranchisement, and a need to be aware of power and resources within the social-system to “survive” or move beyond their current life circumstances (Peterson et al., 2002). Christens and colleagues (2011b) recognized a relationship between specific subgroup memberships, based on race and SES, and dimensions of psychological empowerment. However, more recent analyses have identified no difference in psychological empowerment by race (Christens et al., 2013a).

Empowerment and related literature (e.g., community participation and neighborhood sense of community) have largely failed to test race as a moderator (Christens et al., 2013b). The presented studies examining race in empowerment are limited, inconsistent, or only theorize the relationship between race and psychological empowerment. The inconsistencies present in the existing research can be attributed to the complex nature of psychological empowerment, and the relationship it holds with sociocultural, historical, and contextual factors (Christens et al., 2013b). Therefore, further research needs to examine the processes (e.g., ethnic identity and race) that effect the development of psychological empowerment, and the impact it has on outcome behaviors (Speer et al., 2012; Zimmerman, 2000).
Moderating influence of race on substance use. Race has been examined as a moderator in substance use prevention for more than a decade (Dahne et al., 2014; Marsiglia et al., 2004). Results from the Youth Risk Behavior Surveillance Survey (YRBSS) recently displayed statistically significant differences in the substance using behaviors of Hispanic and Black youth. For example, Hispanic students smoked cigarettes at significantly higher rates (9.2%), when compared to Black teens (6.5%; \( p < .05 \)); used alcohol at significantly higher rates (34.4%) compared to Black students (23.8%; \( p < .001 \)); and used cocaine (8.0%) and heroin (2.7%) at significantly greater rates, compared to Black adolescents’ cocaine (3.8%) and heroin use (2.6%; \( p < .05 \); Kann et al., 2016). Estimates suggest racial differences in the substance using behavior of Black and Hispanic youth (Elkington et al., 2010; Schmidt, Ye, Greenfield, & Bond, 2007), with early longitudinal investigations corroborating such findings (Duncan, Duncan, & Strycker, 2006; Flory et al., 2006; White, Nagin, Replogle, & Stouthamer-Loeber, 2004). However, a large proportion of the existing substance use research has examined race as a moderator between Black and White samples. This is a serious limitation when we consider that Hispanics designate the largest group of minorities in the U.S. and second largest demographic group in the U.S. (Murphey et al., 2014).

Based on recent national averages Hispanic teens engaged in higher rates of substance use, when compared to Black teens (Kann et al., 2016), with recent studies further displaying that Hispanics are superseding both Black and White groups in drug and alcohol use (Vaughan et al., 2015). However, empirical investigations have not always found consistent results or Hispanics were not considered in the analysis. For
example, in a study of White and Black teens, Brown, Miller, and Clayton (2004) found that White teens engaged in overall higher rates of substance use, and peers were more likely to have influence on drug and alcohol use, when compared to Black adolescents. Interestingly, in this same study, peer influence had a paradoxical effect for Black youth, by lowering their drug and alcohol use (Brown et al., 2004). In another study, Black adolescents initiated the use of alcohol at later ages when compared to Whites, with Hispanics engaging in intermediate level usage that decreased longitudinally (Malone et al., 2012). In addition, White teens were more likely to report alcohol use into subsequent years, when compared to Black and Hispanic young adults (Malone et al., 2012). However, Finlay, White, Mun, Cronley, and Lee (2012) illustrated that Black youth participated in more frequent drinking behaviors, while White youth engaged in heavy episodic drinking behaviors and marijuana use, although Black adolescents’ heavy use of alcohol and marijuana exceeded White teens after 20 years of age. Chen and Jacobson (2012) also discovered, among a sample of Hispanic, Black, and White young adults in their early 20s, that Hispanic participants had higher initial rates of substance use, when compared to Black and White young adults; however, longitudinally, Black young adults continued to experience higher rates of use. Although there is evidence of moderation by race on adolescent substance use, there are clear inconsistencies in the research. These inconsistencies are largely attributed to confounding factors, such as immigration status, gender, socioeconomic status, and geographic location. In addition, most of the reviewed studies include White samples who were found to surpass Black and Hispanic youth substance use.
Although the results of these prior studies identify Whites using drugs and alcohol at higher rates (Kann et al., 2016), these findings do not consider the disproportionate level of drug and alcohol use among Black and Hispanic groups, when compared to White populations (Chen & Jacobson, 2012; Vaughan et al., 2015). In addition, there are some longitudinal investigations that have identified no differences in substance-using behavior by race (e.g., Elkington et al., 2011; Williams, Ayers, Abbott, Hawkins, & Catalano, 1999). Given the current limitations and discrepancies in findings, further research is needed to explain differences in substance-using behaviors by race, particularly between Black and Hispanic young adults, for which there is a paucity of research (Chen & Jacobson, 2012).

To summarize, the studies presented in this section provide support for the moderating effect of race on ethnic identity, substance use, and psychological empowerment. The existing research, however, has largely compared minority groups to White samples who, when compared to persons of color, have different lived experiences when it comes to ethnic identity, substance use, and psychological empowerment. Those studies that have examined Black and Hispanic groups have found contradictory results. Moreover, researchers examining psychological empowerment among Black and Hispanic adolescents have largely failed to test the moderating effect of race. Those investigations that have examined variations in psychological empowerment, based on race, have found contradictory results (Christens et al., 2013a). Further research is needed to explore the moderating relationship of race on ethnic identity, substance use, and psychological empowerment among and between minority samples.
Research Questions and Hypotheses

In summary, the purpose of this study is to extend the research in empowerment and substance use, assess the mediating impact of ethnic identity on psychological empowerment and substance use, examine the mediating influence of psychological empowerment, and test the moderating effect of race among a cohort of urban Black and Hispanic adolescents. This study builds upon the research more recently conducted in the empowerment literature that argues ethnic identity as a mediating variable (see Table 1) between empowerment-based predictors (i.e., neighborhood sense of community [SOC] and community participation), psychological empowerment, and substance use (See Figure 1; Christens & Dolan, 2010; Christens & Lin, 2014; Christens & Peterson, 2012; Christens et al., 2013b; Christens et al., 2011a; Garcia-Reid et al., 2015; Gullan et al., 2013; Molix & Bettencourt, 2010; Peterson, 2014; Peterson et al., 2014). In addition, this study addresses the limited number of investigations that have examined psychological empowerment as a mediator (see Table 2; Christens & Peterson, 2012; Molix & Bettencourt, 2010) and the few empowerment studies to date that have investigated race as a moderator (Christens et al., 2011b; Molix & Bettencourt, 2010). To respond to these limitations, three hypothesized analytic models are presented (Figures 3–5; see Appendix A). Four research questions and eleven hypotheses were generated in total.

**Research question 1**

Does ethnic identity effect the relationship between community participation–neighborhood sense of community (SOC) and psychological empowerment?
H1-1: Ethnic identity will be directly and positively affected by neighborhood SOC and community participation and have a direct effect on psychological empowerment.

H1-2: Ethnic identity will perform as a mediator between neighborhood SOC, community participation, and psychological empowerment.

H1-3: Community participation and neighborhood SOC will have a positive indirect effect on psychological empowerment through ethnic identity.

Research question 2

Does ethnic identity have an influence on the relationship between community participation–neighborhood SOC and 30-day substance use?

H2-1: Ethnic identity will be directly and positively affected by neighborhood SOC and community participation and have a negative direct effect on 30-day substance use.

H2-2: Ethnic identity will perform as a mediator between neighborhood SOC, community participation, and 30-day substance use.

H2-3: Community participation and neighborhood SOC will have a negative indirect effect on 30-day substance use through ethnic identity.

Research question 3

Does psychological empowerment influence the relationship between ethnic identity and 30-day substance use?

H3-1: Psychological empowerment will mediate the relationship between ethnic identity and 30-day substance use for the full sample of adolescents.
**H3-2:** Ethnic identity will have a negative indirect effect on 30-day substance use through psychological empowerment, for the full sample of adolescents.

**Research question 4**

Does the relationship between ethnic identity, psychological empowerment, and 30-day substance use differ between Black and Hispanic adolescents?

**H4-1:** Psychological empowerment will mediate the relationship between ethnic identity and 30-day substance use between subsamples.

**H4-2:** Ethnic identity will have a negative indirect effect on 30-day substance use through psychological empowerment, between subsamples.

**H4-3:** Race may have a moderating influence on the mediating relationship of psychological empowerment between ethnic identity and 30-day substance use.

These hypotheses, research questions, and analyses will extend the literature, through this dissertation, in several ways. First, this study will expand the research on psychological empowerment among adolescent samples. Second, this study will expand our knowledge of psychological empowerment as a prevention construct among urban youth of color. Third, studies have alluded to the mediating effect of ethnic identity on not only substance use, but also psychological empowerment. Hence, this study extends this literature base by examining the mediating effects of ethnic identity among empowerment-based constructs. Fourth, this study assesses the direct effect of ethnic identity on psychological empowerment and substance use, and further justifies ethnic identity as a theoretically related paradigm. Fifth, this dissertation expands the research on psychological empowerment as a mediating variable. Lastly, the moderating effect of
race on empowerment-based predictors will be examined in more detail, as current findings in the substance use literature are inconsistent, and only a small number of empowerment-based studies have examined race as a moderator.
CHAPTER III
RESEARCH DESIGN AND METHODS

Sample and Design

These secondary data were collected as part of a comprehensive needs assessment within a northeastern United States urban school district, between 2006 and 2008. At the time data were collected, this city was rated as one of the 30 poorest school districts in the northeastern U.S., with high rates of substance use and crime (Reid et al., 2014). During these years, the local school superintendent, with the support of the board of education, sought to understand the substance use and gang problems plaguing the district to effectively design prevention-intervention programs.

Target community. The target community is a densely populated urban city in the northeastern U.S., with a population of roughly 145,000 residents (United States Census Bureau, 2015). This city is one of the largest communities in the state for which it is located. Approximately 33% of the city’s population lives below the poverty line, with an average household income of $33,964, which is nearly $40,000 less than the state’s average income (United States Census Bureau, 2015). Of those individuals living below the poverty line, 39% were below the age of 18 (United States Census Bureau, 2015). Moreover, roughly 30% of the city’s residents were under the age of 18 in 2014 (United States Census Bureau, 2015). This community is also racially and ethnically diverse, with more than 70% of the residents identifying as Black and Hispanic, and nearly one third being foreign-born residents (United States Census Bureau, 2015). These sobering statistics, in tandem with low high school and college graduation rates, high rates of
crime, and high alcohol outlet density, designates this community as socially isolated and disorganized, which is found to affect adolescent development (Junger-Tas, Steketee, & Jonkman, 2012; Sampson & Groves, 1989).

**Data collection.** A convenience sampling of students were recruited from all physical education and health classes in grades 9 through 12 (sampling approximately 2,500 students each year). This provided students in the school an equal opportunity to participate. The school district sent home parent permission slips to all students, with those students who returned both signed parent permission slips and student assent forms being eligible to take the survey. This sampling of adolescents was given a two-hour time period (i.e., nearly two class periods), during health and physical education, to complete the student questionnaire. All questionnaires were self-administered in English.

The sampled students were administered the 184-question survey during the allotted two-hour time period. The survey assessed various outcome behaviors based on measures from the Youth Risk Behavioral Surveillance Survey (YRBSS), these include 30-day substance use, violence, and sexually risky behavior (Kann et al., 2014). In addition to these outcomes, the survey also examined neighborhood sense of community (Peterson et al., 2008b), community–school participation (Speer & Peterson, 2000), psychological empowerment (Peterson et al., 2011a), ethnic identity (Phinney, 1989), and family cohesion and conflict (Arthur et al., 2002), among others. With many of the more sensitive questions (e.g., interpersonal violence and thirty-day substance use) methodological response bias was an inherent issue among adolescents, with youth either under- or over reporting certain behaviors (Garbarino et al., 1991; Williams & Nowatzki,
However, researchers have emphasized that adolescents’ perceptions are the best indicators of their lived experience (Garbarino et al., 1991), and that reports of substance use and similar problem behaviors have a degree of validity (Williams & Nowatzki, 2005).

Several mechanisms were put in place at the time of the survey design to reduce the potential for methodological bias. First, the distance between like negative outcome behaviors (e.g. violence and substance use) were separated, which has an influence on context and question order effects (MacKenzie, Podsakoff, & Podsakoff, 2011; Podsakoff, MacKenzie, & Podsakoff, 2012). Second, consistency between positive and negative response items were balanced, meaning higher numerical values indicated higher scores (MacKenzie et al., 2011; Podsakoff et al., 2012). Last, questions were developed using clear and concise language (i.e., no jargon or ambiguous terminology; MacKenzie et al., 2011; Podsakoff et al., 2012).

In the 2006–2007 school year, 648 youth were surveyed (a nearly 26% response rate), and in the 2007–2008 school year, 991 students were surveyed (a nearly 39.6% response rate), for a total sample of 1,639 students. 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. In addition, the majority of
students were on free or reduced lunch (68%), a proxy for low socioeconomic status (SES).

See Table 3 for the demographic breakdown of the sample used in the present study. For the present study, the original sample of students was delimited to those who self-identified as either Hispanic \((N = 929; 62.8\%)\) or Black \((N = 551; 37.8\%)\), for a total sample of 1,480 teens. Similar to the original sampling of adolescents, females (61%) designated the majority of participants, with the largest percentage of youth between 16 and 18 years of age \(70.5\%). In addition, the distribution between grades 9 through 12 were near evenly split (see Table 3). A large proportion of students were also on free or reduced lunch (68%). Furthermore, 45% of the sample disclosed using drugs or alcohol at least one day during the 30 days before surveying. The original sample of students was delimited because: 1) Black and Hispanic youth designated the two largest cultural groups within the sample; 2) Black and Hispanic adolescents designate the two largest minority groups within the Northeastern United States, and also within the community from which the data emanated (United States Census Bureau, 2015); and 3) studies within both the substance use (Finlay et al., 2012; Malone et al., 2012) and empowerment literature (Peterson, 2014) have failed to examine the experiences of Black and Hispanic teens by largely focusing on Black and/or White teens or Hispanic adolescents alone.

Two publications have emanated from these data to date. First, Peterson et al. (2011a) tested and validated the SPCS among a sample of students from the 2007–2008 \((N = 977)\) administration. Peterson established the SPCS as a multidimensional scale. The second study was conducted by Christens and Peterson (2012), who used path analysis to
understand the role of sociopolitical control (SPC). These authors found that SPC indirectly influenced psychological symptoms (e.g., depression and anxiety) through developmental outcomes (e.g., school importance, self-esteem, and risk behaviors). In addition, they found that SPC mediated the paths between ecological supports (e.g., social support and family cohesion) and developmental outcomes.

**Measurement**

Refer to Table 4 for descriptive statistics, associated alpha levels (Cronbach α), and correlations for all variables. Five measures were used in this study: psychological empowerment (Peterson et al., 2011a), ethnic identity (Phinney, 1989; Phinney & Ong, 2007), neighborhood sense of community (SOC), community participation (Arthur et al., 2002; Peterson et al., 2008b), and substance use outcomes (Kann et al., 2014). The scales used in this study have been identified by prior researchers as psychometrically sound, with high reliability and validity for this specific population (see Appendix B). In addition to these scales, demographic variables (e.g., gender and race) were also examined.

