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The Protective Role of Psychological Empowerment on Tobacco Use Behaviors

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THE PROTECTIVE ROLE OF PSYCHOLOGICAL EMPOWERMENT ON TOBACCO USE
BEHAVIORS

A thesis defense submitted in partial fulfillment of the requirements for the degree of Master of
Science at Virginia Commonwealth University

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Abstract

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By: Brittany M. Berry, B.A.

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science at Virginia Commonwealth University

The primary aim of this study was to determine the protective effects of psychological empowerment (i.e., the belief that one has the knowledge, capabilities, and authority to be an active agent in their own life and in the surrounding community) on the tobacco use behaviors of young adults. A secondary aim was to examine whether religiosity confers a protective advantage to psychologically empowered individuals within an African American subsample. Multiple linear regression was used to determine the main and interaction effects of psychological empowerment and religiosity on the current cigarette use behaviors of 798 young adult, college students. The findings suggest a link between empowerment, religiosity, and tobacco use such that the protective effects of empowerment and religious support on cigarette use behaviors may be codependent. This research provides insight on the mutual dependence of

protective factors for tobacco use and suggests an expansion of current risks and protective

factors models.

The Protective Role of Psychological Empowerment on Tobacco Use Behaviors

Introduction to the Problem

Tobacco use in the United States. Tobacco smoking is one of the most preventable causes of death in the world (WHO, 2009). Approximately one-fifth of adults in the United States are tobacco smokers (CDC, 2009). Each year an estimated 443,000 deaths are caused by tobacco-related diseases (CDC, 2008). Much of the morbidity and mortality is related to cigarette smoking. However, other tobacco use like smokeless tobacco and cigars are known to cause cancers of the mouth and throat which may also lead to death (NCI, 1998).

While tobacco use prevalence in the U.S. is a significant public health concern, there are important individual differences within U.S. populations. For instance, tobacco use prevalence in the U.S. varies considerably according to developmental age, ethnicity, and gender. Such sociodemographic variability related to tobacco use prevalence is reviewed here briefly. The focus of the review centers on cigarettes, although similar overall patterns of use have been observed for other tobacco products.

Young adult tobacco use. National survey data show that tobacco use increases with age. According to the NSDUH (2007), tobacco use among adults is much greater than among adolescents. For instance, cigarette use among adults (ages 18-49) is two to three times greater than the rate of cigarette use for adolescents (ages 12-17). Of particular concern, is the rate of cigarette use among young adults (ages 18-25) who have the highest rate of past month use. Moreover, research shows that rates of cigarette use are higher among those entering this developmental period (18 to 20-year-olds) compared to those who are transitioning to older adulthood.

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Emerging adulthood, coined by Jeffrey Arnett (Arnett, 2000), is the often unstable period between adolescence and adulthood. This transformative period spans ages 18 to 25. Emerging adulthood involves identity development and responsibility-taking beyond that which occurs during adolescence. Many individuals move away from home, enroll in institutions of higher education, try out various employment options, and reevaluate lifestyle decisions (Rohrbach, Sussman, Dent, & Sun, 2005). According to young Americans, accepting responsibility for one's life, making decisions independent of one's parents, and achieving financial independence are the essential indicators of adulthood (Arnett, 1998). Therefore, these markers are the end goal of emerging adulthood and signify the completion of this period. In contrast, young people in other cultural contexts emphasize marriage as an indicator of having reached adulthood (Arnett, 1998). Nevertheless, emerging adulthood is often a period of shifting identities, values, and beliefs.

The values and beliefs about tobacco use emerging adults previously held during adolescence may be in transition during this period. Many individuals live independently from their parents, therefore parental monitoring is less likely to be a deterrent against tobacco use. Furthermore, social roles and contexts may change during emerging adulthood. Entry into new social circles and contexts where tobacco use may be more salient or prevalent may affect an emerging adult's own tobacco use (Rohrbach, et al., 2005). During emerging adulthood, young adults have new freedoms and experiences that may lead to a trajectory of tobacco use.

Individual differences in tobacco use. Tobacco use prevalence, particularly cigarette use, in young adulthood differs considerably across ethnicity and gender. Following American Indians and Alaska Natives (42.4%), Whites and Hispanic adults have the highest rates of cigarette use compared to other major U.S. ethnic groups (NSDUH, 2008). Cigarette use among

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Whites and Hispanics is 27.6% and 24.0%, respectively. African Americans and Asians have the lowest rates of cigarette use at (20.9% and 14.2%, respectively), among major U.S. ethnic groups. The rate of cigarette use for multi-ethnic adults – those reporting two or more races/ethnicities – is 28.5%.

In terms of gender, more males (41.2%) than females (32.8%) ages 18 to 25 smoke cigarettes. Males smoke cigarettes at higher rates than females of white, African American, and Hispanic racial/ethnic groups. White males have the highest rate of cigarette use (28.5%) compared to African American males (24.3%) and Hispanic males (23.5%). Similarly, white females smoke at higher rates (26.7%) than African American females (18.2%) and Hispanic females (15.5%). Rates of cigarette use are highest among males and Whites; however, African Americans are disproportionately affected by the negative health effects of smoking (Fagan et al., 2004). Therefore, it is important to focus on cigarette use in both African American males and females.

Age of initiation. Ethnic differences in smoking prevalence may be attributable to the transitional period between adolescence and young adulthood. Research shows that African Americans are late initiators of tobacco use (Trinidad, Gilpin, Lee, & Pierce, 2004); however, late initiation of tobacco use predicts smoking persistence in late adulthood (Chassin, Presson, Sherman, &Pitts, 2000). In general, late onset smokers do not achieve the same maximum level of smoking (i.e. number of cigarettes per day) as earlier onset smokers (Chassin et al., 2000). For instance, most African American smokers reach a lower maximum quantity of cigarettes per day (White, Nagin, Replogle, & Stouthamer-Loeber, 2004). African Americans are more likely to suffer from tobacco-related diseases (Fagan et al., 2004), although they typically initiate tobacco use later (Trinidad et al., 2004) and reach a lower quantity of cigarettes smoked than

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Whites (Chassin et al., 2000). Thus, the adverse health effects of tobacco use may be more severe for this population.

Tobacco-related morbidity and mortality. African American smokers are disproportionately impacted by tobacco-related illnesses and mortality (Fagan et al., 2004), although they typically have lower rates of smoking than Whites (Larson et al., 2009). The three primary causes of smoking-related death are lung cancer, ischemic heart disease, and chronic obstructive pulmonary disease (CDC, 2008). African Americans who are heavy smokers (i.e. 1.5 packs per day) have a greater risk of developing smoking-related lung cancer than white and Hispanic heavy smokers (Haiman et al., 2006).

Factors such as cigarette preference and smoking topographies also relate to the risk of smoking-related illness and mortality. Approximately 84% of African American smokers used menthol cigarettes in 2005 and 2006 (U.S. Department of Health and Human Services, 2007). Benowitz, Herrera, and Jacob (2004) found that menthol inhibits the metabolism of nicotine, and may increase the body's systemic exposure to it. African Americans, in terms of puffing behaviors, also inhale more nicotine per cigarette than Whites (Chang et al., 2004). The decisions African Americans make regarding tobacco use preferences and practices have important implications for the tobacco-related health risks.

Research also suggests that cessation is more difficult for African Americans than Whites (CDC, 1998). Among smokers who have smoked at least 100 cigarettes, 50% of white smokers quit compared to 35.4% of African American smokers (CDC, 1998). Furthermore, there are poor retention rates for African Americans in cessation programs (King, Sánchez-Johnsen, Van Orman, Cao, & Matthews, 2008). Low cessation rates increase the likelihood of persistence of tobacco use in adulthood, thus heightening the risk for tobacco-related morbidity and mortality.

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Education and low economic status also impact disparities in smoking-related illness and death. Cigarette smoking is greatest in low-income communities where individuals are less educated and have jobs of a lesser status than those who reside in middle- and upper-income communities (Barbeau, Krieger, & Soobader, 2004). African Americans are disproportionately represented in these communities. Smoking is correlated with education such that tobacco use for adults with nine to 11 years of education is three to four times higher than for adults with an undergraduate degree and six to seven times higher for adults with a graduate degree (CDC, 2009). African Americans often have fewer years of education than their white counterparts and greater dropout rates in high school (Aud, Fox, & KewalRamani, 2010; U.S. Department of Education, 2010). Education and employment are vital in the obtainment of various securities and services (e.g. health insurance, quality healthcare, etc.). One's health may suffer without such provisions. In addition to educational and economic risks, there are other risks that have been studied that greatly impact the likelihood of negative health effects associated with tobacco use. The combination of the risks associated with fewer years of education and being a smoker causes greater risk for illness and mortality in African Americans.

Risk factors for tobacco-related morbidity in African Americans are compounded with environmental stress. Factors such as racism (Kwate, Valdimarsdottir, Guevarra, & Bovbjerg, 2003) and stress (Fernander, Schumacher, & Nasim, 2008) increase risk associated with tobacco use. Among African American female smokers, experiences of racism in the past year were associated with increased quantity of cigarettes smoked (Kwate et al., 2003). Fernander and colleagues (2010) found race-related and general life stress to be significantly related to smoking risk. Given the disproportionate risks for tobacco-related disease and death in African

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Americans, it is important to understand risk and protective factors for tobacco use in this community.

Risk and protective factors for tobacco use. Social epidemiological research has often been used to describe the individual and environmental influences of tobacco use behavior. Importantly, this research has provided insight, albeit limited, about factors that may contribute to tobacco use behaviors and tobacco-related morbidity and mortality. Risk factors are characterized as individual and environmental factors that increase the likelihood that an undesired event or behavior will occur, whereas protective factors are those that decrease the likelihood an event or behavior will occur.