**Demographic Variables**

Demographic information was assessed using single-item questions about race-ethnicity, educational level (i.e., grade), age, and gender (See Appendix B for summary of demographic items). Two demographic variables were included in the present study’s analyses. *Race* was used a moderator in Model 3 and *gender* was included as a control in all three SEM analyses. For gender, respondents self-selected either *male* (0) or *female* (1). Within the original sampling of students, respondents had the opportunity to choose
between Hispanic, White non-Hispanic, Asian, Black, American Indian, Native Hawaiian or other Pacific Islander, or Other. For the delimited sample, which is used for the present study, two ethnic-racial identity options were included, Black (1) and Hispanic (2).

**Main Analytic Variables**

**Neighborhood SOC.** Neighborhood sense of community (SOC) is an eight-item self-report measure based on the Brief Sense of Community Scale Index (BSCSI) by Peterson et al. (2008b), and theorized through McMillan and Chavis’s (1986) original theoretical discussions. This scale measures four dimensions of neighborhood SOC (i.e., needs fulfillment, group membership, influence, and emotional connection). Peterson et al. (2008b) validated and assessed the reliability of this scale, identifying a Cronbach alpha of .92.

In the present study, participants responded to nine items that measured neighborhood SOC (sample items in Appendix B: I feel like a member of this neighborhood) using a 4-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (4; Peterson et al., 2008b). Responses were summed to reflect higher composite scores of neighborhood SOC (Cronbach α = .90). Students responded with moderate perceived levels of neighborhood SOC ($M = 24.04$, $SD = 9.53$), with responses ranging from 8 to 48.

**Community participation.** Community participation is a self-report five-item measure derived from the Student Survey of Risk and Protective Factors/Community Participation scale. This measure assesses participation in community and school activities (sample items in Appendix B: How often do you go to meetings/activities for a
club/youth group?), using a 4-point Likert scale ranging from never (1) to almost every day (4; Arthur et al., 2002). Speer and Peterson (2000) demonstrated support for the validity of this scale, and through Confirmatory Factor Analysis (CFA) identified this scale representing one underlying participation dimension. Previous studies (e.g., Chan et al., 2014; Christens et al., 2011a) have revealed Cronbach alphas ranging from .79 to .86 as a high. For the present study, responses were totaled to reflect greater community participation (Cronbach $\alpha = .75$). Students reported moderate rates of community and school participation ($M = 12.73, SD = 4.81$), with responses ranging from 5 to 20.

**Ethnic identity.** The Multigroup Ethnic Identity Measure (MEIM) is a 20-item scale (sample items in Appendix B: I have spent time trying to figure out more about my ethnic group.) measuring ethnic identification and belongingness to a broader group, culture, and setting (Phinney & Ong, 2007). The MEIM has been used among multiple ethnic groups (Phinney, 1989; Phinney & Ong, 2007) and is considered one of the most widely used self-report tools for ethnic identity development. This scale was first validated among Black youth, and has been subsequently validated among diverse groups across the United States and internationally (Kazarian & Boyadjian, 2008). The MEIM has high internal consistency and validity, ranging from .71 to .92 (Phinney & Ong, 2007; Ponterotto, Gretchen, Utsey, Stracuzzi, & Saya, 2003).

Responses for the present study were measured using a 4-point Likert scale ranging from strongly disagree (1) to strongly agree (4; Phinney, 1989; Phinney & Ong, 2007). Scores were totaled by summing responses, with higher scores representing greater ethnic identification (Cronbach $\alpha = .86$). Students responded with moderate levels
of perceived ethnic identification ($M = 53.16, SD = 10.25$). Responses ranged from 20 to a maximum of 80.

**Psychological empowerment.** Psychological Empowerment was measured using a 17-item scale, referred to as the Sociopolitical Control Scale for Youth (SPCS-Y), which is based on the work of Zimmerman and Zahniser (1991), Holden (2004, 2005), and Peterson et al. (2006). Items used in the scale are presented in Appendix B (sample items: I am a leader in groups. I can usually organize people to get things done.). The SPCS-Y was created using two subscales (i.e., leadership competence and policy control), based upon Peterson and colleague’s (2011a) validation of this measure. Using factor analysis, Peterson (2006, 2011a) supported the structure of this scale, identifying high internal consistency with Cronbach alphas ranging from .81 to .89.

In the present study, the first subscale included was an 8-item measure that assessed *leadership competence* (Cronbach $\alpha = .81, M = 3.80, SD = .73$). The second subscale was measured using nine items to assess *policy control* (Cronbach $\alpha = .85, M = 3.58, SD = .70$). All responses were recorded using a five-point Likert scale, ranging from the negative, *definitely cannot or strongly disagree* (1), to the positive, *definitely can do it or strongly agree* (5). Both scales were combined (Cronbach $\alpha = .88$) and participants responded with overall higher composite scores of psychological empowerment ($M = 62.42, SD = 10.75$). Responses ranged from a low of 17 to high of 85.

**30-day substance use.** Questions used for this measure assessed 30-day substance use and smoking habits (sample items in Appendix B: During the past month,
on how many days did you have 5 or more drinks of alcohol in a row?). These four domains make up the alcohol, tobacco, and other drug use (ATOD) construct of the YRBSS (Kann et al., 2014). Response options ranged from 0 days (0) to all 30 days (6). Based on prior research, the substance use construct of the YRBSS has been identified to have an internal consistency and reliability that ranged from .89 to .93 (Brener et al., 2014). Consistent with previous research studies in empowerment, a mean of all 14 items was calculated (e.g., Christens & Peterson, 2012; Garcia-Reid et al., 2013). Responses ranged from 1.00 to 6.00, with 6.00 representing the use of substances during all 30 days previous to being surveyed (Cronbach \( \alpha = .94 \)). On average youth disclosed lower mean rates of 30-day substance use (\( M = 1.64, SD = .77 \)).

A lower mean outcome is not atypical when considering previous investigations (e.g., Christens & Peterson, 2012; Garcia-Reid et al., 2013; Peterson & Reid, 2003; Samek et al., 2015; Tyler & Melander, 2015) have observed similarly lower mean 30-day response rates, but continued to identify significant and important findings. For example, Christens and Peterson (2012) reported a 1.46 mean 30-day response rate of use out of a possible six. Elsewhere, Garcia-Reid et al. (2013) also reported a 1.55 mean 30-day substance use rate out of a possible 6. In yet another study, Samek et al. (2015) also identified overall lower mean rates of substance use (i.e., .80 out of a maximum of 9), while examining the relationship substance use held in the presence of sibling companionship and parent involvement. Despite these lower mean rates of 30-day substance use, these authors found significant and important results that contributed to the substance use literature.
In addition, 30-day substance use results were skewed (4.31) and highly leptokurtic (9.78). Data transformation procedures were not employed because analyses were conducted using AMOS Structural Equation Modeling (SEM) software. Structural equation modeling software examines the covariance matrix through maximum-likelihood estimations, which reduces issues associated with normality, and has less of an impact on parameter estimates (Hancock & Liu, 2012). As Field (2013) and Wright, London, and Field (2011) discuss, the least bias method should be employed when handling nonnormal data.

**Data Analysis Plan**

**Preliminary Analysis**

Preliminary data analysis occurred in three stages. First missing data analyses were conducted to assess the patterns and levels of missingness (i.e., whether data is missing or not missing; Graham, 2009) associated with the given sample. Second, bivariate correlations and alpha levels were analyzed to assess the reliability and internal consistency of scales, and initial associations between main study variables and potential controls. Lastly, issues of normality and collinearity were examined among the main study variables. Following preliminary analyses main analytic procedures were conducted by examining the three models through AMOS SEM software v.23.0 (Arbuckle, 2013). Each stage of analysis is described below.

Missing data were examined using the Missing Value Analysis feature in SPSS (v.23.0). Missing data analysis indicated that the largest amount of missing data were no greater than 20% for any given variable. Missing data theory specifies that missingness
may occur as a result of one of three mechanisms: 1) *missing completely at random* (MCAR) or when missing data are unrelated to observed and unobserved values in the dataset; 2) *missing at random* (MAR) or when missingness may be a result of observed data, but not unobserved values, thus at random; or 3) *missing not at random* (MNAR), which is dependent upon unobserved variables contributing to the missing data (Graham, 2009; Little & Rubin, 2014; McGinniss & Harel, 2016). Little’s MCAR Test (SPSS v.23.0) was used to determine if data were MCAR. Little’s MCAR test revealed that the Chi square result was significant ($\chi^2 = [df = 70] 107.88, p = .002$), indicating these data were most likely not MCAR (Little, 1988). This is not surprising, as MCAR assumptions are perhaps unrealistic when compared to data MAR and MNAR (Little & Rubin, 2014).

Further examinations of these data indicate that the largest amounts of missing data were related to 30-day substance use (see Table 5 in Appendix A). This is not surprising, and may be due to the sensitivity of questions and methodological response bias (MacKenzie et al., 2011; Podsakoff et al., 2012).

Numerous methods are available for handling missing data. These methods include EM algorithm, multiple imputation (MI), and maximum likelihood (ML) methods (Graham, 2009; Little & Rubin, 2014; McGinniss & Harel, 2016). Traditionally, MI techniques have been used; however, this method requires that random draws occur from the population (Graham, 2009; Little & Rubin, 2014). Data in this study were from a single sample, therefore any error-variance lost through MI procedures must be addressed using bootstrapping techniques (Graham, 2009; McGinniss & Harel, 2016). Maximum likelihood procedures, however, address the missing data and parameter estimation, and
estimate the standard error in a single step (Acock, 2005; Hancock & Liu, 2012; Johnson & Young, 2011). In addition, because Little’s MCAR test revealed that data were mostly not MCAR, and the sample for these data is large, maximum likelihood procedures are designated as an appropriate method for handling missing data (Allison, 2002). Therefore, in this study ML estimation, through AMOS v.23.0 program software was used to address missing data.

Following missing data analyses and ML methods of handling missing data, normality and collinearity were examined. Standard cutoffs for kurtosis (normal distribution has kurtosis of 3) and skew were used (normal distribution has skewness of 0; Field, 2013). Considering previous studies that have examined variables, such as substance use, have shown skewed and leptokurtic results, it was expected that 30-day substance use would be nonnormal (e.g., Christens & Peterson, 2012). Empowerment scales, such as psychological empowerment, community participation, and neighborhood SOC (Christens & Peterson, 2012; Peterson et al., 2006; Peterson et al., 2011a), as well as the MEIM to measure ethnic identity (Phinney, 1989; Phinney & Ong, 2007), were expected to observe relatively normal distributions.

All variables were determined to be within the appropriate parameters, with the exception of 30-day substance use, which was highly skewed (4.31) and leptokurtic (9.78; refer to Table 4). There are numerous transformation procedures available to correct nonnormal data: 1) log transformation (log[\(X_i\)]); 2) square root transformation (\(\sqrt{X_i}\)); 3) reciprocal transformation (1/\(X_i\)); and 4) reverse score transformations (Field, 2013). However, the least bias method is recommended to handle nonnormal data (Field,
2013; Wright et al., 2011). Because AMOS SEM software was used to analyze data, transformation procedures were not employed. AMOS SEM software examines the covariance matrix through ML estimations, which sidesteps issues associated with normality and limits the impact on parameter estimates (Hancock & Liu, 2012; Walker & Smith, 2016). In addition to ML estimations, the Bollen-Stine (Bollen & Stine, 1992) bootstrap procedure was employed to adequately handle nonnormal data, which is described in more detail in the description of main analytic procedures.

Following these analyses, alpha-level reliabilities (Cronbach α) and a bivariate correlation matrix were generated to assess the internal consistency of scales and evaluate initial associations between main study variables, as well as potential controls (Field, 2013; See Table 4 in Appendix A). Based upon previous empowerment-based studies, gender was an expected control (e.g., Christens & Peterson, 2012; Peterson et al., 2011a; Speer et al., 2012). In addition to these analyses, multicollinearity was examined using both the bivariate correlation matrix and regression analyses. Variables and scales having correlations .80 and above would merit further investigation (Field, 2013). The variance inflation factor (VIF) and tolerance were also used to further assess collinearity (Bowerman & O’Connell, 1990; Field, 2013). Predictors greater than 10 for VIF and below 0.2 for tolerance may require further investigation (Bowerman & O’Connell, 1990). However, all study variables were within designated parameter ranges for VIF (< 10) and tolerance (> 0.2). Following these preliminary analyses, main analytic procedures were conducted.
Main Analytic Procedures Using Path Analysis

Main analytic procedures involved running each of the three models through AMOS SEM software separately, using maximum likelihood procedures (Arbuckle, 2013). Path analysis, which is based on multiple regressions, examines the relationship between exogenous (i.e., variable not caused by another variable, but effects one or more variables in model) and endogenous variables (i.e., a variable that is caused or effected by one or more variables in a model; Iacobucci, 2010). Path models examine the total effects, as well as the direct and indirect effects of variables in a single model, simultaneously (Peterson et al., 2014). Structural equation modeling path analyses are superior to standard regression analyses in that they: 1) provide more accurate estimates of the effects of hypothesized variables; 2) estimate all effects simultaneously; 3) allow for greater accuracy of parameter estimates when examining competing models; and 4) allow the researcher to compare effects of multiple mediators (Zhao, Lynch, & Chen, 2010). Importantly, path analyses allow for parsimonious testing of variables, particularly in the case of small sample sizes, therefore providing meaningful results (Peterson et al., 2014).

Maximum likelihood (ML) procedures were used to analyze data. Due to the data being nonnormal, asymptotically distribution free (ADF) estimation were used initially; however, \( \chi^2 \) results were not significantly different between ADF and ML, across Model 1 (\( \chi^2 [2] =3.73, p = .15 \)), Model 2 (\( \chi^2 [3] =.06, p = .15 \)), and Model 3 (\( \chi^2 [3] = 1.52, p = .22 \)). In addition, ADF estimations provide poor estimates in the presence of model misspecification (Olsson, Foss, Troye, & Howell, 2000). Therefore, ML procedures were
retained for further analyses as they are a more robust method of analyzing data (Hancock & Liu, 2012; Walker & Smith, 2016). However, to more adequately handle nonnormal data the Bollen-Stine (Bollen & Stine, 1992) bootstrap procedure was employed, with 6,000 bootstrap resamples used, which is considered robust (Walker & Smith, 2016). Bollen-Stine bootstrap procedures have been observed as a robust method of handling nonnormal data, particularly with larger sample sizes (N ≥ 200; Nevitt & Hancock, 2001).

**Mediation testing.** *Mediation* refers to the effects of the independent variables (X) on outcome variables (Y), through a mediating (M) variable (Cheong & MacKinnon, 2012; Hayes & Preacher, 2014; Mallinckrodt et al., 2006; Preacher & Kelley, 2011).

Data were fit to the path models using AMOS SEM software. For Model 1 (see Figure 3 in Appendix A) and Model 2 (see Figure 4 in Appendix A), ethnic identity was examined as a mediating variable between community participation/neighborhood sense of community and psychological empowerment (Model 1), and 30-day substance use (Model 2). In Model 3 (see Figure 5 in Appendix A), psychological empowerment was examined as a potential mediator between ethnic identity and 30-day substance use. In all three models, direct, indirect, and total effects were examined to assess relationships among variables.

To test mediation there are two methods that are traditionally used: 1) the *causal steps strategy*; and 2) the *product of coefficients approach* or the Sobel Test (Fairchild & MacKinnon, 2009; MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; Valente,
According to the causal steps strategy by Baron and Kenny (1986), mediation is present when:

1) X as the independent variable (IV) significantly predicts Y as the dependent variable (DV).
2) X (IV) significantly predicts the mediator (M).
3) M significantly predicts Y (DV) when controlling for X (IV); and
4) The effect of X (IV) on Y (DV) significantly decreases when M and X (IV) are entered simultaneously as predictors (Preacher & Hayes, 2004, 2008).

Researchers have argued, however, that a significant total effect of IV on DV is not required for mediation (Preacher & Hayes, 2008).

Additional methods of mediation, such as the Sobel test (Sobel, 1986, 1987) or products of coefficients approach, focus not on the paths in the model, but instead the product of \( \hat{a} \) (i.e., predictor to mediator) and \( \hat{b} \) (i.e., mediator to outcome); this is because the product is equal “to the difference between the total and direct effect,” (Preacher & Hayes, 2008, p. 880). The product represents the total and direct effects achieved by calculating the critical ratio of the product of \( \hat{a} \) and \( \hat{b} \) to its standard error \( s_{ab} \) (Hayes & Preacher, 2014; MacKinnon et al., 2002; Preacher & Hayes, 2008). If \( p \) is significant than mediation has occurred; however, methodologists have taken issue with the use of the standard normal distribution from which \( p \) is derived (MacKinnon et al., 2002; Preacher & Hayes, 2008)—because, generally, normal distributions are only present within larger sample sizes (Cheung & Lau, 2007; Fairchild & MacKinnon, 2009; Preacher & Hayes, 2008). Valente et al. (2015) argued that researchers should, therefore, select a mediation
analysis that accounts for the correlation between paths $a$ and $b$, and reduces the chances of Type 1 error, which is an inherent issue when utilizing bootstrapping or bias correcting methods to test for mediation.

Considering the critiques surrounding the Baron and Kenny approach and the Sobel Test, MacKinnon et al. (2002) investigated, through multiple simulations, 14 different models for examining the effect of an intervening variable (mediator). These authors established that the Test of Joint Significant (TJS) exhibited the best balance of statistical power, while reducing Type I error (MacKinnon et al., 2002; Mallinckrodt et al., 2006). The TJS method requires that only the path from predictor to mediator ($\hat{a}$) and mediator to outcome ($\hat{b}$) be statistically significant (Fairchild & MacKinnon, 2009; Leth-Steensen & Gallitto, 2015; Mallinckrodt et al., 2006). When these paths are statistically significant, an indirect effect is present. Researchers have further suggested that TJS is a more parsimonious test of mediation to bootstrapping methods (Krause et al., 2010), and has the potential to perform more adequately than both bootstrapping and Normal Theory approaches, which can increase Type I errors (Leth-Steensen & Gallitto, 2015; Mallinckrodt et al., 2006). Therefore, considering Valente and colleagues (2015) recommendations, as well as MacKinnon and colleagues (2002) findings, the present study used the TJS as a method to examine mediation among the tested models.

The strength of effects is, however, difficult to determine in mediation models. For that reason, it is helpful to further examine the difference between the indirect and total effect of a variable (Preacher & Kelley, 2011). The decompensation of effects, relative indirect effect proportion were examined to better understand the effect of the
predictor variable on the outcome variable, through a mediating variable (refer to equation below; Ditlevsen, Christensen, Lynch, Damsgaard, & Keiding, 2005; Field, 2013). $P_m$ is interpreted as, the percent effect $X$ has on $Y$ through $M$.

$$P_m = \frac{ab}{ab + c}$$

Using SEM software to run mediation analyses is also superior to traditional regression approaches for several reasons. First, SEM investigates variables with multiple indicators (Cheung & Lau, 2007). Second, measurement errors in the model can be controlled, thus avoiding complications from measurement error and underestimation of mediation effects (Cheung & Lau, 2007). Third, SEM allows for the analysis of complicated mediation models with, for example, multiple mediators simultaneously (Cheung & Lau, 2007). Lastly, SEM provides a clear model where all relevant paths are included, without omission of any (Cheung & Lau, 2007). However, as an aside, Cheong and MacKinnon (2012) noted that true mediation occurs longitudinally and results should be interpreted as preliminary.

**Mediation-moderation testing.** Following mediation analyses, mediation-moderation testing was conducted on Model 3, between Hispanic and Black youth. Moderation was examined because more recently researchers have questioned whether race moderates the effects psychological empowerment (Christens & Dolan, 2010; Christens et al., 2011a; Molix & Bettencourt, 2010), ethnic identity (Umana-Taylor, 2010), and substance use (Chen & Jacobson, 2012). Moderation was conducted using AMOS multigroup analysis (Arbuckle, 2013).
Moderation examines how effects differ by group, whereas mediation-moderation involves a mediator that varies across levels of a moderator (Cheong & MacKinnon, 2012; Field, 2013). To test mediation-moderation a constrained and unconstrained approach was implemented, using AMOS multigroup analysis. Through multi-group analysis, model invariance was tested to assess if estimates are comparable across groups (Qureshi & Compeau, 2009).

First, all path coefficient parameter estimates were allowed to vary freely across groups. At this point, model fit indices and \( \chi^2 \) (chi square) results were recorded. Paths that were insignificant for both Black and Hispanic youth were then trimmed (i.e., removed). Next, equality constraints (i.e., all paths constrained to 1) were imposed on path coefficients, with model fit indices reassessed following analysis. Next, chi square difference (\( \chi^2_{\text{diff}} \)) testing (Gaskin, 2012) was used to assess whether a significant difference was present between the constrained and unconstrained models among groups (Schermelleh-Engel, Moosbrugger, & Müller, 2003). Moderation is present if the \( \chi^2 \) result is significant (Gaskin, 2012; Schermelleh-Engel et al., 2003; Werner & Schermelleh-Engel, 2010). Should the \( \chi^2 \) test result indicate insignificance, this would specify a lack of moderation at the model level and dictate that the restricted model be retained (Schermelleh-Engel et al., 2003). Following these analyses, path-by-path moderation analyses were conducted. In this each path was examined individually to assess if confidence intervals (CI) fell within the 95% CI range produced by \( \chi^2_{\text{diff}} \) testing (West, Taylor, & Wei, 2012). Path specific moderation examines whether individual
paths are, in this case, moderated by race. Similar to moderation at the model level, path specific moderation specifies parameter values that are invariant for each individual path.

Model fit for all path analysis models were assessed using several indices. These included Chi Square ($\chi^2$) test, Comparative Fit Index (CFI), Goodness of fit indices (GFI), and Root Mean Square Error of Approximation (RMSEA; West et al., 2012). To assess these indices, several rules were also in place. Nonsignificant $\chi^2$ values indicate acceptable model fit. Higher values (i.e., greater than .95) on the Comparative Fit Index and Goodness of Fit Index, and smaller RMSEA (i.e., less than .08), are desirable. RMSEA that are $\leq .05 = $ good fit, $.05-.08= $ acceptable fit and $.08-.10= $ unacceptable fit (West et al., 2012). These fit assessments were used as path models are generated. Lastly, model modification indices were examined to improve fit and model performance.
CHAPTER IV

RESULTS

Preliminary Analyses

Correlations and descriptive statistics of scale variables for the full study sample are reported in Table 4 (see Appendix A). Table 6 (see Appendix A) displays the correlation results for subsamples. As expected, assumptions of normality were met for all study variables, with the exception of substance use. Thirty-day substance use had a kurtosis of 9.78, suggesting a highly leptokurtic distribution, and a skewness of 4.31, further indicating that the scores were clustered toward the lower end of the scale. This was not surprising if we consider that adolescents tend to either over- or underreport their responses to more sensitive questions, such as substance use (MacKenzie et al., 2011; Podsakoff et al., 2012), which has been evident in more recent examinations of drug and alcohol use among urban teens (Christens & Peterson, 2012; Garcia-Reid et al., 2013; Tyler & Melander, 2015). Considering maximum-likelihood (ML) procedures were used through AMOS SEM software, data transformation procedures were not utilized to handle estimation problems associated with nonnormal data (Olsson et al., 2000; West et al., 2012). Alpha levels were relatively high across scales, ranging from .75 to .94 (Field, 2013).

All main study variables for the full sample of adolescents were correlated (see Table 4). Correlations ranged from low (± .1) to moderate (± .3; Field, 2013). For example, the correlation between substance use and psychological empowerment was moderately and negatively correlated ($r = -.31, p < .01$). Between subsamples, all
variables were correlated for Hispanic adolescents, with the exception of neighborhood SOC and substance use (see Table 6). Among Black youth, neighborhood SOC was also not correlated with community participation, nor substance use. Potential controls were examined between the full and subsamples (e.g., age, gender, and grade). For both the full and subsamples, gender (Female = 1, Male = 0) was correlated with the main outcome variables—i.e., substance use and psychological empowerment—designating gender as a control in the analyses. No issues of multicollinearity were evident, with all correlations lower than .80 and the VIF less than 10 (Field, 2013).

Main Analytic Results

Model 1 results. Figure 6 (see Appendix A) presents the over-identified path model, which includes only significant paths and standardized beta weights. Results are also reported in Tables 7 and 8 (see Appendix A), with unstandardized weights included. Of note, unstandardized beta weights greater than 1.00 are not unreasonable, as they represent the upper limit of the 95% confidence interval (Hayes, 2012). Results are presented below.

Model 1 tested the direct and indirect effects of community participation/neighborhood SOC through ethnic identity on psychological empowerment. Gender was controlled for during this analysis. This model demonstrated good overall fit for the sample data ($\chi^2 (3) = 5.09, p = .16$; RMSEA = .02, GFI = .99, AGFI = .99, CFI =.99; CMIN/df = 1.69), and accounted for 9.5% of the variability in ethnic identity and 15.5% of the variability in psychological empowerment. Such variability ($r^2$) results are not uncommon (e.g., Christens & Lin, 2014; Christens & Peterson, 2012; Speer et al., 2012)
when considering that a host of additional variables are likely to also predict ethnic identity and psychological empowerment. Pathways from all of the independent variables (i.e., community participation and neighborhood SOC) to ethnic identity were statistically significant \((p < .001)\). In addition, the path between ethnic identity and psychological empowerment was statically significant \((p < .001)\), indicating mediation in the model, based on the TJS (MacKinnon et al., 2002; Mallinckrodt et al., 2006). Standardized effect sizes ranged from small (.01–.07) to large (.25 and greater; Field, 2013; Preacher & Kelley, 2011). Bollen-Stine bootstrapping results showed that the p value was greater than .05 \((p = .26)\), indicating that the proposed model is consistent with the sample data (Bollen & Stine, 1992; Walker & Smith, 2016).

As displayed in Figure 6, community participation had a moderate direct effect on psychological empowerment and a small indirect effect on psychological empowerment, through ethnic identity. This outcome supports previous research findings, which established that adolescents who participated in more community–school-based activities had a greater perceived ethnic identity (Anglin et al., 2012; Harper & Quaye, 2007; Hipolito-Delgado & Zion, 2015), and higher composite scores of psychological empowerment (Christens & Peterson, 2012; Peterson et al., 2005; Peterson & Reid, 2003; Peterson et al., 2011b). Gender had a positive effect on psychological empowerment, a result in line with previous investigations (Christens & Peterson, 2012; Peterson et al., 2005; Speer et al., 2012).

Neighborhood sense of community (SOC) predicted perceived psychological empowerment, although the direct effect was much smaller when compared to the
influence community participation had on psychological empowerment. Neighborhood SOC also predicted psychological empowerment indirectly, through its effect on ethnic identity (see Table 8 in Appendix A), which identifies that those youth who had a greater perceived connection to their community had higher composite scores of ethnic identity (Anglin et al., 2012; Garcia-Reid et al., 2013; Umana-Taylor, 2010), and in turn greater psychological empowerment. Ethnic identity, as the mediator, had the strongest standardized direct effect on psychological empowerment in this model, validating that those youth who had stronger and more stable ethnic identities were likely to feel empowered and have higher levels of self-efficacy, policy control, and leadership.

Table 8 presents the results of the decompensation of effects. The decompensation of effect (Alwin & Hauser, 1975) and the relative indirect effect (Ditlevsen et al., 2005) proportion are useful methodological techniques for understanding the relative strength of the direct, indirect, and total effects in a path model. Beyond the direct effects in Figure 6, two separate indirect effects were computed from this model. The first indirect effect was between neighborhood SOC and psychological empowerment via ethnic identity. The second indirect effect occurred between community participation and psychological empowerment by way of ethnic identity.

As can be seen in Table 8, community participation had a relatively strong total effect on psychological empowerment. The ratio of the indirect effect, .07, to the total effect of .21 indicates that 37.5% of the effect community participation had on psychological empowerment was through ethnic identity. This result demonstrates that ethnic identity mediates more than one third of the overall effect of community
participation on psychological empowerment, although most of the overall effect of community participation on psychological empowerment was direct, which is consistent with prior investigations (Christens & Lin, 2014; Speer et al., 2012).

Neighborhood SOC also had a moderate total effect of .14 and an indirect effect of .05, through ethnic identity, indicating that 33% of the overall effect of neighborhood SOC on psychological empowerment was indirect through ethnic identity. This result displays that again, ethnic identity mediated approximately one third of the effect between neighborhood SOC and psychological empowerment; although, similar to community participation, the majority of the overall effect between neighborhood SOC and psychological empowerment was direct. Overall, the results from the decompensation of effects support that ethnic identity partially mediated the influence neighborhood SOC and community participation had on psychological empowerment, supporting theoretical conjectures (Cattaneo & Chapman, 2010; Zimmerman, 2000), and empirical findings (Hipolito-Delgado & Zion, 2015; Molix & Bettencourt, 2010).

**Model 2 results.** Figure 7 (see Appendix A) presents the over-identified path model, with standardized regression weights reported. See Tables 7 and 8 for additional results. Model 2 examined the direct and indirect effects of community participation/neighborhood sense of community (SOC) through ethnic identity on 30-day substance use. Gender was controlled for during this analysis. This model displayed good overall fit for the sample data ($\chi^2 (4) = 1.36, p = .24$; RMSEA = .02, GFI = .99, AGFI = .99, CFI = .99; CMIN/df = 1.36), and accounted for 8.8% of the variability in ethnic identity and 17% of the variability in 30-day substance use. Such variability ($r^2$) results
are not uncommon (Christens & Lin, 2014; Christens & Peterson, 2012; Peterson & Reid, 2003; Speer et al., 2012) when considering that a host of additional variables are likely to also predict ethnic identity and psychological empowerment. Bollen-Stine bootstrapping results showed that the $p$ value was greater than .05 ($p = .23$), providing evidence that the proposed model is consistent with the data (Bollen & Stine, 1992; Walker & Smith, 2016).