Risk and protective factors specific to tobacco use have been studied extensively. Hawkins, Catalano, and Miller (1992) developed a framework that views risk and protective factors as either proximal (i.e., individual) or distal (i.e., contextual) influences. Proximal influences are typically individual or person-level characteristics (attitudes, beliefs, etc.). For instance, early initiation of tobacco use is considered an individual risk factor for tobacco persistence later in life (Van De Ven, Greenwood, Engels, Olsson, & Patton, 2010). Conversely, late tobacco onset is viewed as a protective factor (Van De Ven et al., 2010). Contextual influences are conceptualized differently as they relate to family, peer, and community influences. For example, the family domain consists of factors relevant to familial characteristics and experiences. Parental tobacco use is a risk factor for youth tobacco use (Hill, Hawkins, Catalano, Abbott, & Guo, 2005). Adequate parental monitoring has the reverse effect, acting as a protective factor against tobacco use (Hill et al., 2005). The peer domain involves risk and protective factors related to peer attributes and features of peer relationships. For instance, association with peers who use drugs increases the likelihood of tobacco use (Corona,

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Turf, Corneille, Belgrave, & Nasim, 2009). Peers who display prosocial behaviors promote abstinence from tobacco use, thus relationships with these peers are protective. On a more distal level, community influences consist of conditions and resources in an individual's surrounding environment that increase risk for or protect against tobacco use. Regarding the community domain, neighborhood violence is considered a risk factor for tobacco use (Lambert, Brown, Phillips, & Ialongo, 2004). Communities in which there are opportunities for prosocial involvement are protective against tobacco use (Corona et al., 2009), as they provide resources for positive development. The categorization of risk and protective factors as proximal and distal influences illustrates the more direct (proximal) impact of some factors and the indirect (distal) impact of other factors.

Since Hawkins et al.'s (1992) seminal work, there have been several extensions to the basic risk and protective factors model. One such extension is a view of risk and protective factors from an exposure-vulnerability perspective (Wallace & Muroff, 2002). Exposure is an individual's reported contact with a self-identified risk, whereas vulnerability indicates an individual's susceptibility to risk. Historically, the theory that equal exposure is directly related to equal vulnerability has guided risk-based research and intervention approaches (Nasim, Belgrave, Corneille, Corona, & Turf, unpublished manuscript). This theory does not account for protective factors or resiliency, which may vary across ethnicity, gender, or other factors. According to Wallace and Muroff (2002), exposure and vulnerability are conceptually distinct and do not necessarily correlate. Researchers do not always observe the previously assumed one-to-one ratio of exposure to risk. Although youth in Wallace and Murroff's (2002) study reported exposure to risk, they were not equally vulnerable to those risks. For instance, African Americans reported higher exposure to community risks for substance use than other ethnic

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groups; however, they were not more vulnerable to cigarette use than other ethnic groups. Mediating and moderating factors at the individual and environmental levels may buffer against risk and account for lower vulnerability in the presence of heightened risk.

Another risks and protective factors perspective takes an ecological or nested approach – that is, individual (micro-level) factors are influenced by environmental or contextual (e.g. exo- or macro-level) factors (Flay, Petraitis, & Hu, 1999). This perspective has a basis in Bronfenbrenner's (1979) ecological model, which is a conceptualization of child development within varying levels of contextual influence. Certain factors may increase risk for some individuals and protect against risk for other individuals depending on a host of contextual factors. For instance, parental monitoring may be protective for many youth; however, parental monitoring may be a risk factor when the parent-child relationship is highly volatile. Youth who have violent relationships with their parents may be better served to be monitored less closely, as it may be the problematic relationship that provokes delinquent behaviors.

According to Flay and colleagues (1999), risk and protective factors can be conceptualized as proximal, distal, and ultimate influences. Proximal influences involve an individual's own beliefs and skills (e.g. an individual's efficacy to refuse tobacco use). Distal-level influences are comprised of an individual's relationships with parents and peers, as well as behaviors that impact the individual's belief systems. Ultimate influences are more broadly defined and differ from proximal and distal influences in their relation to an individual. These influences are not characteristics of people themselves or their relationships with others, but are defined by the characteristics of the other people in an individual's most intimate relationships (e.g. parents, role models, etc.). Risk and protective factors exist on all three levels and function together to influence an individual's values and behaviors. Flay et al. (1999) further describe

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proximate, distal, and ultimate factors as moderators, wherein factors on one level moderate the effects of factors in the same or different levels on a given outcome. For instance, an individual's tobacco refusal efficacy (proximal) may moderate the effect of parental beliefs about smoking (distal) on that individual's tobacco use. Flay et al.'s (1999) model provides a greater understanding of risk and protective factors within a greater context of interacting influences.

While these models have had profound influence on the construction and contextual underpinnings of risk and protective factors, considerations of culture and experiences specific to ethnic groups are noticeably absent from such models. Findings in current research are often based on white samples (Wallace & Muroff, 2002). There are general protective factors that may or may not apply to certain groups; however, there are also protective factors in each domain that are sensitive to the cultural orientation of a particular group. For example, ethnic identity and religious orientation are individual-level protective factors for African Americans (Brook & Pahl, 2005; Tademy, unpublished manuscript). Cultural interdependency is a culturally-salient community-level protective factor (Ellickson, Pearlman, & Klein, 2003). Risk and protective factors that account for the cultural experiences may interact differently at individual and community levels (Berry, Shillington, Peak, & Hohman, 2000).

Previous research has provided foundational models of individual and contextual risk and protective factors related to tobacco use. Various extensions upon these models have improved researchers' insights on the systematic relations between factors influencing tobacco use behaviors; however, cultural gaps in research are evident. Identifying and understanding the cultural factors that protect against tobacco use in African American young adults is a necessary next step in risk and protective factors research. Wallace and Muroff (2002) found that African Americans are more vulnerable to contextual factors rather than individual factors; therefore,

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research should be focused on identifying individual protective factors to buffer against environmental risks.

An investigation of psychological empowerment and religion as protective factors in the individual domain is proposed, as these factors are sensitive to the experiences of a given ethnic group. Empowerment may cultivate a sense of competence and control for individuals whose agency has been limited or gone unrecognized. Ethnicity is investigated as a moderator of the relationship between empowerment and tobacco use. Psychological empowerment focuses primarily on recognizing and building upon an individual's assets; therefore, empowerment may be especially protective for African Americans as they have historically been treated with deficit-based approaches. Furthermore, research supports the particularly protective role of religion for African Americans (Nasim, Corona, Belgrave, Utsey, & Fallah, 2007). An examination of empowerment, religion, and the interaction between them may provide further evidence for the importance of a consideration of experiences specific to particular ethnic groups in views of risk and protective factors.

Theoretical Framework

What is Psychological Empowerment?

Psychological empowerment is the perception that one has the knowledge, capabilities, and authority to be an active agent in their own life and in the surrounding community. Psychological empowerment was originally studied by examining power and control (Conger & Kanungo, 1988). The earliest approaches to and applications of psychological empowerment focused on maximizing the organizational effectiveness of managerial practices in the workplace (Conger & Kanungo, 1988). Conger and Kanungo (1988) considered empowerment as a guiding concept to examine the power struggle between employer and employee and to better the

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relationship between them. Early examinations of distributions of power in the workplace were the foundation for subsequent investigations of psychological empowerment and its applications.

Over the years, researchers have offered various perspectives and approaches to the study of psychological empowerment. These perspectives have included views of empowerment as both a process and an outcome. For instance, Perkins and Zimmerman (1995) view psychological empowerment as the process by which individuals belonging to underrepresented groups take deliberate action to gain access to and control over resources they could not readily access in the past. Similarly, Bolton and Brookings (1998) perceive empowerment as a tool or mechanism for underrepresented groups to become active participants in their lives and their surrounding environments. That is, psychological empowerment is an important mechanism in the cultivation of self-efficacy and control for disadvantaged groups (Bolton & Brookings, 1998). Still, others have described empowerment as the result of engagement in confidence- and efficacy-building activities. In this way, psychological empowerment (PE) is viewed as one's perceived competency, self-control, and agency (Menon, 1999).

A common theme that emerges from each of these perspectives – irrespective of it being considered a process or outcome – is the fundamental importance of individuals gaining an understanding of and control over their own lives. Researchers continuously build upon previous conceptualizations of psychological empowerment to facilitate its application to variety of research questions and areas of interest. The objective of this study is to augment existing literature with a perspective of psychological empowerment as it applies to the tobacco use of African American young adults. If empowered, African Americans may have a clearer understanding of the influences and systems at work in their own lives. Moreover, they may

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experience a greater sense of control over their futures and increased motivation to exercise their power to abstain from tobacco use.

Conceptualizations of empowerment also extend beyond individuals and intergroup relations, and include community movements. For instance, Holden, Messeri, Evans, Crankshaw, and Ben-Davies (2004) describe the restoration of control to community members in participation movements in which they help with planning, organization, and other tasks. Holden, Evans, Hinnant, and Messeri (2005) provide a view of psychological empowerment specific to tobacco control in which the focus is on the individual's capacity to be an agent in anti-tobacco advocacy in the community. Holden et al's (2005) perspective is rooted in Zimmerman's (1995) theory of psychological empowerment in its focus on elements influencing the individual's own abilities and self-perceptions (e.g. knowledge, competence), as well as their capacity for working with other community members toward a common goal. Both Holden and colleagues (2004) and Zimmerman (1995) highlight the importance of one's perceptions of their own control and one's understanding of environmental power distributions in becoming a successful and effective agent in the community.

Zimmerman's (1995) and Holden et al.'s (2005) perspectives are engaged for this study, which include psychological empowerment as the combination of one's perceived efficacy and control; one's ability to understand their environment and the power at work in it; and, one's ability to exert control in their environment are integrated. Zimmerman's (1995) and Holden et al's (2005) views provide a theoretical foundation for understanding the various intrapersonal characteristics that affect the individual's self-perceived power and subsequent behaviors. Furthermore, these frameworks aid in the conceptualization of empowerment as it relates to tobacco use and participation in anti-tobacco activities.

Application to Current Research

There are several reasons why psychological empowerment is important in the study of tobacco use among African Americans. First, the examination of psychological empowerment as a protective factor will increase the research field's understanding of factors that deter smoking and are relevant to the experiences of African Americans. Previous research has not described psychological empowerment's protective role against risk behaviors among African Americans. Additionally, understanding psychological empowerment as a protective factor for African American tobacco use is important in developing interventions that focus on the agency of an individual from an asset-based perspective. Researchers desire to develop the most effective programs to prevent tobacco use in African American young adults. In order to develop effective programs, investigators need a comprehensive knowledge of risk factors and culturally relevant protective factors for this population.

Psychological empowerment involves taking action and being involved in one's own community. Empowerment interventions build upon skills the individual already possesses. Interventions might also cultivate efficacy for competencies that the individual already possesses. Some individuals may not have had efficacy-building experiences to develop these competencies in the past. Psychological empowerment may significantly increase knowledge and understanding of African American tobacco use and better prepare us to apply tobacco research to prevention and intervention programs.

Zimmerman's Theory of Psychological Empowerment

 Conceptualization and underlying assumptions of the framework. Zimmerman's (1995) theory informs the approach taken in this study to examining psychological empowerment as it relates to tobacco use. Psychological empowerment, as conceptualized by

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Zimmerman (1995), is the perception that one is competent and capable of acting across ecological domains and contexts. Application of Zimmerman's (1995) theory of psychological empowerment necessitates an understanding of some important characteristics that must be assumed. First, psychological empowerment bears different representations and meanings for different people. For example, resisting pressure to engage in tobacco use may represent empowerment for a non-smoker. Limiting the number of cigarettes smoked per day may be empowering for a smoker. Psychological empowerment may also be experienced differently by individuals due to various personal factors, such as ethnicity, socioeconomic status, and education. Furthermore, empowerment is represented differently across contexts. Empowering experiences may vary in form in the home, versus the school, versus the workplace. A student may feel empowered by receiving good feedback on an assignment, whereas a mother may feel empowered by maintaining a clean home despite a hectic schedule. Different contexts are associated with different tasks and skills that are necessary to succeed; therefore, empowerment may be observed in the completion of varying tasks and the possession of certain skills depending on the context.

Psychological empowerment is a dynamic variable in that it changes over time. It may change such that an individual can be empowered at times or in certain domains and disempowered at other times and in other domains. The factors which indicate empowerment for an individual may also change over time. Maintaining independence may be empowering for an adolescent; however, maintaining a balance between independence and dependence in a marriage may be empowering for that individual as a middle-aged adult. Additionally, there is no global measure of psychological empowerment, as one would be inconsistent with the previous

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assumptions. Psychological empowerment may vary across individuals, communities, cultures, and time; therefore, there is no sound method to develop a universal measure of empowerment.

Hence, empowerment may not be fully captured by one operationalization due to the aforementioned possibilities in variability and its multifaceted conceptualization. It is necessary for researchers to provide thorough and varied investigations of empowerment in order to maintain a concise and more informed perspective of how different groups of people are empowered differently in varying contexts. Empowerment may be represented or developed differently in African Americans than in Whites and other ethnic groups; therefore, it is important to examine psychological empowerment in African Americans as current research does not focus on this specific population.

Zimmerman's three components. Zimmerman (1995) takes a nomological approach to conceptualize psychological empowerment. In a nomological approach, one describes the relationship between lesser constructs to define a broader construct. In the case of psychological empowerment, Zimmerman explains the relationships between the intrapersonal, interactional, and behavioral components of empowerment in order to conceptualize the broader concept of psychological empowerment. (See Figure 1.) He describes empowerment in terms of the individual's perceived control, the application of this control to their social and political environments, and participation in collective action. The three components of Zimmerman's (1995) theory include intrapersonal, interactional, and behavioral empowerment.

INTRAPERSONAL

o Domain specific perceived control
o Domain specific self-efficacy
o Motivation control
o Perceived competence

Holden et al.'s Extension of Intrapersonal Empowerment

o Domain specific efficacy
o Perceived sociopolitical control
o Participatory competence

INTERACTIONAL

o Critical awareness
o Understanding causal agents
o Skill development
o Skill transfer across life domains
o Resource mobilization

PSYCHOLOGICAL EMPOWERMENT

BEHAVIORAL

o Community involvement
o Organizational participation
o Coping behaviors

Figure 1. Zimmerman's (1995) theory of psychological empowerment and Holden et al.'s (2005) extension of intrapersonal empowerment

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The intrapersonal and interactional components of empowerment are at the focus of this study. As defined by Zimmerman (2000), intrapersonal empowerment is an individual's "perceived control or beliefs about competence to influence decisions that affect one's life" (p.50). It is a gauge of individuals' own feelings about themselves. Zimmerman believes these self-perceptions are vital because individuals who perceive themselves as incapable of reaching goals are less likely than others to seek the necessary knowledge or take action to achieve those goals. Intrapersonal empowerment is a broader construct that includes more specific components including, domain-specific perceived control and self-efficacy, motivation to control, and perceived competency.

Interactional empowerment is one's "ability to analyze and understand one's social and political environment" (Zimmerman, 2000, p.50). This component is used to describe individuals' understandings of their communities and the sociopolitical issues affecting these communities. Furthermore, interactional empowerment indicates an individual's awareness of important behavioral choices that could potentially aid in achieving goals. The behavioral options available to an individual are context specific; therefore, it is necessary that one understands the norms and values in the relevant cultural context. Knowledge of the culture includes awareness of agents of power and influential factors of their decision-making processes. Zimmerman posits that interactional empowerment relates perceived control to taking action. He purports that achieving a given goal requires an individual's knowledge of necessary skills, a method to acquire these skills, and a system to manage these skills. Interactional empowerment bridges the gap in Zimmerman's framework between intrapersonal and behavioral empowerment.

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Behavioral empowerment is the third component of Zimmerman's framework. Zimmerman defines it as "participation in collective action, involvement in voluntary or mutual help organizations, or solitary efforts to influence the sociopolitical environment" (Zimmerman, 2000, p.50). The behavioral component involves the performance of actions completed for the purpose of influencing outcomes. Zimmerman emphasizes the importance of the actions of an individual or group taken to exert control and the unimportance of the type of action. Behavioral empowerment includes community involvement, organizational participation, and coping behaviors. As the third link of Zimmerman's framework, the behavioral component is most successful when interactional empowerment is present. Behavioral empowerment then reinforces intrapersonal empowerment.

In this study, psychological empowerment is investigated as it relates to individual smoking behavior. Empowerment is pertinent for individuals to change their own beliefs and behaviors. Individuals who feel personally empowered and interact within the environment and in behaviors to improve the community may be able to make the most optimal decisions about their own tobacco use. An individual who is empowered will be more able to maintain prosocial decisions about tobacco use regardless of environmental conditions. Participation in community efforts may then reinforce and build upon experiences of empowerment. Given the disproportionate representation of African Americans in low-income communities, it is important that they be able to resist tobacco use regardless of community conditions and circumstances. The investigation of empowerment will provide a foundation for understanding its processes in the individual as well as in the interactional and behavioral domains.

Psychological empowerment as a multilevel construct. Zimmerman conceptualizes psychological empowerment as a multilevel construct that can be observed at the individual,

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organizational, and community levels (Zimmerman, 1995). In this study the individual level is examined, which Zimmerman asserts is necessary to understand the other levels. The individual is the smallest unit of study in empowerment research. Empowered organizations and communities are comprised of empowered individuals; therefore, examination of empowerment at the individual level should precede investigation at the other levels. Moreover, study of individual empowerment should increase knowledge of interactions at all levels.

Holden and Colleagues' Extension to Zimmerman's Theory

In this study, Holden and colleagues' (2005) extension of Zimmerman's theory (1995) is used to expound upon intrapersonal and interactional empowerment, and their application to tobacco use. Holden et al. (2005) developed a conceptual framework to expand on Zimmerman's intrapersonal and interactional components and examine empowerment through advocacy activities with youth. Holden et al. define intrapersonal empowerment by three constructs, including domain-specific efficacy, perceived sociopolitical control, and participatory competence. (See Figure 1.) Domain-specific efficacy is an individual's personal feelings of being capable and having the skills initiate involved in anti-tobacco advocacy activities. Holden et al. define perceived sociopolitical control as an individual's beliefs about their own efficacy in the context of social and political systems. Perceived sociopolitical control involves one's beliefs about whether they can make decisions and take action toward a desired outcome although social and political systems may be constructed to restrict their agency. Finally, participatory competence is one's perceptions about their ability to be involved in and contribute to tobacco control activities in groups or organizations. Participatory competence is the individual's assessment of their own ability to work with others toward a common goal related to tobacco control.

Interactional empowerment, as defined by Holden and colleagues (2005), includes the individual's knowledge of resources, assertiveness, and advocacy. (See Figure 1.). An individual has knowledge of resources for tobacco use if they are aware of the people and services to seek to aid in tobacco cessation. A knowledgeable individual can access such services themselves and can direct others to accessing the available resources for smoking cessation. Assertiveness is the degree to which an individual feels they can initiate conversations about tobacco use. Furthermore, assertiveness involves how confident one is in inviting others to join in anti-tobacco advocacy activities. Advocacy measures the frequency of which an individual has attempted to convince friends and family to be more concerned with tobacco use issues. Moreover, advocacy also assesses the frequency of which one has attempted to persuade school and government officials, local businesses, and other community stakeholders to have more concern for tobacco use issues.

Holden et al.'s framework presents these variables to tailor Zimmerman's intrapersonal and interactional components of psychological empowerment for application to tobacco research. These components assess whether an individual feels they can complete a task relevant to tobacco control, along with other community members, and despite systematic influences that are constructed to hinder their participation in the community. Furthermore, the components gauge the knowledge about anti-tobacco resources and the abilities of individuals to engage in discussions with others about tobacco use. These characteristics are the foundation of the empowered agent who can abstain from tobacco use and interact in the community to aid in the development and implementation of tobacco control strategies.