Pathways from all of the independent variables (i.e., community participation and neighborhood SOC) to ethnic identity were statistically significant ($p < .001$). The path between ethnic identity and 30-day substance use was also statistically significant ($p < .001$). In addition, community participation had a positive direct effect on 30-day substance use ($p < .001$). However, neighborhood SOC displayed no direct influence on 30-day substance use. Despite this result, mediation was present in this model based on the TJS (MacKinnon et al., 2002; Mallinckrodt et al., 2006).

Displayed in Figure 7, community participation had a negative direct effect on 30-day substance use, and indirectly effected 30-day substance use, via ethnic identity (see Table 8 for indirect effects). These results indicate that those adolescents who engaged in more community–school-based activities had more solidified ethnic identities, which in turn reduced their probability of 30-day substance use. In addition, gender had a positive influence on 30-day substance.

Neighborhood SOC, interestingly, had no direct effect on 30-day substance use. However, neighborhood SOC indirectly, through ethnic identity, reduced the probability of 30-day substance use (see Table 8). This result points out that those adolescents who
had a positive neighborhood SOC (or felt more connected to their social and cultural group) also disclosed greater composite scores of ethnic identity, which in turn reduced the effects on 30-day substance use. Results also display ethnic identity as a suppression variable, rendering any direct effect between neighborhood SOC and 30-day substance insignificant (MacKinnon, 2008; MacKinnon, Krull, & Lockwood, 2000). Therefore, those youth who had a stronger perceived SOC also disclosed greater composite scores of ethnic identity, which in turn reduced the effects on 30-day substance use. This finding supports prior investigations illustrating the indirect effect of neighborhood SOC on negative behavioral outcomes, by way of ethnic identity (e.g., Garcia-Reid et al., 2013).

In addition, this outcome begins to add credibility to prior studies that have exhibited ethnic identity as a mediator (e.g., Brittian et al., 2015; Garcia-Reid et al., 2013). Ethnic identity as the mediator had a negative direct effect on 30-day substance use. This result further corroborates findings that have shown students with stronger and more solidified ethnic identities (i.e., greater cultural group belongingness and stronger affirmations associated to their ethnic-cultural group) are less likely to involve themselves in substance-using behaviors (e.g., Brook et al., 1998b; Garcia-Reid et al., 2013; Marsiglia, Kulis, & Hecht, 2001).

Table 8 presents the decompensation of effects and the relative indirect effect proportion. These results offer insight on the relative strength of the direct, indirect, and total effects for the presented path model (Ditlevsen et al., 2005). Two separate indirect effects were computed. The first indirect effect was between neighborhood SOC and 30-
day substance use via ethnic identity. The second indirect effect was between community participation and 30-day substance use by way of ethnic identity.

Community participation had a strong, negative total effect on 30-day substance use (see Table 8). The ratio of the indirect effect, -.02, to the total effect of -.35 indicates that 4.3% of the overall effect of community participation on 30-day substance use was indirect, through ethnic identity. This specifies that ethnic identity mediated a small proportion of the effect, between community participation and 30-day substance use. The vast majority of the effect between community participation and 30-day substance use was direct. This result illustrates the importance of access and involvement to community activities as a buffer against substance use and proxy for youth empowerment (Chan et al., 2014; Christens & Peterson, 2012).

With regard to the indirect effect between neighborhood SOC and 30-day substance use, the ratio of the indirect effect, -.03, on the total effect, -.07, indicates that 46.5% of the overall effect of neighborhood SOC on 30-day substance use was through ethnic identity. This finding substantiates that ethnic identity performs as an important mediator between youth perceiving strong connectedness and belongingness to their community, and participating in lower substance-using behaviors (e.g., Anglin et al., 2012; Garcia-Reid et al., 2013). Hence, ethnic identity performs as a developmental mechanism that is enhanced through community participation and perceptions of belongingness, which in-turn protects adolescents from negative behavioral outcomes, such as substance use.
Model 3 results. Model 3 was first tested among the entire sample of adolescents (see Figure 8 and Table 9 in Appendix A). Following this analysis, mediation-moderation analyses were performed between Black and Hispanic adolescents (see Figure 9). Figure 8 displays the over-identified path model, with standardized beta weights reported for the full sample. This model examined the direct and indirect effects of ethnic identity on 30-day substance use, via psychological empowerment among Black and Hispanic adolescents. In addition, this model tested the direct influence of psychological empowerment on 30-day substance use. Gender was controlled for during analysis.

Among the full sample of adolescents, as displayed in Figure 8, Model 3 showed good overall fit for the sample data ($\chi^2 (3) = 2.51, p = .47$; RMSEA = .03, GFI = .99, AGFI = .99, CFI = .99; $\text{CMIN}/df = .84$), and accounted for 13% of the variability in psychological empowerment and 13% of the variability in 30-day substance use. All pathways in the model were significant ($p < .01$). Bollen-Stine bootstrapping results showed that the $p$ value was greater than .05 ($p = .74$), indicating that the proposed model is consistent with the data, and the sample data fit the model well (Bollen & Stine, 1992; Walker & Smith, 2016). Results further indicate mediation in the model, based on the TJS (MacKinnon et al., 2002; Mallinckrodt et al., 2006). Ethnic identity had a small, negative, direct effect on 30-day substance use and a strong, positive effect on psychological empowerment. In addition, ethnic identity had a moderate, negative indirect effect on 30-day substance use, through ethnic identity (see Table 10 for indirect effects in Appendix A). Psychological empowerment was observed to have a strong,
negative, influence on 30-day substance use. Gender, as a control, had a positive effect on psychological empowerment and a negative influence on 30-day substance use.

The decompensation of effects and the relative indirect effect proportion are displayed in Table 10 for this model. The ratio of the indirect effect, -.09, to the total effect of -.15, indicates that 62% of the overall effect of ethnic identity on 30-day substance use was mediated through psychological empowerment. This outcome is important as it supports theoretical conjectures and previous empirical findings that have argued psychological empowerment as an important mediator in youth development (Christens & Peterson, 2012; Molix & Bettencourt, 2010). This finding also substantiates the relationship between ethnic identity and psychological empowerment on negative behavioral outcomes. Previous studies have similarly emphasized that strong ethnic group connections and identity increases psychological empowerment, and vice versa (Garcia-Reid et al., 2013; Gullan et al., 2013; Hipolito-Delgado & Zion, 2015). This is an important finding as it has been largely theorized and minimally tested empirically (Garcia-Reid et al., 2013).

**Mediation-moderation results for model 3.** Following mediation analysis among the entire sample, mediation-moderation was examined using the multi-group analysis feature in AMOS SEM software, among Black and Hispanic adolescents (see Figure 9). Gender was again designated as a control in this model, with direct links to psychological empowerment and 30-day substance use. See Tables 10 and 11 for results (see Appendix A).
Between Black and Hispanic teens, the hypothesized model showed good overall model fit for the sample data ($\chi^2 (6) = 6.95, p = .32$; RMSEA = .01, GFI = .99, AGFI = .99, CFI = .99; AIC = 34.96; CMIN/df = 1.16). Bollen-Stine bootstrapping results showed that the $p$ value was greater than .05 ($p = .79$), indicating that the proposed model is consistent with the data, and the sample data fit the model well (Bollen & Stine, 1992; Walker & Smith, 2016). To further test moderation, insignificant ($p > .05$) paths were trimmed from the model. The path between ethnic identity and 30-day substance use was insignificant, and therefore was trimmed. Following the trimming of the initial model, fit increased slightly ($\chi^2 (8) = 11.11, p = .19$; RMSEA = .02, GFI = .99, AGFI = .99, CFI = .99; AIC = 35.11; CMIN/df = 1.38). Chi square difference ($\chi^2_{diff}$) test was performed between the trimmed and originally hypothesized model to assess whether a significant difference was present. No difference was present between trimmed and nontrimmed models ($\chi^2_{diff} (2) = 4.16, p = .13$). This was further verified by the AIC (Akaike Information Criterion), which is recognized as an important indicator to assess fit between models (West et al., 2012), irrespective of whether models use the same or different data (Kumar & Sharma, 1999; Levy & Hancock, 2011; Raykov & Penev, 1998; Rigdon, 1999). The smaller AIC indicates a better fitting model (Levy & Hancock, 2011; West et al., 2012); therefore, the originally hypothesized model, with the smaller $\chi^2$ was retained for subsequent analyses (Werner & Schermelleh-Engel, 2010).

To test for invariance, or moderation, a constrained model was analyzed next. Parameter estimates in the model were constrained to be equivalent (equal to 1) across Hispanic and Black adolescent groups. This constrained model was found to have equally
good overall model fit for the sample data ($\chi^2 (11) = 12.89, p = .30; \text{RMSEA} = .01, \text{GFI} = .99, \text{AGFI} = .99, \text{CFI} = .99; \text{CMIN}/df = 1.17$). Next, $\chi^2$ difference testing was performed (Gaskin, 2012). Bollen-Stine bootstrapping results showed that the $p$ value was greater than .05 ($p = .79$), indicating that the proposed model is consistent with the sample data, and the sample data fit the model well (Bollen & Stine, 1992; Walker & Smith, 2016). The $\chi^2$ difference was not significant, signifying that groups were not different at the model level ($\chi^2_{\text{diff}} (5) = 5.94, p = .31$), which suggests that the constrained model fit the data just as well as the model with the parameters varying freely (Schermelleh-Engel et al., 2003). Because the model was not trimmed and no difference was present due to moderation, the model with the smaller $\chi^2$ and AIC was retained for subsequent analyses (Schermelleh-Engel et al., 2003). Put another way, the results from this analysis indicate that the mediating relationship between ethnic identity and 30-day substance use, via psychological empowerment, did not differ between Hispanic and Black adolescents at the model level (see Figure 9 for the final model).

Figure 9 and Table 11 (see Appendix A) display the results for the final path model. Individual paths were also examined for invariance between Hispanic and Black teens, which is a next step in examining for moderation through SEM analyses (Jenatabadi, 2014). Only one path was observed as invariant at the path level. Although not significant for path-level moderation, the relationship between ethnic identity and psychological empowerment was also slightly higher for Black youth ($\beta = .33, p < .001$) when compared to Hispanic teens ($\beta = .31, p < .001$). This was also the case for the relationship between psychological empowerment and 30-day substance use. The indirect
effect of ethnic identity on substance use, via psychological empowerment was similar between groups (See Table 10). Overall, this model accounted for 11% of the variability in psychological empowerment and 11% of the variability in 30-day substance use for Hispanic adolescents, and 12% of the variability in psychological empowerment and 14% of the variability in 30-day substance use for Black teens.

The decompensation of effects and relative indirect effect proportions are displayed in Table 10 for the moderated-mediated model (Figure 9). For Hispanic teens, as shown in Table 10, the ratio of the indirect effect, -.08, to the total effect of -.13 indicated that 66.4% of the overall effect of ethnic identity on 30-day substance use was mediated through psychological empowerment. A similar mediating effect was observed for Black youth (66.2%). Although the decompensation of effects illustrates a similar mediating impact between groups, the variability in psychological empowerment and ethnic identity may illustrate a meaningful difference between Black and Hispanic adolescents. Moreover, these results may suggest ethnic identity to be an equally important indicator of enhancing psychological empowerment and reducing substance use for Black youth.
CHAPTER V

DISCUSSION

Substance use prevention-interventions during the last decade have had limited effectiveness in reducing the causes and mechanisms of drug and alcohol use among urban youth of color, specifically Black and Hispanic young adults (Paiva et al., 2014). This is due to distorted funding priorities that highlight and privilege treatment opposed to prevention and evidence-based interventions (New York Drug Policy Alliance, 2015). In addition, much of the federal spending focused on substance (ab)use is dedicated to enforcement, prosecution, and incarceration of drug users, which are vestiges of the War on Drugs (Alexander, 2012; Levy-Pounds, 2013; New York Drug Policy Alliance, 2015). As a result, youth of color are disproportionately persecuted, whether intentionally or unintentionally, when compared to their more affluent White counterparts (New York Drug Policy Alliance, 2015). In addition to biased funding priorities, research studies and theoretical conjectures used to examine adolescent substance use among youth of color have largely focused on “risks” (Garcia-Reid et al., 2016; Kirshner, 2015) and been deficient in attending to and pursuing culturally sensitive perspectives meant to reduce the impact of such deleterious health outcomes (Christens & Peterson, 2012; Fletcher & Sarkar, 2013; Paiva et al., 2014). As a result, these studies have perpetuated and problematized urban youth of color (Travis & Leech, 2014).

Relying on empowerment theory as an effective lens to understand and decrease adolescent drug and alcohol use, and promote strengths and community engagement, is a unique and needed area of further inquiry. Empowerment is defined as a mechanism by
which individuals gain control over their lives and engage in civic action (Rappaport, 1987; Rappaport et al., 1984; Zimmerman, 2000). Therefore, empowerment is a useful lens for understanding the confluence of mechanisms that reduce negative behaviors such as substance use, and increasing the capacity for wellness and community engagement (Beeker et al., 1998; Christens & Peterson, 2012). Through this theoretical paradigm, youth are observed as capable individuals, who when provided socio-cultural resources such as access to community organizations and programs, are more likely to experience psychological empowerment and less likely to experience the isolation that leads to substance use.

Contrary to previous theories that focused on “risks,” empowerment, as Zimmerman (2000) stated, focuses on “enhancing wellness instead of fixing problems, identifying strengths instead of cataloging ‘risk’ factors, and searching for environmental influences instead of blaming victims,” (p. 44). Yet, little is known about psychological empowerment (Peterson, 2014) and its role in substance use prevention (Christens & Peterson, 2012). In addition, minimal research has examined the role of ethnic identity as a developmental process among empowerment constructs, and specifically on psychological empowerment (Garcia-Reid et al., 2013; Molix & Bettencourt, 2010; Stanton-Salazar, 2011). Moreover, a paucity of studies have inspected the mediating role of psychological empowerment, albeit theoretical conjectures (notable exceptions include Cattaneo & Chapman, 2010; Christens & Peterson, 2012); and the moderating effect of race on ethnic identity, psychological empowerment, and substance use.
Ethnic Identity as a Mediator

Using empowerment theory, this study found support for the mediating role of ethnic identity between community-based empowerment constructs (e.g., community participation and neighborhood sense of community) on psychological empowerment and substance use. Specifically, ethnic identity mediated the effect neighborhood sense of community (SOC) and community participation had on psychological empowerment and substance use. The results support hypotheses made that ethnic identity would perform as a mediator between neighborhood SOC, community participation, psychological empowerment, and substance use. In addition, these findings provide evidence that ethnic identity increases the probability of psychological empowerment and reduces the chances of substance use. Moreover, neighborhood SOC and community participation had a positive indirect effect on psychological empowerment, and negative indirect effect on substance use, confirming hypotheses made.