Why Psychological Empowerment is Important: Building on Self-Efficacy.

Psychological empowerment, as constructed by Zimmerman's (1995) and Holden et al. (2004), is an important consideration in tobacco research. Explorations in psychological empowerment will provide a more comprehensive illustration of how more traditional constructs of interest (e.g. competence) interact and affect individuals' tobacco use behaviors. More prevalently studied constructs such as self-efficacy and self-esteem only begin to define psychological empowerment.

Refusal efficacy, as it relates to drug use, is an individual's ability to refuse drugs when others offer drugs, in experiences of peer pressure to use drugs, and when tempted to use drugs to cope with life stress (Ellickson & Hays, 1991; Hays & Ellickson, 1990). Research illustrates the importance of drug refusal efficacy in the drinking (Burke & Stephens, 1999) and smoking behaviors (Gwaltney et al., 2001) of youth and young adults. Increased self-efficacy is associated with decreased smoking rates (Winkleby et al., 2004). Moreover, low self-efficacy is predictive of smoking onset for boys and low self-esteem is predictive of smoking onset for girls (Nebot et al., 2004). Barkin, Smith, and Durant (2002) found a greater likelihood of current tobacco use and expectation of future use for youth who are less confident.

Moreover, refusal efficacy may be linked to religiosity. Research suggests that religious beliefs or practices may contribute to the strength of the inhibitory effect of youth and young adults' refusal efficacy on their tobacco use (Belgrave, Reed, Plybon, & Corneille, 2004). That is – drug refusal efficacy may function as an additional pathway for religiosity to affect smoking behavior and health outcomes. Self-efficacy is protective for tobacco use; however, research does not adequately discuss the interacting effects of self-efficacy and other empowering qualities (e.g. competency and perceived control) on tobacco use in the individual and the

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community. Moreover, some research findings have indicated that self-efficacy is a weak predictor of tobacco use (Kinard & Webster, 2010). A more comprehensive understanding of self-efficacy within a system of other interacting elements and contexts may better position researchers to interpret its protective effects and make sense of conflicting findings.

Self-efficacy is an important element of psychological empowerment; however, empowerment involves other traits and contexts that influence and interact with self-efficacy. Participation in the community and understanding the political environment may foster perceived control, self-efficacy, and self-esteem or vice versa.   All three components of psychological empowerment function together to provide context specificity – that is, power or efficacy in one component is impacted by processes in the other components. Individuals may have varying degrees of intrapersonal, interactional, and behavioral empowerment. Psychological empowerment theory highlights the interdependence of these constructs and their application in the community. The study of self-efficacy or power alone does not account for the interactional and community factors that construct a multi-faceted context for the experience and display of efficacy.

Researchers can better understand concepts such as self-efficacy, self-esteem, and control in the individual by studying their relation to interactional and behavioral empowerment. Interactional and behavioral empowerment may help to explain the contextual conditions for cultivating intrapersonal empowerment and the utilities of it outside of one's personal life. Thus, studying psychological empowerment as it relates to smoking behavior will assist us in considering the intricacies of self-efficacy and power as they relate to smoking behavior.

Implications for Psychological Empowerment in Intervention

Zimmerman's three-component model is conducive to developing empowering interventions, as it enables researchers to isolate particular components to investigate and target in programming. Holden and colleagues' explanations of intrapersonal empowerment highlight specific mechanisms that build intrapersonal empowerment. It is pertinent that researchers can conceptually decompose empowerment to understand the mechanisms by which it functions within specific populations and contexts. Zimmerman's comprehensive framework and Holden et al.'s extensions facilitate the development of effective intervention strategies.

Psychological empowerment has significant implications for health-oriented intervention (Neighbors, Braithwaite, & Thompson, 1995). According to Rappaport (2002/1981), researchers and health professionals must modify their perceptions of the individual's ability to acquire and utilize information. In the past, health professionals and researchers have saturated individuals with information about smoking-related health risks and social and political issues, acting upon a deficit-based perspective (Rappaport, 2002/1981). Such deficit-based approaches may be observed in prevention methods used in some grade schools where health instructors teach a unit on smoking policy, health risks of smoking, tobacco advertisement, and peer pressure to smoke. These programs center on youths' presupposed lack of knowledge regarding the risks associated with tobacco use.

The use of psychological empowerment as the basis for intervention represents a more novel, asset-based approach. It requires a reversal of the perception of the naïve individual, deprived of information about risks for negative outcomes of tobacco use, to a perception of the individual as an agent of change. From this viewpoint, the individual needs a catalyst in order to

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take on the role of active participant in anti-tobacco advocacy to make changes on both individual and community levels.

Psychological empowerment may be especially valuable in interventions for African Americans, consistent with research supporting its utility in minority communities (Bolton & Brookings, 1998). African Americans have historically been characterized as a disadvantaged group due to social, economic, and political factors. Often African Americans live in communities that lack adequate educational resources, have high unemployment rates, hazardous environmental conditions, and high concentrations of poverty (Neighbors, Braithwaite, & Thompson, 1995). Many African Americans may perceive a lack of control over the unfavorable circumstances associated with living in poverty. There may be a need to bolster the knowledge bases and efficacy of these individuals regarding issues important to there wellbeing. For instance, personal responsibility for one's own health and individual change are often stressed in health promotion research (Neighbors et al., 1995). An emphasis on personal responsibility reinforces the realization of one's own control. Individual change is a reflection of efficacy to manifest one's beliefs and to change personal behaviors such that outcomes are favorable.

African Americans are often resistant to intervention from white researchers and professionals due to a cultural mistrust of companies (Phelps, Taylor, & Gerard, 2001) and power structures in society. This mistrust may prove beneficial in discerning programs or professionals with a lack of genuine care for the outcomes of African Americans. Conversely, it may serve as a barrier to receptivity of educational opportunities and interventions that may otherwise better equip African Americans to make personal and community change. Interventions promoting psychological empowerment may ease hesitancy to trust and use information provided by professionals, as the individual controls their participation in an

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empowerment program. African Americans may be less apprehensive and more receptive of interventions when they are engaged in accessing the new information, developing programs, and carrying out tasks that induce personal and community change.

Psychological Empowerment is More than Knowledge about Tobacco Use

It is important to study psychological empowerment because negative decisions about smoking can not solely be attributed to a lack of knowledge of risks or policies. Unger et al. (1999) surveyed 10th graders in California about their smoking status, attitudes toward anti-tobacco policy, support for anti-tobacco policy, and various psychosocial smoking-related variables (e.g. perceived positive and negative consequences of smoking). They found that although smokers showed the greatest awareness of anti-tobacco policies, never-smokers showed greater support for anti-tobacco policies (Unger et al., 1999). This finding provides evidence that knowledge of tobacco policies is not sufficient to deter smoking behavior. Al-Haqwi, Tamim, and Asery (2010) found that although a sample of medical students were knowledgeable about the negative health effects of tobacco use, 25% continued to smoke. Knowledge of the effects of tobacco use is insufficient in preventing use; therefore, other individual protective factors, possibly a perceived lack of control and self-efficacy, may influence individuals to use tobacco despite knowing the severity of the potential consequences. Further investigation of psychological empowerment will aid in determining the factors involved in individuals' decisions about tobacco use and the effectiveness of tobacco prevention.

Psychological Empowerment Activities in Tobacco Control

A variety of activities and types of information are used to induce psychological empowerment in tobacco intervention research. The activities and ideas implemented often depend on the particular outcomes of interest in a given empowerment intervention. Anti-

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tobacco advocacy groups are often formed in which youth govern decision-making and work with adults to implement anti-tobacco strategies (Holden et al., 2005). In a study conducted by Dunn and Pirie (2005), youth developed anti-smoking materials (e.g. posters and t-shirts), made anti-smoking presentations to younger children, and planned smoke-free social events. They also worked to restrict the number of neighborhood stores offering tobacco products and encouraged restaurants to maintain smoke-free dining environments.

Holden and colleagues (2004) discuss essential characteristics of activities in tobacco interventions with a foundation in empowerment. They report that group structure, adult involvement, and group climate are all important in empowering activities and influencing collective participation. Group structure involves basic terms of involvement including incentives, available activities, and availability of resources. Adult involvement is largely the support given by parents, agencies, and the state. Group climate entails the cohesion of the group as well as collective resiliency and efficacy. All three components of participation in empowering activities influence the amount and duration of participation as well as the roles individuals play within the group.

The most essential characteristic of empowering activities in tobacco control is the opportunity for youths' active participation in ways that support their positive development (Holden et al., 2004). Participation in anti-smoking advocacy and education is associated with increased participatory competence, knowledge of available resources, assertiveness, industry and interpersonal confidence, and perceived sociopolitical control (Holden, Crankshaw, Nimsch, Hinnant, Hund, 2004). Generally, youth are more confident in their abilities following engagement in empowering activities. Greater confidence fosters self-efficacy to resist pressure to smoke and to participate in anti-tobacco advocacy.

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Psychological Empowerment as an Outcome of Anti-Tobacco Advocacy Participation

The goal of tobacco interventions centered on anti-tobacco advocacy is oftentimes to foster empowerment in individuals in order to elicit positive change in tobacco use behaviors. Carver, Reinert, Range, and Campbell (2003) exposed a selected group of predominantly African American females to a youth leadership conference in tobacco prevention. The participants were selected by school principals in the area and anti-tobacco community coalition project leaders on the basis of being imaginative, agreeable, and enthusiastic about collaboration with others (Carver et al., 2003). At the conference, the youth attended presentations about a statewide tobacco-prevention initiative and brainstormed methods to decrease tobacco use in their communities. Following participation in the study, a majority of the participants reported confidence in their abilities to resist peer pressure to use tobacco; moderate assurance in their abilities to advocate against tobacco use; and, some belief in the prohibition of all forms of pro-tobacco advertisements (Carver et al., 2003). These findings suggest that anti-tobacco advocacy planning cultivates empowerment in youth as seen in their self-efficacy to resist tobacco use despite pressure from peers. Engagement in advocacy activities also advances youths' confidence in their capabilities to effectively advocate against tobacco use and advertisement.

From Anti-Tobacco Advocacy to Individual Change

Researchers have implemented interventions to determine if participation in anti-tobacco advocacy is correlated with individual changes in smoking behavior. Winkleby et al. (2004) investigated the effects of youth participation in an anti-tobacco advocacy program on the prevention of initiation of tobacco use and the cessation of current tobacco use. In this study, the treatment group participated in a semester-long anti-tobacco advocacy program targeting tobacco advertising and the availability of tobacco. Winkleby et al. (2004) found a significant difference

in net change of smoking between treatment and control groups for regular smoking. Regular smoking decreased by 3.8% in the treatment group and increased by 1.5% in the control group. At the time of a post treatment measurement (six months), smoking had decreased by 4.8%. There were also net changes in perceived incentive value, perceived self-efficacy, and outcome expectancies for the treatment group. The findings suggest that participation in anti-tobacco advocacy programs does indeed influence constructs related to psychological empowerment, such as perceived self-efficacy. Furthermore, participation motivates tobacco users to cessate smoking.

Interventions based in empowerment have the potential to produce lasting positive outcomes for the individual as well as the community. Community cycles of tobacco use may be terminated if the application of psychological empowerment in smoking prevention provokes youth to refuse tobacco use and initiate dialogue with other youth about smoking cultures. The mechanisms by which psychological empowerment functions, including increased confidence and assertiveness, may confer future advantages in other behavioral domains (e.g. drinking behavior and sexual activity). Individuals' experiences of empowerment may motivate greater interest in their future outcomes and positive decision-making related to tobacco use behaviors.

Religion, Psychological Empowerment, and the African American Community

Empowering interventions are relatively recent in comparison to the longstanding institution of religion in the African American community. Taylor, Chatters, & Levin (2004) describe African American religious life as "a vibrant, creative, and resourceful testament to the power of faith to uplift and sustain in the face of prejudice, discrimination, and exclusion" (p.11). Religion has historically been a protective factor for African Americans, enabling them to prevail in adverse conditions. Although African Americans may be disproportionately exposed to

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certain community risk factors, their vulnerability to tobacco use is not proportional to their risk level (Wallace & Muroff, 2002). Religion is a factor particularly protective for African Americans, as it buffers exposure to risks for tobacco use. Psychological empowerment, similar to religion, promotes self-esteem and resilience; therefore, religion may moderate the relationship between empowerment and tobacco use such that empowerment is more protective for African Americans who are more religious. Thus, consideration of the religious context in the study of psychological empowerment increases the relevance of this research to the experiences of African Americans and may enhance the protective effects of empowerment on tobacco use.

Intrapersonal empowerment and religion are based on similar underlying constructs. Many religious groups endorse and strive to build efficacy, sociopolitical control, and participatory competence. Religious affiliation often fosters a sense of power and control over one's life, thus affiliates experience intrapersonal empowerment. Identification with a religious group also offers systems of support and coping strategies to better endure stress and hardship. In health research, beliefs that God gives individuals the power to take care of themselves and that God controls each individual's health are empowering (Holt, Lewellyn, & Rathweg, 2005). African Americans who experience empowerment within a religious context should be less likely to initiate use than those not associated with a religious group.

Previous Research

The moderating effects of religiosity on the relationship between intrapersonal empowerment and tobacco use for African American young adults are examined. Numerous researchers have studied religion and its effects on substance use attitudes and behaviors. Research suggests that religiosity is associated with adolescent substance use, such that highly

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religious adolescents are less likely to use substances than adolescents of lesser religiosity (Wallace, Brown, Bachman, & Laveist, 2003; Nonnemaker, McNeely, & Blum, 2003). Based on this finding, religiosity acts as a protective factor for the adolescent substance use. Furthermore, Belgrave, Reed, Plybon, and Corneille (2004) found drug refusal efficacy to be a pathway by which religiosity protects against substance use. More specifically, drug refusal efficacy mediates the relationship between private religiosity, internalized behaviors indicating religious importance, and tobacco use (Nasim, Utsey, Corona, & Belgrave, 2006). These findings suggest that religiosity enhances drug refusal efficacy, increasing protection against substance use. Drug refusal self-efficacy is similar to the domain-specific efficacy component of intrapersonal empowerment, as both are indicators of one's perceived capacity to complete certain tasks specific to tobacco use. The same mediation effects of drug refusal efficacy on the relationship between religiosity and tobacco use may be observed in the effect of domain-specific efficacy on this relationship for African American tobacco users.

It is expected that religiosity will moderate the relationship between empowerment and tobacco use given the protective nature of religion on substance use already established in literature. If empowerment is protective, fostering empowerment within a religious context that is already set up to be empowering may then be more beneficial in that context than for individuals not embedded in the religious context. However, it is a possibility that religiosity will be compensatory, affecting tobacco use behaviors directly rather than moderating the relationship between empowerment and tobacco use.

Research suggests that religiosity protects against substance use (Wallace et al., 2003; Nonnemaker et al., 2003); however, much of this research is not focused on cigarette smoking or African American young adults specifically. Moreover, few studies examine religion as a

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moderating factor of psychological empowerment. Religious affiliation and involvement promote empowerment; therefore, African Americans who identify with a religious group and experience the support associated with religious involvement may potentially perceive greater intrapersonal empowerment than nonreligious African Americans.

Smith's Theory of Religious Effects.

Smith (2003) developed a theory that suggests religion positively affects American adolescents through nine, mutually reinforcing factors. Smith organizes these nine factors into three main categories, including moral order, learned competencies, and social and organizational ties. (See Figure 2.) An acknowledgement of the common reductionist thinking in the analysis of religious effects prefaces an explanation of the theory. Smith suggests that the typical explanation of religious effects is based on factors that are not inherently related to religion (e.g. social class, race, nationalism, etc.) and is too simplistic of an approach; however, he offers two limitations to his non-reductionist perspective. This theory recognizes that researchers of perspectives based in sociology cannot make affirming or disconfirming claims about the possible divine influences of religion based on sociological principles. Furthermore, sociology cannot be used to disclaim that the social effects mentioned are effects through which divine influences may operate.
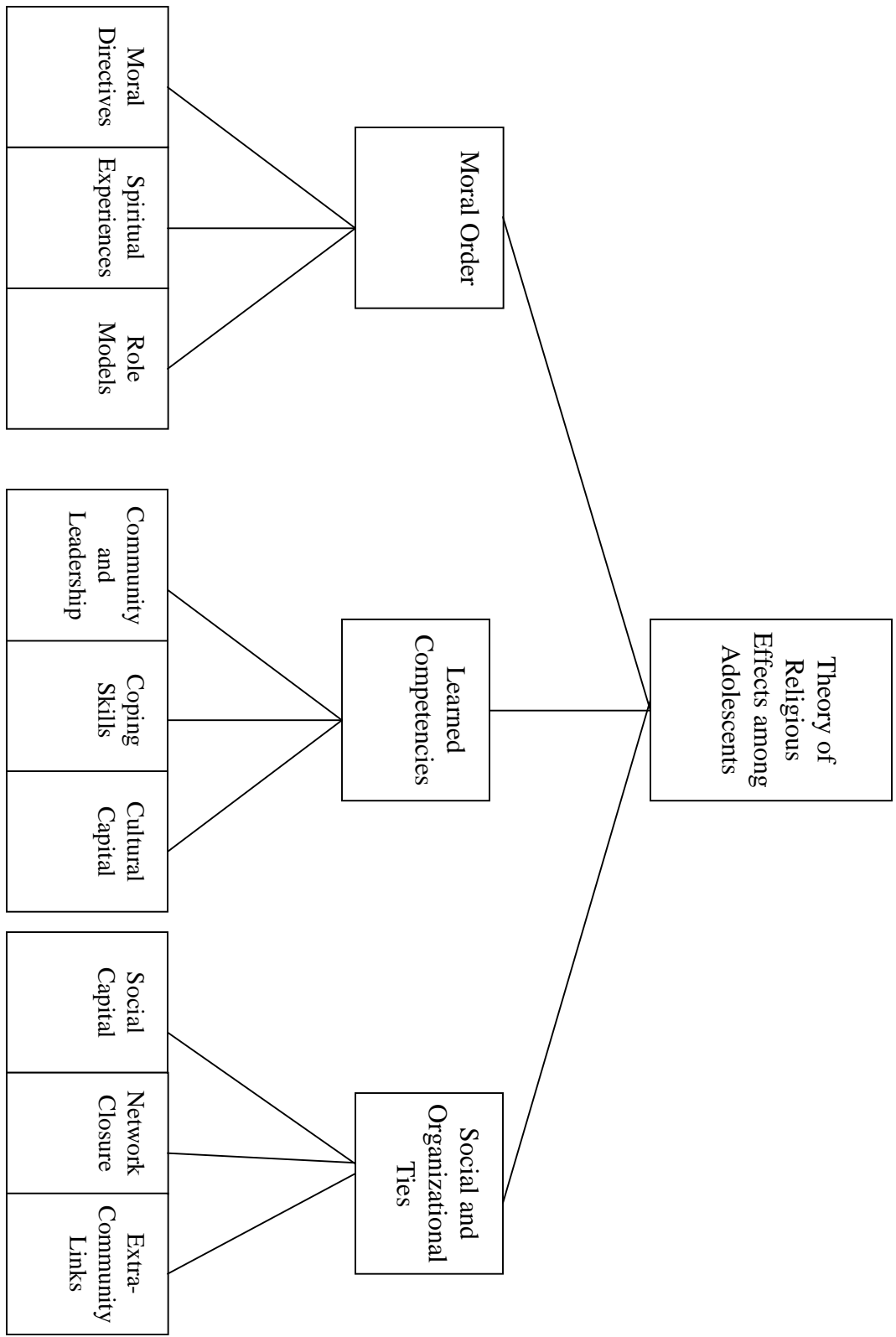
Figure 2. Smith's (2003) theory of religious effects.