Overall, these results add to a growing body of literature demonstrating that supportive community environments and community participation reduce the effects of substance use (Chan et al., 2014; Holden et al., 2005; Peterson & Reid, 2003), and increase the capacity for psychological empowerment (Christens & Lin, 2014; Nowell & Boyd, 2014; Speer et al., 2012). This study also offers evidence that community participation and neighborhood SOC have a positive effect on ethnic identity, and in turn increase youth psychological empowerment, and reduce negative-outcome behaviors (Anglin et al., 2012; Garcia-Reid et al., 2013; Hipolito-Delgado & Zion, 2015; McMillan, 1996). Moreover, this scholarship uniquely extends previous empirical investigations, as
it situates ethnic identity as a mediator (Garcia-Reid et al., 2013). Therefore, a major contribution is in pinpointing the specific role of ethnic identity, as a developmental process, among empowerment-based measures and on psychological empowerment, and substance use.

The conclusion drawn is that ethnic identity is an often overlooked construct among empowerment measures, and more specifically when these measures are tested among Black and Hispanic adolescents. This is problematic considering the greatest use of empowerment, and original theoretical formulations, were with/for individuals of color and those living in isolated low-income communities (Freire, 1968[2014]; Peterson et al., 2014; Rappaport, 1987; Rappaport et al., 1984; Travis & Leech, 2014; Zimmerman, 2000). These findings also offer evidence and draw attention toward the context specific nature of empowerment (Zimmerman, 2000). For instance, results from this investigation highlight the importance of using culturally and ethnically sensitive variables (i.e., ethnic identity) when attempting to understand, and curtail negative outcome behaviors such as substance use (Beeker et al., 1998; Christens & Peterson, 2012; Israel, Schulz, Parker, & Becker, 1998), as well as increasing the capacity for strengths, leadership, and community involvement among ethnically and racially marginalized urban adolescents.

Results from this study also draw attention to community participation and neighborhood SOC as important aspects of youth empowerment, particularly in promoting overall well-being (Christens & Lin, 2014) and limiting detrimental behaviors (Garcia-Reid et al., 2013; Nowell & Boyd, 2014). Despite the fact that recent studies have started to untangle the relationship between community participation, neighborhood
SOC, ethnic identity, psychological empowerment, and substance use (e.g., Christens & Lin, 2014; Christens & Peterson, 2012; Garcia-Reid et al., 2013; Molix & Bettencourt, 2010), to date no studies have engaged these constructs simultaneously among urban Black and Hispanic adolescents. As this study demonstrates, active engagement in the community and perceived connectedness to the community increases an individual’s ethnic identity and connection to his or her ethnic group(s), and as a result enhances their psychological empowerment.

Previous investigations have demonstrated that youth who have a greater association to their community are likely to have more solidified ethnic identities (Anglin et al., 2012; Caughy et al., 2003; Garcia-Reid et al., 2013; Phinney & Ong, 2007; Zimmerman & Zahnisier, 1991), which in turn increases their capacity for psychological empowerment or perceived control over their environment, leadership capacity, and drive to engage in community change (Cattaneo & Chapman, 2010; Christens & Lin, 2014; Christens & Peterson, 2012; Peterson, 2014; Peterson et al., 2006; Zimmerman, 1995, 2000; Zimmerman et al., 1992). Therefore, Black and Hispanic urban adolescents’ ethnic identity can be fostered through specific community-based activities that connect individuals with their ethnic, cultural, and racial groups, which can in turn increase their capacity for psychological empowerment and their likelihood of engaging in empowerment-based community activities (Christens & Lin, 2014; Christens & Speer, 2015; Stanton-Salazar, 2011). A resulting function of participating positively in the community is that youth of color may develop a stronger link to their ethnic identities, a perceived capability to engage in the sociopolitical domain (i.e., school-based youth
services programs), and be less inclined to engage in drug and alcohol using behaviors, which can result from social isolation (Christens & Peterson, 2012; Peterson & Reid, 2003).

**Psychological Empowerment as a Mediator and the Moderating Effects of Race**

Model 3 hypothesized that psychological empowerment would mediate the relationship between ethnic identity and psychological empowerment. Although the overall variance was small (13%), which indicates that a host of additional variables outside those tested are likely to reduce substance use, outcomes from this study do present intriguing findings that support theoretical conjectures. Specifically, results from this study highlight that psychological empowerment mediated more than 60% of the effect ethnic identity had on substance use. This finding theoretically and empirically supports psychological empowerment as an important mediating construct that reduces substance use for Black and Hispanic urban adolescents (Cattaneo & Chapman, 2010; Christens & Peterson, 2012). These results also substantiate the theoretical relationship between ethnic identity, psychological empowerment, and substance use. Furthermore, these outcomes hold important practical significance to the psychological empowerment field, when we consider that only a small number of research investigations have examined the mediating influence of psychological empowerment (Peterson et al., 2014) among racial and ethnic minority adolescents (notable exceptions include Christens & Peterson, 2012).

As individuals develop stronger internalized perceptions of their ethnic identity, they are more likely to experience a greater connection to their ethnic group and engage
in positive social networks (Gaylord-Harden et al., 2007; Umana-Taylor, 2010), which reduces social isolation (Young Jr., 2004) and the probability of negative-outcome behaviors such as substance use (Garcia-Reid et al., 2013). For instance, ethnic identity development provides youth access to opportunities for belonging to the larger community, increases the possibility of participating in positive social networks (Stanton-Salazar, 2011; Zimmerman et al., 2011), and enhances the likelihood of developing more empowering perceptions (e.g., leadership and self-efficacy; Gullan et al., 2013; Hipolito-Delgado & Zion, 2015). This idea was supported in the present study, as youth who participated in more community activities and had a stronger neighborhood SOC were likely to develop a stronger commitment to their ethnic identity and ethnic-racial group (Anglin et al., 2012; Guest & Schneider, 2003; Phinney & Ong, 2007). Therefore, participation in positive and purposeful community activities improves healthy and successful developmental trajectories (Balsano, 2005; Guest & Schneider, 2003; Kirshner, Hipolito-Delgado, & Zion, 2015), as well as engenders feelings of acceptance, support, and connectedness within one’s social group (Anglin et al., 2012). These experiences in turn increase one’s psychological empowerment (e.g., greater self-efficacy, leadership drive, and control over their surroundings).

Therefore, the results identified in Model 3 point toward the significance of psychological empowerment in youth development, particularly in the sociopolitical and civic domain (e.g., youth-based advocacy groups, such as the YES program; Zimmerman et al., 2011). These findings also illustrate that a stronger ethnic identity not only facilitates leadership and agency, but also provides key insights into the importance of
empowerment-based mechanisms in ethnic identity development, and reducing substance-using behaviors. As Zimmerman (2011) stated, you cannot “remove ethnic identity and youth culture from the everyday lives” of racially and ethnically marginalized youth of color (p. 438).

Model 3 also examined whether these results were moderated by race. The outcomes from this model did not differ significantly by racial group, indicating that ethnic identity may be an equally important mechanism for both Black and Hispanic young adults, as opposed to previous discussions, which have labeled ethnic identity as having a stronger influence for Hispanic over Black groups (Cokley, 2007; Schildkraut, 2010; Umana-Taylor et al., 2014). In fact, results begin to support that ethnic identity may be an equally important determinant of well-being for both Black and Hispanic participants (Cokley, 2005; Hughes et al., 2009).

There is a growing argument among scholars that ethnic identity is important for both Black and Hispanic Americans (Schwartz et al., 2014). For instance, researchers contend that ethnic and racial identities are inseparable identity experiences (Brittian et al., 2015; Schwartz et al., 2014). In her text Black Behind the Ears: Dominican Racial Identity from Museums to Beauty Salons, Candelario (2007) argued that identity processes should be understood as both ethnic and racial within the United States. This is because Black and Hispanic (e.g., Dominicans) minority groups are racialized minorities navigating “in the context of histories and structures beyond their control” (Candelario, 2007, p. 10). Hence, there is a dialectical relationship present between institutions and social structures, which colors individual’s identity narratives.
Researchers have further argued that both race and ethnicity are socially constructed concepts and that these concepts allow space for the examination of social experiences that are salient to largely specific ethnic and racial groups (Schwartz et al., 2014); such as historical experiences within colonized nations (Brittian et al., 2015; Sellers, Smith, Shelton, Rowley, & Chavous, 1998). This implies that because Black Americans have long histories within colonized nations, they embrace a more racialized view of identity (Brittian et al., 2015; Sellers et al., 1998). However, these same historical experiences can also designate these individuals as an ethnic group (Brittian et al., 2015; Sellers et al., 1998).

Unlike most Black Americans, Hispanic citizens are able to provide a clear line to their country of origin, and with that, ethnic practices and behaviors specific to their cultural group (Brittian et al., 2015; Schwartz et al., 2014). Hispanic Americans, therefore, designate their group by their communities’ country of origin, hence an ethnic group (Brittian et al., 2015). This is illustrated in studies where Hispanic young adults identified experiences of discrimination, not due, from their perspective, to a racial status, but instead due to language and cultural practices specific to their ethnic group (Edwards & Romero, 2008). Yet, the results from the current study begin to add support to those investigations and philosophical arguments that emphasize ethnic identity may be equally important for both Black and Hispanic citizens, specifically during adolescence.

The lack of significant moderating effects may also illustrate that psychological empowerment is an equally significant mediating construct for disenfranchised youth of color. Such results are consistent with previous research findings, which have recognized
that empowerment-based mechanisms tend to be more important for individuals of marginalized and low-socioeconomic-status groups (Christens & Lin, 2014; Christens et al., 2013b; Garcia-Reid et al., 2013; Peterson et al., 2002; Speer et al., 2012). Because Black and Hispanic adolescents tend to occupy subordinate roles within United States society and are alienated from empowering experiences, identifying psychological empowerment as an equally important mediator adds credence to those investigations urging for more community-development funding (i.e., for organizations such as community centers, youth services programs, voluntary associations, and public schools) in urban neighborhoods (e.g., Christens & Speer, 2015; Putnam, 1993b; Putnam, 2015). In addition, the results from this study are important, as they support ethnic identity and psychological empowerment as important mechanisms in reducing substance use for youth of color. These findings also build upon previous research and theoretical conjectures that identify the relationship between ethnic identity and psychological empowerment (Anglin et al., 2012; Chan et al., 2014; Crocetti et al., 2012; Garcia-Reid et al., 2013; Hipolito-Delgado & Zion, 2015).

The relationships found heretofore recognize that supportive community environments and positive developmental outcomes (i.e., ethnic identity) increase individual empowerment and reduce the probability of negative-outcome behaviors, forming a developmental cascade (Christens & Peterson, 2012). Masten and Cicchetti (2010) describe this developmental cascade as the “the cumulative consequences for development of the many interactions and transactions occurring in developing systems that result in spreading effects across levels, among domains at the same level, and across
different systems or generations” (p. 491). Hence, current findings suggest that to improve outcomes, the quality of environmental or community level supports, and the level of involvement youth have in community and organizational activities needs to be considered if positive ethnic identity development, and individual, and transactional empowerment-based development is to occur (Christens, 2012b; Christens & Kirshner, 2011; Christens & Peterson, 2012). Through these enriching life experiences youth will be less likely to experience social isolation due to living in already marginalized communities, and instead adopt an empowering sense of self that will allow them to succeed beyond their current life conditions.

Overall, results from this investigation establish the important role ethnic identity has for our focal audience in both empowering individuals toward leadership and policy control, and reducing substance-using behaviors. A stronger connection to the community and more active, and positive, community participation not only affects psychological empowerment and reduces substance use, but also influences one’s ethnic identity development. This, as a result, has an influence in empowerment and limiting detrimental behaviors. Second, findings reveal that psychological empowerment mediates a large proportion of the outcome between ethnic identity and substance use among Black and Hispanic adolescents. Not only do these results support the theoretical connection between ethnic identity, psychological, and substance use, but these outcomes also substantiate the importance of psychological empowerment as a catalyst toward well-being and decreasing social isolation. Furthermore, findings from this study corroborate that those youth with more solidified ethnic identities are likely to perceive greater
psychological empowerment or more leadership potential, sociopolitical control, and self-efficacy. Lastly, although results did not differ by race, these findings may point toward the importance of ethnic identity and psychological empowerment for both Black and Hispanic urban adolescents on reducing negative outcomes such as substance use.

**Implications**

**Implications for prevention.** The results from this study provide promising thoughts for current substance use prevention initiatives. Findings point toward the central role of community participation and the perception of neighborhood sense of community (SOC) on psychological empowerment and substance use, both directly and indirectly through ethnic identity. In addition, this study notes the influence ethnic identity has on substance use, through psychological empowerment, for Black and Hispanic adolescents. These results support the importance of developing community-based organizing activities that not only increase youth capacity for empowerment, but also enhance ethnic identity development to reduce the probability of substance use.

As Beeker and colleagues (1998) discussed, the success of community prevention-interventions is dependent upon how residents and stakeholders address the problem (e.g., substance use, violence, and poverty) plaguing their community(s). One mechanism through which prevention practitioners can address substance use and other social ills within the community is through youth organizing initiatives and activities. Youth organizing is a unique initiative that has had promising results in the prevention-intervention of substance use (e.g., Zimmerman et al., 2011) and in promoting positive youth development (Conner, Zaino, & Scarola, 2013; Kirshner & Ginwright, 2012).
Youth involved in effective organizing activities are likely to execute community and social changes, and less expected to engage in negative health seeking behaviors (Christens & Speer, 2015; Kirshner, 2015; Kirshner & Ginwright, 2012; Zimmerman et al., 2011). Prevention practitioners can implement effective youth organizing initiatives for substance use prevention, through schools, churches, community centers, or established prevention coalitions. Through these organizations, youth develop a greater capacity for community involvement, a stronger sense of community belongingness, and a more solidified connection to their cultural or ethnic groups, thus enhancing psychological empowerment and reducing isolation.

An effective example of a youth organizing initiative is Youth Empowerment Solutions for Peaceful Communities or YES, located in Flint, Michigan (Zimmerman et al., 2011). The YES program is a violence and substance use participatory prevention program that involves adolescents and adults in egalitarian relationships that are focused on community change and mentorship. Not only did youth, through this project, have access to mentorship opportunities with adults who have similar lived experiences, and are racially ethnically similar, but they also had an opportunity to participate in activities that increase community pride and connection (Zimmerman et al., 2011). Youth involved in this project were also more likely to be leaders, perceive greater control over their environment, have a stronger sense of ethnic and racial pride, and a lowered proclivity for engaging in substance use (Zimmerman et al., 2011). Therefore, prevention specialists need to consider Youth Participatory Research initiatives, similar to that of the YES
program, which allow adolescents access to these empowering community-based opportunities and mentor relationships.

Pairing disenfranchised youth of color with empowerment agents, or adult mentors of similar racial and ethnic backgrounds, can enhance community connection, participation, ethnic identity, and empowerment (Langhout et al., 2011; Stanton-Salazar, 2011, 2016). Through empowering adult mentors, youth are likely to develop more solidified ethnic identities, particularly as they move through the exploratory phase of identity development (Molix & Bettencourt, 2010; Putnam, 1993b; Putnam, 2015). Empowerment agents or adult mentors are not only more likely to aid in the development of a youth’s ethnic identity, they are also likely to: 1) increase teens awareness of issues within their environment (Stanton-Salazar, 2011); 2) help youth meet their goals and gain mastery over their lives and destinies (Stanton-Salazar, 2011; Zimmerman, 1995); and 3) provide “resource-full” relationships that afford youth access to cultural and social capital resources (e.g., supportive networks of adult and peer groups, methods to navigate social/community terrain, or how to effectively apply or gain entry into college/university), which will allow these adolescents to succeed toward positive futures, and in turn reduce their probability for negative-outcome behaviors, like substance use (Christens, 2012b; Stanton-Salazar, 2011). Therefore, prevention practitioners need to compete for grant funding and resources that not only work toward reducing environmental access points to drugs and alcohol, but also put efforts toward developing sustainable programs that provide access to empowerment-based adult
mentors and community organizations, which directly and indirectly effect substance using behavior.