Moral order. Moral order is defined as "the idea of substantive cultural traditions grounded upon and promoting particular normative ideas of what is good and bad, right and wrong, higher and lower, worthy and unworthy, just and unjust, and so on, which orient human consciousness and motivate human action" (Smith, 2003, p. 20). Religious ideals serve as the model for moral behavior and the criteria by which human action is to be judged. Beliefs about moral order are taken from beliefs about God as well as the values of authority figures close to an individual.

The three components of moral order are moral directives, spiritual experiences, and role models. Moral directives are characterized as the cultural norms, standards, and motivations for particular actions. Adolescents typically learn to be self-controlled in the pursuit of virtues and values through these directives. Smith (2003) lists the religious traditions of teaching youth to tithe from their income, to seek reconciliation and not vengeance, and to abstain from sexual promiscuity as examples of moral directives that promote positive development. Regarding this study, traditions of taking care of one's body and treating it as a temple might encourage individuals to refrain from tobacco use. Smith (2003) notes that religion is not the only source of moral directives, but rather, directives are present in all cultures. Adolescents have to navigate and negotiate the many sources of moral directives with which they may identify at any given time.

Spiritual experiences reinforce moral order. Smith (2003) suggests that adolescents do not simply endorse moral directives that are not their own, but that spiritual experiences solidify these directives and help maintain consistency over time. Examples of these reinforcing spiritual experiences include conversion experiences or an answer to prayer. These experiences serve to validate the moral directives of religion for adolescents.

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Finally, role models are adults and peers who provide adolescents with examples of moral directives in practice that lead to positive outcomes (Smith, 2003). They also provide opportunities for adolescents to build strong, positive relationships. Individuals may experience modeling of healthy behaviors that may guide them away from smoking behaviors. Role models provide examples of living in adherence to moral order; however, there are also examples of people who have lived immorally and consequently incur punishment. Membership in relationships with role models is typically contingent upon adhering to the moral directives and order; therefore, as adolescents develop close relationships with role models, more is at stake in decision-making. Adolescents may be more likely to follow the directives for fear of otherwise losing role model relationships. Role models validate the moral order by being examples of successful living through adherence to the order.

Learned competencies. Learned competencies are the second category of Smith's (2003) theory which involves edifying adolescents' competencies and knowledge of skills that will improve their lives. The first factor in this category is community and leadership. Smith suggests, that religious affiliation is heavily intertwined with religious participation. Thus, adolescents have multiple opportunities for involvement in various activities. These activities may include facilitating a Bible study; organizing a program; or, serving as a youth delegate on a committee. Smith (2003) asserts that adolescents gain skills such as group decision-making, public speaking, and conflict resolution through their involvement in these types of activities; moreover, the acquired kills are beneficial in many life domains external to the religious context. The skills gained represent intrapersonal empowerment and are consistent with domain-specific efficacy, perceived sociopolitical control, and participatory competence. The community and leadership skills gained in religious participation may equip individuals to participate in anti-

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tobacco advocacy activities or work cooperatively with others to change smoking cultures in their communities.

Coping skills, a component of learned competencies, are an application of religious beliefs that help many youth cope with stress, especially that associated with adolescence (Smith, 2003). More advanced coping skills may replace cigarette smoking as a coping mechanism to handle life stress or certain difficult situations. According to Smith (2003), religion provides adolescents with more and sometimes better coping strategies by way of practices and beliefs. Practices of prayer, confession, and funeral rites may be beneficial coping strategies for adolescents, as well as beliefs that an omnipotent God is in control or that all things work together for the good of those who love God. These beliefs may cultivate a sense of God support that may alleviate stress and negative coping; therefore, individuals may turn to God rather than tobacco use to cope with stress. Smith (2003) notes that nonreligious adolescents also have coping skills; however, religious participation provides additional skills and strategies to deal with life stressors that may confer a greater benefit for some adolescents.

Religion also provides opportunities for adolescents to gain cultural capital through their learned competencies. The preferences, skills, and knowledge adolescents have are ascertained through cultural experiences and are oftentimes unevenly distributed across cultures. Smith argues that religion is another cultural context in which adolescents can gain capital and competency. Adolescents may gain capital in learning musical techniques, holiday traditions, and ethical traditions in the religious context that may generalize to other areas of scholarship. African Americans are disproportionately exposed to cigarette smoking and its negative effects in their communities; however, exposure to religious contexts may create new understandings of

culturally acceptable behavior. The cultural capital adolescents gain from religious participation increases the value in it.

       Social and organizational ties. Social and organizational ties are Smith's (2003) final category of factors that influence the impact of religion. This category includes factors such as social capital, network closure, and extra-community links, that explain the effects of religion on the opportunities and barriers to which youth are exposed. Social capital refers to the benefit adolescents receive in being engaged with members of all ages of their congregations. Smith (2003) discusses the idea that adolescents spend a majority of their time interacting with and being socialized by their same-aged peers. Adolescents spend most of their day in school, extracurricular activities, playing sports, and watching television. He infers the danger in this seemingly one-sided socialization, particularly the limitless opportunities for peer pressure to occur. Interactions and ties with congregation members may create a sense of congregational support and church leader support that may buffer against smoking initiation. Religious involvement allows adolescents to interact and form networks with adults of all ages, increasing the life skills and perspectives to which they are exposed.

       The second factor of social and organizational ties is network closure, which refers to the tight-knit nature of congregational communities. The closeness of members allows multiple adults who care about and pay attention to youth to report oversights or issues to parents. Typically, adults in the religious community provide guidance and sometimes discipline in addition to that provided by parents. This allows parents to more effectively monitor their adolescent and to communicate expectations for their adolescent to congregation members who help monitor them. Access to various congregation members such as youth ministers and Sunday school teachers helps to keep the adolescents' friendships and associations more centered

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on positive relationships and influences. Interactions with these congregation leaders reinforce perceptions of congregational and church leader support.

Extra-community links are the final component of social and organizational ties (Smith, 2003). Smith (2003) proclaims that churches are often connected to other religious organizations in their communities, as well as outside the community, and even internationally. Therefore, church involvement automatically creates opportunities for youth that might not otherwise be available. Adolescents may have access to summer camps, mission projects, music festivals and other activities. Participation in these kinds of activities can lead to healthier lifestyles and more prosocial decisions and behaviors. Involvement may also introduce youth to people and resources outside of their community that could be instrumental in fostering empowerment and inciting community change in tobacco use behaviors. Smith's (2003) theory for analyzing the effects of religion on adolescents provides a very comprehensive and conceivable framework for conceptualizing religious effects in African American young adults.

Smith's (2003) framework and research findings on the protective relationship between religion and substance use suggest some implications for smoking prevention in African Americans. Faith-based substance use interventions may provide additional support for this population through the moral and social benefits of spirituality and religious involvement. Individuals may be empowered by the knowledge, skills, and support gained in the religious context. According to Smith's (2003) framework, individuals may gain a sense of moral order in directives to take care of one's body, and therefore choose to abstain from tobacco use. African Americans may pray about their tobacco use behaviors or the reasons for them and experience comfort in this process. Also, intervention personnel may serve as role models with whom participants may form important, accountability-promoting relationships.

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Pertaining to learned competencies, Smith's (2003) second category, African American young adults may learn certain leadership and coping skills in religious contexts that may reinforce abstinence from smoking or alleviate the need for smoking as a coping strategy. They may also acquire new tastes and cultural experiences that conflict with their tobacco use; therefore, these individuals may decide to end use. The knowledge and competency conferred by religious beliefs and involvement will provide African Americans in a faith-based intervention with more options in making decisions about tobacco use.

Furthermore, in line with Smith's (2003) final category, faith-based initiatives will provide exposure to possible social and organizational ties for African American young adults. They may situate students in a network of caring adults and peers who can aid in monitoring their behavior and socializing them toward positive development. Students may gain access to community, national, and international organizations and opportunities that can also aid in positive development and reinforce prosocial decision-making.

Although Smith's theory was not developed specifically for the study of religious influences on African Americans, it is still highly relevant to this community. Jang and Johnson (2004) applied the categories of learned competencies and social and organizational ties from Smith's theory to study the effect of religion on distress in African American adults. The researchers found that more highly religious African Americans showed less distress and reported a greater sense of control and social support than less religious and non-religious African Americans (Jang & Johnson, 2004). Jang & Johnson's (2004) study provides support for using Smith's theory with African American adults

Research Aims, Questions, and Hypotheses

The study took place at Virginia Commonwealth University. A secondary analysis was conducted of data collected from the Fall 2009 semester through the Spring 2010 semester. Approximately 798 undergraduate students at the university were recruited through the participant pool for introductory-level psychology courses. The primary purpose of this study was to extend previous research on risk and protective factors on tobacco use via the examination of psychological empowerment and religiosity. The following research questions guided the investigation:

Question 1.1.: What is the nature of the relationship between intrapersonal empowerment and past 30-day smoking for young adults?

Hypothesis 1.1.: Intrapersonal empowerment will be negatively correlated with past 30-day smoking. Young adults who report higher empowerment will be report less past 30-day smoking.

Zimmerman (1995) posits that intrapersonal empowerment is associated with competence and agency. According to Holden (2005), competence and agency may help individuals to more comfortably and assertively address and maintain anti-tobacco attitudes and behaviors. Thus, higher levels of intrapersonal empowerment should be associated with less tobacco use.

Question 1.2.: What is the nature of the relationship between interactional empowerment and past 30-day smoking for young adults?

Hypothesis 1.2.: Interactional empowerment will be negatively correlated with past 30-day smoking. Young adults who report higher empowerment will report less past 30- day smoking.

Zimmerman's framework and Holden's extension suggest that greater intrapersonal empowerment may mean greater knowledge, assertiveness, and advocacy participation for individuals. These construct may be beneficial in resisting pressures to smoke and working toward smoke-free communities.