**Implications for policy.** As of late, federal and state funding for prevention programming has slowed (ONDCP, 2015a), providing less monies for organizations and institutions located within urban communities (Christens & Speer, 2015; Glaude Jr., 2016). However, recently the United States Congress responded in June of 2016 by passing S.524. The Comprehensive Addiction and Recovery Act (CARA), which added $5 million in grant programming for Drug Free Communities (DFC) grants and increased funding from approximately $85 million to $90 million (ONDCP, 2015a). Nevertheless, this is a small sum when compared to the $1.4 billion spent on prevention in total and the nearly $11 billion spent on treatment (ONDCP, 2015a). In addition, as most critics of prevention-programming argue, researchers and policy makers for prevention do not often consider the views of the constituents their policies are impacting, therefore creating tension and reducing community members’ willingness to engage in prevention research efforts (Fullilove & Fullilove, 1995; Israel et al., 1998; Kumpfer et al., 2009).

Resnicow, Soler, Braithwaite, Ahluwalia, and Butler (2000) advocated more than a decade ago for more tailored, targeted, and culturally sensitive substance use prevention programming. These authors emphasized that substance (ab)use prevention needs to consider more culturally focused trajectories because of variations in rates of substance (ab)use, patterns of drug and alcohol use, and the comorbid outcomes (e.g., high school dropout rates, violent behavior, poverty, and others) that affect racial and ethnic minorities disproportionately when compared to their White counterparts (Resnicow et
al., 2000). Moreover, substance use prevention fails to consider the heterogeneity within Black and Hispanic groups, which can lead to ethnic glossing (Longshore, 1997). Therefore, it is important, particularly for substance (ab)use prevention, to consider the variability, heterogeneity, and the multiple intersecting identities individuals living in marginalized urban communities come forward with (Kumpfer, Alvarado, Smith, & Bellamy, 2002; Kumpfer et al., 2009; Metzger, Cooper, Zarrett, & Flory, 2013; Reid & Garcia-Reid, 2013; Resnicow et al., 2000).

One way to develop culturally sensitive interventions is to involve the community in the prevention process (Fullilove & Fullilove, 1995; Metzger et al., 2013; Reid & Garcia-Reid, 2013). As a pragmatic example, Resnicow, Baranowski, Ahluwalia, and Braithwaite (1998) discussed the use of the family and community in developing culture-based messaging to reduce substance-using behaviors among urban youth of color; such statements included, “for the sake of their community” and “your people need you to be strong,” (p. 279). Therefore, effective community programing adapts and builds quality prevention programming by drawing from the community and families’ strengths, and strategies, for handling social problems such as drug and alcohol use (Gutierrez & Lewis, 2012).

This argument substantiates the importance of Drug Free Communities (DFC) prevention programing, which emphasizes key stakeholders as active members in decisions and community change projects (Community anti-drug coalitions of America, 2010b, 2010c; Reid & Garcia-Reid, 2013). Hence, policy makers and grant writers need to include aspects of prevention programing that consider the thoughts and opinions of
community members. In doing this, prevention programming will empower and enhance the capacity of stakeholders in addressing and defining the problems within their community (Beeker et al., 1998; Christens & Speer, 2015), which in turn will increase the likelihood for sustainability and success in the future (Reid et al., 2014).

Policy makers should therefore increase federal funding for DFC prevention programming, which can create a substance (ab)use prevention coalition in disenfranchised-impoverished urban communities that will actively involve young people as members of the committee or coalition, and in having an equitable voice in community change (Community anti-drug coalitions of America, 2010b, 2010c). Adolescents who share control with adults contribute back to the community, experience positive developmental outcomes (Christens & Peterson, 2012), and positively perceive the research and prevention programming being executed within their community as beneficial (Fullilove & Fullilove, 1995; Hughey et al., 2008). This recommendation is particularly important as we continue to see a rise in heroin and prescription drug use in both urban and non-urban communities throughout the U.S (Klevens, Jones, Ward, Holtzman, & Kann, 2016).

In line with previous recommendation, policy makers need to also expand federal and state dollars for local community organizations, both within the school and outside (e.g., DFC grant programming), that focus on youth engagement, as well as preventing and reducing substance using behaviors. Through youth organizing, adolescents are more intimately involved in community change processes, which is associated with participatory competence and empowerment (Christens & Speer, 2015; Conner et al.,
2013; Gullan et al., 2013; Kirshner & Ginwright, 2012; Speer et al., 2003; Speer et al., 2012; Zimmerman, 2000). Once involved in these organizational and community structures, teens find a supportive community network of peers and adult mentors that provide support, guidance, and links to additional cultural resources that are associated with ethnic identity development, empowerment, and successful life futures (Christens, 2012b; Christens & Speer, 2015; Langhout et al., 2011; Leventhal & Dupere, 2011; Stanton-Salazar, 2011).

Results from the present study support prior research that emphasizes the importance of community organizations, key stakeholders, and families in reducing and preventing negative behaviors, and promoting a positive neighborhood sense of community (SOC), community participation, ethnic identity, and empowerment (Christens, 2012a; Christens et al., 2013a; Christens & Kirshner, 2011; Christens & Peterson, 2012; Christens et al., 2013b; Kirshner & Ginwright, 2012; Kirshner et al., 2015). Moreover, the present investigation pinpoints the significance of positive community perceptions and community engagement on not only substance-using behavior, but also psychological empowerment, which encompasses leadership capacity, policy control, self-efficacy, and locus of control. Policy makers need to consider these results and similar empowerment-based studies that question how empowerment constructs effect substance use and similarly detrimental outcomes.

**Implications for theory.** Empowerment theory has had a long history in the field of prevention and among individuals of color, who live in oppressed circumstances (Beeker et al., 1998). Empowerment theory has been used, as Peterson (2014) notes, as “a
foundation to our understanding of social change and society’s struggle toward greater social and economic justice,” (p. 105). Freire (1968[2014]) and later empowerment researchers (e.g., Hipolito-Delgado & Zion, 2015; Kirshner et al., 2015; Stanton-Salazar, 2011; Stanton-Salazar, 2016; Zimmerman et al., 2011) have also emphasized the importance of empowerment for marginalized groups, and the convergence of engaging in groups that enhance one’s identity or connection to their cultural group and community, and their perceived feelings of competency to participate in social change. Despite significant developments in theory over the past two decades (e.g., Christens, 2012b; Christens, Winn, & Duke, 2016c; Israel et al., 1998; Peterson, 2014; Schulz et al., 1993; Zimmerman et al., 1992), which have focused on adding new frameworks or dimensions to empowerment (e.g., Christens, 2012b) and further explaining empowering relationships and processes (e.g., Hipolito-Delgado & Zion, 2015; Stanton-Salazar, 2011), few studies have linked empowerment constructs with other theories or perspectives (notable exceptions include, Brodsky & Cattaneo, 2013; Neal, 2014; Travis & Leech, 2014).

As a higher-order theory that is manifested through reciprocating levels of analysis and development (Peterson, 2014), findings from this study indicate that psychological empowerment should not only be considered vis-à-vis leadership and self-efficacy, but also through additional interpersonal developmental processes (Christens & Peterson, 2012; Peterson et al., 2014) such as ethnic identity development. As discussed previously, ethnic identity development occurs through an iterative process of social interactions between group members that augments one’s ethnic identity (Gaylord-
Harden et al., 2007; Phinney, 1992), community connection (Molix & Bettencourt, 2010; Putnam, 1993b; Sarason, 1974), and probability of participating in community-based activities (Crocetti et al., 2012; Gutiérrez, 1995; Hipolito-Delgado & Zion, 2015). Findings from this study, therefore, provide insight into the empirical and theoretical relationship between ethnic identity development and enhancing youth’s psychological empowerment. Moreover, results also illustrate that ethnic identity may have a more robust role in the theoretical conversation of empowerment and psychological empowerment, considering the importance of both empowerment and ethnic identity among marginalized groups of color in oppressed social settings. Hence, researchers need to consider ethnic identity in future theoretical writings and in the scale development of psychological empowerment and the larger empowerment theory. Doing so will offer a more nuanced and critical lens to cultivate action and empower youth, and other community members of color, as well as further understand how to prevent individual’s from participating in negative outcome behaviors such as substance use, and instead enhance positive life futures.

**Limitations**

Although findings from this study are important for extending knowledge in empowerment and substance use prevention-intervention research, there are several limitations. First, findings were drawn from a cross-sectional sample of adolescents. Although cross-sectional research is important for designing questions for longitudinal investigations (Peterson, 2014), future research should consider replicating and investigating this study longitudinally. In addition, true mediation occurs longitudinally
and results should be interpreted as preliminary (Cheong & MacKinnon, 2012). Nevertheless, cross-sectional designs, despite lack of causation, allow for more rapid analyses on particularly detrimental outcomes among marginalized populations (Smith et al., 2011).

A second limitation concerns the use of secondary data, as the researcher does not have control over the data quality (Johnston, 2014). However, the most important implication for secondary data is that the research question(s) matches the data being used, which for the current study was the case. Moreover, secondary data allows new insights to be generated that the original research analyst may not have thought of, or expected. The use of secondary data also accelerates the pace of research, reducing time constraints with traditional data collection methods (Smith et al., 2011).

As a third limitation, within-group differences were not examined for Black and Hispanic adolescents; meaning, questions were not used to understand if self-identifying Black teens aligned more with an African American identity or that of, for example, an African identity. This may be one reason for the lack of moderation, as Black youth may have been either multiracial or have experiences that were similar to their Hispanic counterparts. Given the heterogeneity of Hispanic and Black populations (Stepler & Brown, 2015), it is critical that future research expand upon this limitation and engage within-group differences, so that researchers can develop more culturally competent substance use prevention, and progress the research in empowerment. In addition, lack of moderation may have occurred because of variation in acculturation experiences. Therefore, future studies need to consider generational status, as well as acculturation
experiences as potentially confounding processes in the development of Hispanic and Black adolescents’ ethnic identity and psychological empowerment development, and use of drugs and alcohol (Farrelly, Cordova, Huang, Estrada, & Prado, 2013; Garcia-Reid et al., 2013).

The fourth limitation concerns issues with self-report data and methodological bias, which involves over- or underreporting of certain behaviors or thoughts. Although rates of substance use were low among the present cohort of Black and Hispanic adolescents, previous studies have examined similarly lower mean rates of substance use and continued to observe significant and important results. For example, Christens and Peterson (2012) reported a 1.46 rate of use out of a possible 6.00, and Tyler and Melander (2015) reported a .55 on their mean scale. Therefore, this may provide a small limitation, but not impact the overall importance of the results.

A fifth limitation concerns the measurement of psychological empowerment, as it only examines the intrapersonal aspects of psychological empowerment (Christens & Peterson, 2012; Peterson, 2014). Empowerment theory and psychological empowerment are multifaceted (Peterson, 2014), thus future research needs to consider the theoretical development of empowerment. Future research also needs to develop more representative scales that examine all aspects of psychological empowerment (i.e., intrapersonal, interpersonal, behavioral, and relational components).

A final limitation concerns the use of gender as a control for this study. Although the purpose of this study was not to test the effects of gender, and instead retain as a control, results did indicate a significant and positive effect on psychological
empowerment and negative direct influence on 30-day substance use. Prior research within the empowerment (e.g., Christens & Lin, 2014; Christens & Peterson, 2012; Christens et al., 2011a; Speer et al., 2012), ethnic identity (e.g., Phinney et al., 2001; Rivas-Drake et al., 2014; Umana-Taylor et al., 2013), and substance use literature (e.g., Kann et al., 2016; Lorenzo-Blanco et al., 2015; Schwinn et al., 2010) have all indicated variations between males and females, which was not necessarily captured in this study. Therefore, future research should continue to develop a more robust understanding of the intersecting identities of gender, race, and class, and how these intersections influence youth empowerment, ethnic identity, and in-turn reduce substance using behaviors. Investigation into these intersecting identities would further uncover the idiosyncratic experiences of males and females (Diamond & Butterworth, 2008), and the multiple intersecting identities that further influence youth empowerment, ethnic identity development, and substance (ab)use.

Despite these limitations, this study pushes forward how we understand the impact of ethnic identity, as a mediator between community participation and neighborhood SOC on psychological empowerment and substance use. In addition, this study advances the research on the mediating influence of psychological empowerment between ethnic identity and substance use, among low-income Black and Hispanic adolescents. Lastly, this dissertation provides preliminary evidence that ethnic identity and psychological empowerment may be important indicators for both Black and Hispanic youth in reducing substance-using behaviors.
Directions for Future Research

Future research should consider the results of this study and build toward additional lines of inquiry that will enhance the field of empowerment and its relationship to substance use prevention. First, how psychological empowerment is measured in the current study is a small piece of a much broader, although underdeveloped, understanding for youth empowerment processes and outcomes (Peterson, 2014). Therefore, future studies need to consider the interactional component of psychological empowerment, as only one line of research (e.g., Holden et al., 2005; Holden et al., 2004) to date has measured this component among youth in a tobacco control initiative.

In the present study, despite the lack of statistically significant moderation, there was a meaningful difference, between Black and Hispanic adolescents, with regard to the effect ethnic identity had on psychological empowerment and in reducing substance use for Black youth. This finding may indicate the burgeoning differences in Black and Hispanic adolescents’ lived experiences, with regard to psychological empowerment and ethnic identity, specifically. Therefore, based upon these findings, future research needs to address ethnic identity’s role within the measurement of psychological empowerment, as well as reassessing the other constructs (i.e., leadership, policy control, and self-efficacy) that help explain psychological empowerment (Peterson, 2014). This line of inquiry is specifically important, as researchers have alluded to the lack of cultural sensitivity in measuring empowerment processes (Christens & Peterson, 2012).

This leads toward a track for future research that should consider examining youth empowerment using multilevel modeling. This would enable researchers to examine
specific intersections such as race, gender, and socioeconomic status, nested at multiple ecological levels (Heck, Thomas, & Tabata, 2013). Results from these analyses would empirically validate aspects of relational empowerment and support the ecological nature of this theory and empowerment constructs (Zimmerman, 1995, 2000). Future studies need to also examine these constructs longitudinally, which will further validate empirical findings from this study and related investigations.

Lastly, future research in the prevention of substance (ab)use needs to more adequately evaluate how prevention programs address cultural sensitivity. Culturally sensitive programs may integrate a variety of factors (e.g., norms, values, sociohistorical experiences) into the design and implementation of their prevention programs. This is largely the case for DFC programming, as one of the main tenants of the Strategic Prevention Framework (SPF) is “cultural competence,” (Reid & Garcia-Reid, 2013). Therefore, future studies need to perform ongoing monitoring and assessment of activities integral to ensuring the success and the culturally sensitive nature of the prevention program. These studies will outline the design and evaluation of a culturally competent program to gauge effectiveness. Through this research substance use prevention programming will move away from a one-size-fits-all approach, toward embracing the heterogeneity of individuals and their communities (Metzger et al., 2013; Resnicow et al., 1998; Resnicow et al., 2000).

**Conclusion**

The present study adds to a growing literature base that considers empowerment theory, and measures, as important indicators in understanding substance use during
adolescence. Results from this study are important to the fields of substance use and empowerment, as they expand upon how we understand psychological empowerment among urban minority adolescents (Peterson, 2014), and the important role of ethnic identity with psychological empowerment. Moreover, findings from this empirical investigation display the important relationship between neighborhood SOC-community participation, psychological empowerment, and substance use, as well as the important mediating effect of ethnic identity and psychological empowerment.

Overall, these results indicate that community participation and neighborhood SOC have a key influence on developmental processes such as ethnic identity, which in turn functions as a producer of psychological empowerment and inhibitor of substance-using behaviors. Moreover, psychological empowerment was observed to have a strong mediating impact between ethnic identity and substance use, with no differences observed between Black and Hispanic adolescents. Outcomes from this analysis point out that not only do higher composite scores of ethnic identity reduce substance use, but ethnic identity also has a positive effect on psychological empowerment (i.e., policy control, leadership, and self-efficacy), which in turn reduces the probability of drug and alcohol use, further supporting the theoretical relationship between ethnic identity, psychological empowerment, and substance use. As such, future prevention initiatives should pay heed to this finding—particularly programs that target urban minority populations.

To adequately reduce substance use among urban youth of color, this study reminds us that the context of youth development does not only include settings the
multitude of scholarship in adolescent substance use have covered (e.g., families, schools, and peers), but also the more nuanced community-level experiences such as community participation and neighborhood SOC. In addition, this study draws attention to the importance of developmental processes specific to youth of color, which include ethnic identity, and the impact it has in both reducing substance use and empowering adolescents. The results from this study provide an argument for greater involvement of young people in communities and organizations that promote inclusivity, diversity, democratic and egalitarian relationships, empowerment, and civic competence (Christens & Peterson, 2012). In turn, these positive experiences can have both short- and long-term benefits for urban youth, who are often more likely to use substances and experience negative developmental outcomes (Christens, 2012a; Christens & Lin, 2014; Christens & Peterson, 2012; Prilleltensky, 2008; Speer et al., 2012).

Most important, this study moves away from “risk-focused” substance use research and considers the importance of positive environmental experiences and developmental processes and outcomes on substance use among urban youth of color. As researchers, prevention specialists, and policy makers, we have an obligation to not only prevent substance use, but also enhance individual, as well as community, well-being and empowerment among adolescents. This is not only essential for ameliorating dangers, but also developing adolescent empowerment and creating change agents.
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APPENDIX A

TABLES AND FIGURES
### Table 1

*Studies Demonstrating Ethnic Identity as a Mediator*

<table>
<thead>
<tr>
<th>Study</th>
<th>Basic Description</th>
<th>Basic Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smith et al. (1999)</td>
<td>These researchers examined the relationship of ethnic identity to self-esteem, perceived self-efficacy and pro-social attitudes among a sample of 100 male and female adolescents.</td>
<td>Ethnic identity mediated the link between prosocial behaviors and perceived self-efficacy, which in turn affected self-esteem and a perceived ability to achieve academically.</td>
</tr>
<tr>
<td>Swenson and Prelow (2005)</td>
<td>The study examined the direct and indirect relationships of parenting, ethnic identity, self-esteem, perceived efficacy, and psychological adjustment among a sample of 133 urban Black and European American youth.</td>
<td>Results indicate that for Black youth, ethnic identity mediated the relationship between supportive parenting and depressive symptomology. Youth felt they were able to adequately handle problematic situations, which reduced the likelihood for depressive symptoms.</td>
</tr>
<tr>
<td>Gaylord-Harden et al. (2007)</td>
<td>Among a cohort of 227 Black adolescents these authors examined, through structural equation modeling, the mediating effect of self-esteem and ethnic identity between social support and depression.</td>
<td>Results indicated that ethnic identity accounted for a greater proportion of the overall effect between social support and depression than self-esteem. The effect of ethnic identity was also larger for males than females.</td>
</tr>
<tr>
<td>Hughes et al. (2009)</td>
<td>The authors examined the mediating relationship of ethnic identity and self-esteem between ethnic-racial socialization, and academic and behavioral outcomes, among Black and White adolescents (N = 805).</td>
<td>These authors identified that ethnic identity and self-esteem mediated the relationship between ethnic racial socialization and more distal academic and behavioral outcomes. These effects were more important for Black youth.</td>
</tr>
<tr>
<td>Study</td>
<td>Methodology</td>
<td>Findings</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Corenblum and Armstrong (2012)</td>
<td>Racial and ethnic identity development was explored by asking youth (N = 196) to complete measures on cognitive development, racial-ethnic identity development, and self-esteem measures, as well as in-group attitudes.</td>
<td>Results indicated that ethnic identity served a mediating function between cognitive development and self-esteem, and cognitive development and in-group attitudes, regarding ethnic and racial preference of friends groups.</td>
</tr>
<tr>
<td>Garcia-Reid et al. (2013)</td>
<td>This study examined the risk and protective factors associated with internalizing problems such as depression, anxiety, self-esteem, and externalizing issues (e.g., substance use), among Dominican adolescents (N = 500).</td>
<td>Results revealed that ethnic identity mediated the effects of community-level disorganization and neighborhood sense of community on developmental outcomes, specifically substance use and self-esteem.</td>
</tr>
<tr>
<td>Brittian et al. (2015)</td>
<td>In this study of 2,315 ethnic minority students (largely Black and Hispanic) authors were interested in examining the association between perceptions of ethnic group discrimination and depressive symptoms and if ethnic identity mediated these relationships.</td>
<td>Results from this study found that the relationship between ethnic group discrimination and depressive symptoms were mediated by ethnic identity for Hispanic students, not Black students.</td>
</tr>
</tbody>
</table>
Table 2

*Studies Demonstrating Psychological Empowerment as a Mediator*

<table>
<thead>
<tr>
<th>Study</th>
<th>Basic Description</th>
<th>Basic Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seibert et al. (2004)</td>
<td>Using multilevel analyses, these authors investigated the mediating effect psychological empowerment had between workplace climate and work unit performance outcomes among employees at a <em>Fortune 100</em> manufacturing company.</td>
<td>Results indicated that psychological empowerment mediated the effects of workplace climate on job satisfaction and its indirect link on job performance.</td>
</tr>
<tr>
<td>Avolio et al. (2004)</td>
<td>These authors investigated the mediating effect of psychological empowerment between transformation leadership and commitment to the organizational structure, among 520 nurses in Singapore.</td>
<td>Psychological empowerment mediated the effects of transformational leadership (i.e., ability to influence others in their organization) on participants’ commitment to their organizational structure.</td>
</tr>
<tr>
<td>Molix and Bettencourt (2010)</td>
<td>These authors engaged in two studies; in Study 2, psychological empowerment was predicted to mediate the relationship between ethnic group identity and well-being.</td>
<td>Findings indicated that the relationship between ethnic group identity and well-being was mediated by psychological empowerment longitudinally. In addition, these effects were stronger among Hispanic participants, when compared to Whites.</td>
</tr>
<tr>
<td>Christens and Peterson (2012)</td>
<td>These authors examined the role of psychological empowerment, as a mediator between ecological supports and developmental outcomes, specifically risk behaviors, psychological symptoms, self-esteem, and school importance.</td>
<td>Results identified the important role of psychological empowerment as a mediator between ecological supports such as family cohesion and social support on developmental outcomes.</td>
</tr>
</tbody>
</table>
Table 3

Demographics Delimited Study Sample (N = 1,480)

<table>
<thead>
<tr>
<th></th>
<th>Full Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>902</td>
</tr>
<tr>
<td>Male</td>
<td>578</td>
</tr>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>13–15</td>
<td>437</td>
</tr>
<tr>
<td>16–18</td>
<td>1043</td>
</tr>
<tr>
<td>Grade</td>
<td></td>
</tr>
<tr>
<td>9th</td>
<td>380</td>
</tr>
<tr>
<td>10th</td>
<td>355</td>
</tr>
<tr>
<td>11th</td>
<td>390</td>
</tr>
<tr>
<td>12th</td>
<td>355</td>
</tr>
<tr>
<td>Race</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>929</td>
</tr>
<tr>
<td>Black</td>
<td>551</td>
</tr>
<tr>
<td>Free or reduced lunch</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>1006</td>
</tr>
<tr>
<td>No</td>
<td>474</td>
</tr>
</tbody>
</table>
Table 4

Correlations of Main Variables Within Full Sample (N = 1,480)

<table>
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<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Psychological Empowerment</td>
<td>----</td>
<td>.33**</td>
<td>.14**</td>
<td>.21**</td>
<td>-.31**</td>
<td>.13**</td>
</tr>
<tr>
<td>2. Ethnic Identity</td>
<td>----</td>
<td>----</td>
<td>.26**</td>
<td>.14**</td>
<td>-.14**</td>
<td>.02</td>
</tr>
<tr>
<td>3. Neighborhood Sense of Community</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>-.05</td>
<td>.06*</td>
</tr>
<tr>
<td>4. Community Participation</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>-.34**</td>
<td>.06**</td>
<td></td>
</tr>
<tr>
<td>5. Substance Use</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>-.19**</td>
<td></td>
</tr>
<tr>
<td>6. Gender [Females = 1]</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td></td>
</tr>
</tbody>
</table>

Mean 62.42  53.16  24.04  12.73  1.64  .61
SD  10.75  10.25  9.53  4.81  .77  .48
α  .88  .86  .90  .75  .94  ---
Skewness  -.54  -.56  .24  .34  4.31  -.43
Kurtosis  1.13  .72  -.54  -.45  9.78  -1.82
Table 5  
*Item Nonresponse Rate Totals (N = 1,480)*

<table>
<thead>
<tr>
<th>Item nonresponse rate (percent)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographics</td>
<td></td>
</tr>
<tr>
<td>Age 1.3</td>
<td></td>
</tr>
<tr>
<td>Gender 1.3</td>
<td></td>
</tr>
<tr>
<td>Grade 1.2</td>
<td></td>
</tr>
<tr>
<td>Racial-Ethnic Category 1.8</td>
<td></td>
</tr>
<tr>
<td>Main Analytic Variables</td>
<td></td>
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<tr>
<td>Community Participation 11.4</td>
<td></td>
</tr>
<tr>
<td>Neighborhood Sense of Community 12.8</td>
<td></td>
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<tr>
<td>Ethnic Identity 13.2</td>
<td></td>
</tr>
<tr>
<td>Psychological Empowerment 12.1</td>
<td></td>
</tr>
<tr>
<td>Substance Use 20.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 6

Correlations of Main Variables Between Black (N = 551) and Hispanic youth (N = 929)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Psychological Empowerment</td>
<td>-</td>
<td>.34**</td>
<td>.13**</td>
<td>.18**</td>
<td>-.32**</td>
<td>.14**</td>
</tr>
<tr>
<td>2. Ethnic Identity</td>
<td>.31**</td>
<td>-</td>
<td>.25**</td>
<td>.08*</td>
<td>-.17**</td>
<td>.02</td>
</tr>
<tr>
<td>3. Neighborhood Sense of Community</td>
<td>.14**</td>
<td>.29**</td>
<td>-</td>
<td>.02</td>
<td>.01</td>
<td>-.07</td>
</tr>
<tr>
<td>4. Community Participation</td>
<td>.20**</td>
<td>.13**</td>
<td>.07</td>
<td>-</td>
<td>-.25</td>
<td>.06</td>
</tr>
<tr>
<td>5. Substance Use</td>
<td>-.30**</td>
<td>-.11**</td>
<td>.08**</td>
<td>-.40**</td>
<td>-</td>
<td>-.15**</td>
</tr>
<tr>
<td>6. Gender [Females = 1]</td>
<td>.10**</td>
<td>.02</td>
<td>-.05</td>
<td>.07</td>
<td>-.22**</td>
<td>-</td>
</tr>
</tbody>
</table>

*Note. Black youth upper quadrant and Hispanic youth lower quadrant
*p < .05; **p < .01; ***p < .001
Table 7

Unstandardized, Standardized, and Significance Levels for Unconstrained Direct Effects Path Model (N = 1,480)

<table>
<thead>
<tr>
<th>Path Model</th>
<th>Unstandardized</th>
<th>Standardized</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model 1:</strong> Psychological Empowerment as the Outcome</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Participation → Ethnic Identity</td>
<td>.89</td>
<td>.13</td>
<td>***</td>
</tr>
<tr>
<td>Neighborhood SOC → Ethnic Identity</td>
<td>.21</td>
<td>.27</td>
<td>***</td>
</tr>
<tr>
<td>Ethnic Identity → PE</td>
<td>.36</td>
<td>.28</td>
<td>***</td>
</tr>
<tr>
<td>Community Participation → PE</td>
<td>1.37</td>
<td>.15</td>
<td>***</td>
</tr>
<tr>
<td>Neighborhood SOC → PE</td>
<td>.06</td>
<td>.06</td>
<td>***</td>
</tr>
<tr>
<td>Gender → PE</td>
<td>2.45</td>
<td>.11</td>
<td>***</td>
</tr>
<tr>
<td><strong>Model 2:</strong> Substance Use as the Outcome</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Participation → Ethnic Identity</td>
<td>.89</td>
<td>.12</td>
<td>***</td>
</tr>
<tr>
<td>Neighborhood SOC → Ethnic Identity</td>
<td>.21</td>
<td>.26</td>
<td>***</td>
</tr>
<tr>
<td>Ethnic Identity → Substance Use</td>
<td>-.01</td>
<td>-.13</td>
<td>***</td>
</tr>
<tr>
<td>Community Participation → Substance Use</td>
<td>-.17</td>
<td>-.32</td>
<td>***</td>
</tr>
<tr>
<td>Neighborhood SOC → Substance Use</td>
<td>.01</td>
<td>.11</td>
<td>NS</td>
</tr>
<tr>
<td>Gender → Substance Use</td>
<td>-.22</td>
<td>-.16</td>
<td>***</td>
</tr>
</tbody>
</table>


*p < .05, **p < .01, ***p < .001*
Table 8

Decomposition of Effects for Model 1 and Model 2

<table>
<thead>
<tr>
<th>Model</th>
<th>Criterion Variable</th>
<th>Predictor Variable</th>
<th>Total Effect</th>
<th>Direct Effect</th>
<th>Ethnic Identity</th>
<th>Ratio of Indirect to Total Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Psychological Empowerment</td>
<td>CP</td>
<td>.21</td>
<td>.15</td>
<td>.07</td>
<td>.37</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Neighborhood SOC</td>
<td>.13</td>
<td>.06</td>
<td>.04</td>
<td>.33</td>
</tr>
<tr>
<td>2</td>
<td>Substance Use</td>
<td>CP</td>
<td>-.34</td>
<td>-.32</td>
<td>-.02</td>
<td>.04</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Neighborhood SOC</td>
<td>-.07</td>
<td>--</td>
<td>-.03</td>
<td>.46</td>
</tr>
</tbody>
</table>