Another aim of this study is to examine the moderating effects of ethnicity on the relationship between intrapersonal empowerment and smoking behavior. Limited research is available on intrapersonal empowerment as it relates to smoking behavior; moreover, research does not address ethnic differences in the effects of psychological empowerment. The following question was investigated:

Question 2.1.: Does ethnicity moderate the relationship between intrapersonal empowerment and past 30-day smoking?

Hypothesis 2.1.: Ethnicity will moderate the relationship between intrapersonal empowerment and past 30-day smoking behavior. African Americans will report less past-30 day smoking than whites when they report the same levels of intrapersonal empowerment.

The assumptions of Zimmerman's (1995) theory emphasize the importance of cultural and contextual variance in mechanisms and displays of empowerment. Empowerment has been referenced in previous research with underrepresented groups, such as African Americans. Underrepresented groups may experience greater behavioral benefits from feelings of capability and power.

Question 2.2.: Does ethnicity moderate the relationship between interactional empowerment and past 30-day smoking?

Hypothesis 2.2.: Ethnicity will moderate the relationship between interactional

empowerment and past 30-day smoking behavior. African Americans will report less

past-30 day smoking than whites when they report the same levels of interactional

empowerment.

Given the collective and communal nature of the African American community, African

Americans may have more opportunities to call upon and cultivate their interactional

empowerment. Compared to the more individualistic white community, African Americans are

interactive and participate together in familial and community contexts; thus they may rely on

interactional empowerment more so than their white counterparts.

Additionally, the moderating effects of religiosity on the relationship between

empowerment and tobacco use were investigated for an African American subsample. This was

an exploratory analysis guided by rationale from Zimmerman's (1995) and Smith's (2003)

theory. Zimmerman (1995) emphasizes the possibility for cultural differences in experiences of

empowerment. Smith (2003) posits that religiosity affects individuals through mechanisms

similar to those through which empowerment operates, such as competence and community

interactions. Religiosity may interact interestingly with empowerment for African Americans,

given the social significance of religiosity to the African American community as well as the

protective nature of religiosity for this community. Extensive research is available on the

protective effects of religiosity; however, there is little research that examines the effects of

religiosity as a promoting factor of psychological empowerment. The following questions were

examined:

Question 3.1.1.: Of what significance is religiosity, defined as God Support,

congregational support, and church leader support, in determining the relationship

between intrapersonal empowerment and past 30-day smoking for African American young adults?

Hypothesis 3.1.1.: Religiosity, defined as God Support, congregational support, and church leader support, will moderate the relationship between intrapersonal empowerment and smoking behavior. African Americans who report higher support will report less past-30 day smoking than African Americans who report lower support when both report the same level of intrapersonal empowerment.

According to Smith's (2003) theory, religiosity effects individuals by providing moral order and fostering learned competencies and extra-community ties. Religiosity may interact with intrapersonal empowerment to provide religious support for moral directives against tobacco use. Moreover, religiosity may provide further support for competence-building that may be useful in resisting tobacco use.

Question 3.1.2.: Of what significance is religiosity, defined as God Support, congregational support, and church leader support, in determining the relationship between interactional empowerment and past 30-day smoking for African American young adults?

Hypothesis 3.1.2.: Religiosity, defined as God Support, congregational support, and church leader support, will moderate the relationship between interactional empowerment and smoking behavior as well as the relationship bet. African Americans who report higher support will report less past-30 day smoking than African Americans who report lower support when both report the same level of intrapersonal empowerment.

Religiosity may interact with interactional empowerment to reinforce African Americans' assertiveness and advocacy participation through social connections and involvement with those

within and outside of the immediate religious environment. Individuals may acquire additional skills through their interactions with members of the religious community that may aid in maintaining a non-smoking status.

Question 3.2.1.: Of what significance is religiosity, defined as total religious support, in determining the relationship between intrapersonal empowerment and past 30-day smoking for African American young adults?

Hypothesis 3.2.1.: Religiosity, defined as total religious support, will moderate the relationship between intrapersonal empowerment and smoking behavior. African Americans who report higher support will report less past-30 day smoking than African Americans who report lower support when both report the same level of intrapersonal empowerment.

Question 3.2.2.: Of what significance is religiosity, defined as total religious support, in determining the relationship between interactional empowerment and past 30-day smoking for African American young adults?

Hypothesis 3.2.2.: Religious support, defined as total religious support, will moderate the relationship between interactional empowerment and smoking behavior. African Americans who report higher support will report less past-30 day smoking than African Americans who report lower support when both report the same level of interactional empowerment.

Rationale for these hypothesis includes the same reasoning for the previous hypotheses for the moderating effects of God, congregational, and church leader effects on the relationship between empowerment and tobacco use.

Investigating psychological empowerment may progress research on protective factors for tobacco use. The protective effects of psychological empowerment and religiosity may be unique for African Americans. A better understanding of empowerment and religious support as they relate to tobacco use in African American young adults will improve knowledge about protective factors for tobacco use and the processes by which they interact. Moreover, this research will further researchers' abilities to develop relevant and effective smoking prevention and intervention programs for this population.

Method

Design

This study was a secondary analysis of cross-sectional data which was collected over two semesters from participants via a questionnaire. Participants completed the survey in SONA, the subject pool for introductory level psychology students at Virginia Commonwealth University. Each semester, the deadline for completion of the survey coincided with the psychology department's deadline for receiving research credit.

Participants

Approximately 798 participants were recruited from Virginia Commonwealth University. Participants were male and female students between the ages of 18 and 25. Both tobacco users and non-users were included. Subjects over the age of 25 were eligible to participate; however, their data was excluded from analyses. Students of all ethnic groups were eligible to participate; however, only African Americans and white participants will be included in data analyses to because the complex variability that may exist in empowerment experiences across several ethnic groups is not in the scope of this study. The meanings and manifestations of psychological empowerment as it relates to tobacco use may vary by ethnicity; therefore, the

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ethnic groups included will be limited to African Americans and whites. A subsample of African American participants was analyzed to answer the third research question regarding religiosity as a moderator. Instructors of introductory level psychology instructors announced the requirement for research credits to their students who signed up to participate in the SONA participant pool. SONA is the database of all psychology studies in which the students are eligible to participate. Participants were awarded one research credit for completing the study.

Materials

The survey was created using Inquisite software. Once a survey was created in the program and published, an internet link was provided for online access to the survey. Data were maintained in a database on the Virginia Commonwealth University server.

Subjects were recruited through the participant pool at Virginia Commonwealth University. SONA software provides a system for web-based participant recruitment and participation. Once approved, a profile of the study details, time commitment, compensation, and contact information was uploaded to the system. Students then logged on to the system and signed up for the study. Research credit for participation was granted following each student's completion of the study.

An email account was created for participants to report survey completion. The survey was external to the participant pool system so participants were instructed to notify study personnel once they had completed the survey. The email account was checked every other day and research credit was awarded to those participants who emailed the investigator. The emails were the only roster of participants. It was not possible to link participants to surveys.

Measures

Current smoking. Current smoking is the dependent measure of this study. Current smoking was measured by assessing past 30-day smoking of cigarettes. Participants were asked, "During the last 30 days, on how many days did you smoke cigarettes, even 1 or 2 puffs? Response options were on a Likert scale (1=none; 6 = all 30 days).

Demographic measures. Participants were asked to provide demographic information on age, sex, ethnicity, and percentage of college expenses paid by financial aid.

Intrapersonal empowerment. The primary constructs of interest are intrapersonal and interactional empowerment. Domain-specific efficacy, perceived sociopolitical control, and participatory competence comprise the intrapersonal component of psychological empowerment.

Domain-specific efficacy. Participants were asked to complete Holden et al.'s (2005) 3-item domain-specific efficacy subscale. The subscale provides questions about participants' confidence in convincing parents and friends not to smoke. Participants were also questioned about confidence in working against the tobacco industry. For example, participants were asked, "If asked, how confident are you that you could work effectively against the tobacco industry? Responses were on a 5-point Likert scale (1 = definitely not sure, 5 = definitely sure). Holden et al. (2005) reported that the reliability was less than 0.60 for this subscale. A reliability of 0.71 was obtained in this study.

Perceived sociopolitical control. Holden et al.'s (2005) perceived sociopolitical control subscale was included in the study. Participants were presented with statements about participation to solve political issues and perceptions of their own abilities to participate. There are 5 items and participants were asked to rate the items on the truthfulness of each statement. For instance, one item stated, "I like to wait and see if someone else is going to solve a problem

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so that I don't have to be bothered". Responses were on a 5-point Likert scale (1 = definitely not true, 5 = definitely true). Holden et al. (2005) obtained factor loadings in the scale development of 0.61 to 0.79. The reliability in this study sample was 0.60.

Participatory competence. Participants completed Holden et al.'s (2005) participatory competence subscale. The 3 items included statements about working in groups. Participants were asked to rate each statement on truthfulness. "I can influence the decisions my group makes" is an example of an item. Item responses were on a 5-point Likert scale (1 = definitely not true, 5 = definitely true). Holden et al. obtained a correlation of 0.51 for two of the items. In this study sample a reliability of 0.71 was obtained.

Interactional empowerment. The interactional component of psychological empowerment was examined in this study. It consists of knowledge of resources, assertiveness, and advocacy.

Knowledge of resources. Participants completed Holden et al.'s (2005) 2-item knowledge of resources subscale. The subscale includes a statement about participants' awareness of resources for individuals who desire to quit smoking. Participants also rated a statement about their knowledge of volunteer organizations where they can participate in anti-tobacco advocacy. Each item was rated on the truthfulness of the statement. For example, participants were asked to rate the item, "If I wanted to participate in an anti-smoking campaign, I know of organizations on campus and/ or in the community where I can volunteer and lend a helping hand." Responses were on a 5-point Likert scale (1 = definitely not true, 5 = definitely true). The reliability for this scale in this study sample was 0.66.