*Note.* Community Participation = CP; Neighborhood SOC = Neighborhood Sense of Community
### Table 9
Unstandardized, Standardized, and Significance Levels for Unconstrained Direct Effects Path Model 3 with Psychological Empowerment as Mediator (N = 1,480)

<table>
<thead>
<tr>
<th>Path</th>
<th>Unstandardized</th>
<th>Standardized</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnic Identity → Substance Use</td>
<td>-.01</td>
<td>-.05</td>
<td>*</td>
</tr>
<tr>
<td>Ethnic Identity → PE</td>
<td>.41</td>
<td>.33</td>
<td>***</td>
</tr>
<tr>
<td>PE → Substance Use</td>
<td>-.02</td>
<td>-.28</td>
<td>***</td>
</tr>
<tr>
<td>Gender → PE</td>
<td>2.59</td>
<td>.12</td>
<td>***</td>
</tr>
<tr>
<td>Gender → Substance Use</td>
<td>-.21</td>
<td>-.16</td>
<td>***</td>
</tr>
</tbody>
</table>


*p < .05, **p < .01, ***p < .001*
Table 10

*Decomposition of Effects for Model 3: Psychological Empowerment Mediating and 30-Day Substance Use as the Outcome*

<table>
<thead>
<tr>
<th>Sample Group</th>
<th>Criterion Variable</th>
<th>Predictor Variable</th>
<th>Total Effect</th>
<th>Direct Effect</th>
<th>Indirect Effect Via PE</th>
<th>Ratio of Indirect to Total Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Sample</td>
<td>Substance Use</td>
<td>Ethnic Identity</td>
<td>-.15</td>
<td>-.05</td>
<td>-.09</td>
<td>.62</td>
</tr>
<tr>
<td>Hispanic Adolescents</td>
<td>Substance Use</td>
<td>Ethnic Identity</td>
<td>-.13</td>
<td>-.04</td>
<td>-.08</td>
<td>.66</td>
</tr>
<tr>
<td>Black Adolescents</td>
<td>Substance Use</td>
<td>Ethnic Identity</td>
<td>-.15</td>
<td>-.05</td>
<td>-.10</td>
<td>.66</td>
</tr>
</tbody>
</table>
Table 11

Unstandardized, Standardized, and Significance Levels for Constrained Direct Effects Path Model 3 with Psychological Empowerment as Mediator, between Black (N = 551) and Hispanic (N = 929) Adolescents

<table>
<thead>
<tr>
<th>Parameter Estimate</th>
<th>Hispanic Adolescents</th>
<th>Black Adolescents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized</td>
<td>Standardized</td>
</tr>
<tr>
<td>Ethnic Identity → Substance Use</td>
<td>-.04</td>
<td>-.04</td>
</tr>
<tr>
<td>Ethnic Identity → PE</td>
<td>.31</td>
<td>.31</td>
</tr>
<tr>
<td>PE → Substance Use</td>
<td>-.26</td>
<td>-.26</td>
</tr>
<tr>
<td>Gender → PE</td>
<td>.11</td>
<td>.11</td>
</tr>
<tr>
<td>Gender → Substance Use</td>
<td>-.15</td>
<td>-.15</td>
</tr>
</tbody>
</table>

Note. Model fit results: χ²(6) = 6.95, p = .32; RMSEA = .01, GFI = .99, AGFI = .99, CFI = .99; AIC = 34.95; CMIN/df = 1.1

*p < .05, **p < .01, ***p < .001
Figure 1

Conceptual Model of Relationships among Variables for Ethnic Identity as Mediator

**Perceived Community Connections**
- Community Participation
  - Engagement in civic activities
  - Community activities

**Neighborhood SOC**
- Membership
- Influence
- Needs fulfillment
- Emotional connection

**Mediator Ethnic Identity**
- Self-identification and ethnicity
- Ethnic behaviors and practices
- Belongingness
- Identity Achievement

**Outcomes Psychological Empowerment (Model 1)**
- Motivation to influence the community
- Participatory behavior
- Sociopolitical skills
- Perceived control over environment

**Substance use (Model 2)**
- Alcohol use
- Tobacco use
- Marijuana use
- Other drug use
Figure 2

Conceptual Model of Relationships among Variables for Hypothesized Mediating-Moderating Models

**Predictor**
- Ethnic Identity
  - Self-identification and ethnicity
  - Ethnic behaviors and practices
  - Belongingness
  - Identity Achievement

**Mediator**
- Psychological Empowerment
  - Motivation to influence the school or community
  - Participatory behavior
  - Sociopolitical skills
  - Perceived control over environment

**Outcome**
- Substance use
  - Alcohol use
  - Tobacco use
  - Marijuana use
  - Other drug use (e.g., heroin, cocaine)

**Moderator (Race)**
- Racial category (Black or Hispanic)
Figure 3

Model 1 Predicting Psychological Empowerment

Community Participation → Ethnic Identity → Psychological Empowerment

Ethnic Identity ← Neighborhood SOC

Neighborhood SOC ← Community Participation

Psychological Empowerment ← Community Participation

Ethnic Identity ← Neighborhood SOC
Figure 4

*Model 2 Predicting 30-Day Substance Use*

- Community Participation
- Ethnic Identity
- Neighborhood SOC
- 30-Day Substance Use
Figure 5

Model 3 Mediating Effect of Psychological Empowerment and Moderation by Race
Figure 6

Unconstrained Path Model 1 Testing Mediating Effect of Ethnic Identity on Psychological Empowerment (N = 1,480).

Note. Model fit statistics: $\chi^2 (3) = 5.09, p = .16$; RMSEA = .02, GFI = .99, AGFI = .99, CFI = .99; CMIN/df = 1.69. Standardized parameter estimates reported.

*p < .05, **p < .01, ***p < .001
Figure 7

Unconstrained Path Model 2 Testing Mediating Effect of Ethnic Identity on 30-Day Substance Use (N = 1,480).


* $p < .05$, ** $p < .01$, *** $p < .001$
Figure 8

Unconstrained Path Model 3 Testing Mediating Effects of Psychological Empowerment for Full Sample (N = 1,480).

Note. Model fit statistics: $\chi^2 (3) = 2.51, p = .47; \text{RMSEA} = .03, \text{GFI} = .99, \text{AGFI} = .99, \text{CFI} = .99; \text{CMIN/df} = .84$. Standardized Parameter estimates reported.

* $p < .05$, ** $p < .01$, *** $p < .001$
Figure 9
Constrained Path Model 3 Testing Mediating Effects of Psychological Empowerment between Black (N = 551) and Hispanic (N = 929) Adolescents.

Note. Model fit statistics: Chi square $\chi^2 (6) = 6.95, p = .32$; RMSEA = .01, GFI = .99, AGFI = .99, CFI = .99, AIC = 34.96. Standardized parameter estimates reported. Hispanic youth within parentheses and Black youth outside parentheses.

*p < .05, **p < .01, ***p < .001
APPENDIX B

SURVEY ITEMS
**Demographics variables**

1. **How old are you?**
   - (a) 10
   - (b) 11
   - (c) 12
   - (d) 13
   - (e) 14
   - (f) 15
   - (g) 16
   - (h) 17 or older

2. **What grade are you in?**
   - (a) 9<sup>th</sup>
   - (b) 10<sup>th</sup>
   - (c) 11<sup>th</sup>
   - (d) 12<sup>th</sup>

3. **What is your gender?**
   - (a) Male
   - (b) Female

4. **How would you describe yourself?**
   - (a) Hispanic
   - (b) White non-Hispanic
   - (c) Asian
   - (d) Black
   - (e) American Indian
   - (f) Native Hawaiian or other Pacific Islander
   - (g) Other
**Neighborhood sense of community scale** (Revised Brief Sense of Community Scale): 6 point scale from strongly disagree (1) to strongly agree (6).


<table>
<thead>
<tr>
<th>Statement</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I can get what I need in this neighborhood.</td>
<td></td>
</tr>
<tr>
<td>This neighborhood helps me fulfill my needs.</td>
<td></td>
</tr>
<tr>
<td>I feel like a member of this neighborhood.</td>
<td></td>
</tr>
<tr>
<td>I belong in this neighborhood.</td>
<td></td>
</tr>
<tr>
<td>I have a say about what goes on in my neighborhood.</td>
<td></td>
</tr>
<tr>
<td>People in this neighborhood are good at influencing one another.</td>
<td></td>
</tr>
<tr>
<td>I feel connected to this neighborhood.</td>
<td></td>
</tr>
<tr>
<td>I have a good bond with others in this neighborhood.</td>
<td></td>
</tr>
<tr>
<td>My neighbors let me know when I’m doing a good job.</td>
<td></td>
</tr>
</tbody>
</table>
Community participation derived from the Student Survey of Risk and Protective Factors/Community Participation scale (5 items): 4-point scale from never (1) to almost every day (4).


<table>
<thead>
<tr>
<th>Question</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>How often do you go to sports practice or play games?</td>
<td></td>
</tr>
<tr>
<td>How often do you take lessons or attend classes out of school?</td>
<td></td>
</tr>
<tr>
<td>Last summer, how often did you go to a summer program?</td>
<td></td>
</tr>
<tr>
<td>How often do you talk to an adult about what you’re doing/thinking?</td>
<td></td>
</tr>
<tr>
<td>How often do you go to meetings/activities for a club/youth group?</td>
<td></td>
</tr>
</tbody>
</table>
**Ethnic identity** (Multi-group Ethnic Identity Measure). 20-item scale with responses assessed using a four-point Likert Scale from *Strongly Disagree* (1) to *Strongly Agree* (4).


<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have spent time trying to figure out more about my ethnic group.</td>
<td></td>
</tr>
<tr>
<td>I’m active in groups that include mostly members of my ethnic group.</td>
<td></td>
</tr>
<tr>
<td>I have a clear sense of my ethnic background and what it means for me.</td>
<td></td>
</tr>
<tr>
<td>I like meeting people from ethnic groups other than my own.</td>
<td></td>
</tr>
<tr>
<td>I think a lot of my life will be affected by my ethnicity.</td>
<td></td>
</tr>
<tr>
<td>I am happy that I am a member of my ethnic group.</td>
<td></td>
</tr>
<tr>
<td>I sometimes feel it’d be better if different ethnic groups didn’t mix.</td>
<td></td>
</tr>
<tr>
<td>I’m not clear about the role of my ethnicity in my life.</td>
<td></td>
</tr>
<tr>
<td>I often spend time with people from other ethnic groups.</td>
<td></td>
</tr>
<tr>
<td>I haven’t spent much time trying to learn about the culture/history of my ethnicity.</td>
<td></td>
</tr>
<tr>
<td>I have a strong sense of belonging to my ethnic group.</td>
<td></td>
</tr>
<tr>
<td>I understand what my ethnic group membership means to me.</td>
<td></td>
</tr>
<tr>
<td>I have often talked to others about my culture.</td>
<td></td>
</tr>
<tr>
<td>I have a lot of pride in my ethnic group.</td>
<td></td>
</tr>
<tr>
<td>I don’t try to become friends with people from other ethnic groups.</td>
<td></td>
</tr>
<tr>
<td>I participate in cultural practices of my own group.</td>
<td></td>
</tr>
<tr>
<td>I’m involved in activities with people from other ethnic groups.</td>
<td></td>
</tr>
<tr>
<td>I feel a strong attachment toward my own ethnic group.</td>
<td></td>
</tr>
<tr>
<td>I enjoy being around people from other ethnic groups.</td>
<td></td>
</tr>
<tr>
<td>I feel good about my ethnic background.</td>
<td></td>
</tr>
</tbody>
</table>
**Psychological empowerment scales** using 4 attribute scales developed to target youth, ages 12 to 18: Response options *definitely cannot or strongly disagree* (1) to *definitely can do it or strongly agree* (4).


<table>
<thead>
<tr>
<th>Participatory Competence (17 items)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am a leader in groups.</td>
</tr>
<tr>
<td>I would prefer to be a leader rather than a follower.</td>
</tr>
<tr>
<td>I would rather have a leadership role when involved in a group project.</td>
</tr>
<tr>
<td>I can usually organize people to get things done.</td>
</tr>
<tr>
<td>Others usually follow my ideas.</td>
</tr>
<tr>
<td>I find it easy to talk in front of a group.</td>
</tr>
<tr>
<td>I like to work on solving a problem myself rather than wait and see if someone else will deal with it. I like trying new things that are challenging.</td>
</tr>
<tr>
<td>I feel like I have a pretty good understanding of the important political issues which confront our society.</td>
</tr>
<tr>
<td>I like trying new things that are challenging to me.</td>
</tr>
<tr>
<td>I enjoy political participation because I want to have as much say in running the government as possible.</td>
</tr>
<tr>
<td>A person like me can really understand what’s going on with government and politics.</td>
</tr>
<tr>
<td>People like me are generally well qualified to participate in political activity and decision making in our country.</td>
</tr>
<tr>
<td>It makes a difference who I vote for because whoever gets elected will represent my interests.</td>
</tr>
<tr>
<td>There are plenty of ways for people like me to have a say in what our government does.</td>
</tr>
<tr>
<td>It is important to me that I actively participate in local issues.</td>
</tr>
<tr>
<td>Most public officials would listen to me.</td>
</tr>
<tr>
<td>A good many local elections are important to vote in.</td>
</tr>
</tbody>
</table>
30-Day substance use. Questions on Tobacco, Alcohol, Marijuana, and Other Drug Usage, these four domains make up the ATOD construct of the Youth Risk Behavior Survey: Response Options range from 0 days (0) to all 30 days (6).


<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>During the past month, on how many days did you have a drink of alcohol?</td>
<td>0 days (0) to all 30 days (6)</td>
</tr>
<tr>
<td>During the past month, on how many days did you have 5 or more drinks of alcohol in a row?</td>
<td>0 days (0) to all 30 days (6)</td>
</tr>
<tr>
<td>During the past month, how many days did you use marijuana?</td>
<td>0 days (0) to all 30 days (6)</td>
</tr>
<tr>
<td>During the past month, how many days did you use heroin?</td>
<td>0 days (0) to all 30 days (6)</td>
</tr>
<tr>
<td>During the past month, how many days did you use ecstasy?</td>
<td>0 days (0) to all 30 days (6)</td>
</tr>
<tr>
<td>During the past month, how many days did you use methamphetamines?</td>
<td>0 days (0) to all 30 days (6)</td>
</tr>
<tr>
<td>During the past month, how many days did you use cocaine?</td>
<td>0 days (0) to all 30 days (6)</td>
</tr>
<tr>
<td>During the past month, how many days did you smoke cigarettes?</td>
<td>0 days (0) to all 30 days (6)</td>
</tr>
<tr>
<td>During the past month, how many days did you smoke cigars?</td>
<td>0 days (0) to all 30 days (6)</td>
</tr>
</tbody>
</table>
This page intentionally left blank.