Assertiveness. Holden et al.'s (2005) assertiveness subscale was used. Participants were presented with statements about their abilities to initiate conversations and

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organize groups that focus on resisting tobacco use and advocacy activities. There are 6 items and participants rated the items on the truthfulness of each statement. For instance, one item stated, "I am comfortable asking strangers to follow non-smoking policies in buildings and other locations.". Responses were on a 5-point Likert scale (1 = definitely not true, 5 = definitely true). Holden et al. (2005) obtained factor loadings ranging 0.68 to 0.82. The reliability in this sample was 0.79.

      Advocacy. Participants also completed Holden et al.'s (2005) advocacy subscale. The 4 items included questions about working to persuade family and friends, as well as community officials and stakeholders to be more concerned about tobacco use issues. One item asked, ""In the past year, how many times have you tried to convince other students, your family, or friends to be more concerned about tobacco?" This item was assessed separately as past advocacy with family and peers. Another similar item asked about past advocacy activities in the community and was also assessed separately. The other items questioned how willing participants would be to try convincing others to care about tobacco use. For example, participants "How willing would you be to make an effort to persuade students, your family, or friends to quit smoking?" Item responses for the questions about the past were on a 4-point Likert scale (1 = none, 4 = a lot). Item responses for the questions about willingness were on a 5-point Likert scale (1 = definitely not willing, 5 = definitely willing). Holden et al. (2005) reported a 0.41 correlation for the two items asking about past advocacy experiences. Reliability of 0.79 was obtained in this sample for the advocacy willingness subscale.

    Religious Support. The secondary variable of interest is religious support. Religious support is comprised of God support, congregation support, and church leader support. A composite of the three subscales was also assessed in analyses.

Fiala, Bjorck, & Gorsuch's (2002) religious support scale was included in the questionnaire. There are three subscales including God support, congregation support, and church leader support. Each subscale contains questions about feelings of belonging, worth, appreciation and support fostered by relationships with God, congregation members, and church leaders. Participants were asked to rate the truthfulness of each item. All three subscales contained the same seven items but they are written specific to the object of support. For example, one item on the God support subscale stated, "I feel appreciated by God". The same item read, "I feel appreciated by others in my congregation" on the congregation support subscale, and "I feel appreciated by my church leaders" on the church leader support subscale. Responses for all three subscales were on a 5-point Likert scale (1 = definitely not true, 5=definitely true). Fiala, Bjorck, & Gorsuch (2002) reported reliability alpha's of 0.75, 0.91, and 0.90 for the God support, congregation support, and church leader support scales respectively. In this sample, the reliability was 0.96 for African Americans for God support, 0.94 for congregational support, and 0.96 for church leader support.

Procedure

Following IRB approval, the survey link was posted on the participant pool website for first year psychology students to complete in exchange for class credit. Students signed up to participate in the online survey at their convenience and were asked to email the researcher once they completed the questionnaire. The email account was checked periodically and credit was awarded to participants for completed surveys. The survey was available for two consecutive semesters.

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Informed Consent.

The informed consent form was included on the first page of the online survey. Participants were asked to agree to participate in an online survey that would take 45 minutes to 1 hour. The form discussed class credit as compensation for participating in the study. Also, the consent form detailed principles of confidentiality and assured participants that the surveys would be completed anonymously. Participants were told they had the right to end the survey at any time and signified consent by clicking "next" to continue with the survey. The researcher and advisor's contact information were provided for questions and concerns

Retention Plan.

There were not any anticipated issues with retention as participants needed the participation credits to successfully complete their introductory psychology courses; however, two semesters were allowed for participation to ensure enough completed surveys for analyses.

Data Analysis Plan

The following statistical procedures were conducted to investigate the outlined research questions and test the research hypotheses. All analyses were performed using the PASW 18 statistical package.

Prior to data analyses, the data was sorted by age and ethnicity. Data for participants younger than 18 years old and older than 25 years old, as well as that for any participants not white or African American was excluded. Reliability analyses were performed on the empowerment subscales for the full sample and the African American subsample. One item, "I would enjoy working with others my age to prevent smoking among college students." was removed from the participatory competence scale for the full sample to ensure acceptable reliability. Mean scores were computed for each empowerment subscale and each religious

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support subscale. A composite mean score for religious support was computed by calculating the average of the mean subscale scores. The demographic variable assessing the percentage of tuition paid via financial aid was recoded such that those who responded that they received no aid and those who were unsure were combined. Originally, these response options were the minimum and maximum Likert-scale values, which would limit interpretation of correlations and analyses.

Descriptive statistics, including means, standard deviations, reliabilities, and ranges were calculated for each predictor and the outcome variable. Bivariate correlations were then computed for all demographic, predictor, and outcome variables. Separate descriptive statistics and correlations were computed for the full sample and the African American subsample. Descriptive statistics and correlations for African Americans included religiosity variables which were not included for the full sample.

A linear regression was conducted to determine the relationship between empowerment and past 30-day smoking. The dependent variable was past 30-day cigarette smoking and the predictor variables entered were the empowerment variables, moderator, and demographic variables that were significantly correlated with the outcome; therefore, gender, financial aid, ethnicity, domain-specific efficacy, perceived sociopolitical control, participatory competence, knowledge of resources, assertiveness, past advocacy with the family, past advocacy in the community, and willingness for future advocacy activity were entered simultaneously in the first model for the full sample.

Next, the same regression analysis was performed with the addition of interaction terms to examine ethnicity and religious support as moderators of the relationship between empowerment and current tobacco use. The empowerment variables were centered and separate

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interaction terms were created for ethnicity and each of the empowerment variables that were significant predictors of current tobacco use for the full sample. Past 30-day cigarette use was entered as the dependent variable and all interactions were added to the empowerment and demographic variables in the model from the previous regression. Significant interactions were graphed in order to interpret the results.

Parallel regression analyses were performed for the African American subsample with the following adjustments. In the first model no demographic variables were included, and religious support variables was included as a predictor variable. In the second model, the religious support variables were centered and separate interactions were created for each religious support variable and the significant empowerment variables for the African American subsample. Independent analyses were conducted for total religious support and subscales.

Results

Demographic Characteristics and Correlations.

The full study sample included 798 young adults. Approximately 65.9% were females and 34.1% were males.   The sample was ethnically diverse with 62.9% Whites and 37.1% African Americans. Of the sample, 90.2% were ages 18 to 21 and 9.8% were ages 22 to 25. For the percentage of tuition paid with financial aid, 11% paid less than 25% of their tuition with financial aid, 8.8% used for financial aid for 25% to 50% of their tuition, and 11.7% paid 50% to 75% of their tuition with financial aid. Approximately 27.7% paid greater than 75% of their tuition with financial aid and 40.9% either did not receive financial aid or were not sure if they received aid. See Table 1 for demographic information and Table 2 for descriptive statistics for the full sample.

Table 1.

Demographic Characteristics of Full Sample.

Demographic Characteristics of Full Sample		
	N	Percentage
Age		
18 to 21 years old	720	90.2%
22 to 25 years old	78	9.8 %
Gender		
Female	526	65.9%
Male	272	34.1%
Ethnicity		
White	502	62.9%
African American	296	37.1%
Financial Aid		
None or unsure	326	40.9%
Less than 25%	88	11.0%
Between 25% and 50%	70	8.8 %
Between 50% and 75%	93	11.7%
Greater than 75%	221	27.7%

Table 2.

Descriptive Statistics for All Variables in Full Sample.

Descriptive Statistics for All Variables for Full Sample								
Variable	N	Mean	St. Dev.	Range	Skewness	Number of Items in Scale	Likert Scale	Reliability
Past-30 Day Cigarette Smoking	798	1.97	1.70	6.00	1.46	1	--	--
Intrapersonal Empowerment								
Domain-Specific Efficacy	798	2.74	0.90	4.00	0.10	3	1-5	0.71
Perceived Sociopolitical Control	798	2.60	0.61	3.60	0.001	5	1-5	0.60
Participatory Competence	798	3.92	0.68	4.00	-0.72	2	1-5	0.71
Interactional Empowerment								
Knowledge of Resources	798	3.07	0.94	4.00	-0.02	2	1-5	0.66
Assertiveness	798	3.24	0.74	4.00	-0.18	6	1-5	0.79
Advocacy								
Past Family	798	2.11	0.96	3.00	0.41	1	1-4	--
Past Community	798	1.20	0.52	1.39	2.83	1	1-4	--
Willingness	798	3.16	0.97	4.00	-0.29	1	1-5	0.79

Bivariate correlations were calculated for the demographic, predictor, and dependent variables. (See Table 3.). Ethnicity was significantly negatively correlated with current tobacco use such that reports of greater past 30-day use were associated with being white versus African American ($r = -.32$). Additionally, gender had a significant positive correlation with past month smoking, indicating that being male was associated with a report of greater past month smoking ($r = .08$). Financial aid had a significantly negative relationship with current smoking. Students who received more financial aid for tuition payment reported less tobacco use ($r = -.08$).

Domain-specific efficacy ($r = -.32$) was the only intrapersonal empowerment variable that significantly correlated with current tobacco use. Higher levels of domain-specific efficacy were associated with participants reporting less past 30-day smoking. Perceived sociopolitical control and participatory competence were not significantly related to current tobacco use. Among the interactional empowerment variables, assertiveness ($r = -.41$), past participation in advocacy activities with the family ($r = -.31$) and in the community ($r = -.11$), and willingness to participate in future advocacy activities ($r = -.40$) were significantly, negatively correlated with past 30-day smoking. As reported levels of assertiveness, advocacy experience, and advocacy willingness increased, reported past month tobacco use decreased. Knowledge of resources was not significantly related to current tobacco use. Religiosity variables were tested as moderators. Of these variables, God support ($r = -.27$), congregational support ($r = -.22$), church leader support ($r = -.23$), and self-rated religiosity ($r = -.18$) showed highly significant, negative correlations with current tobacco use. Reports of no past 30-day tobacco use were associated with reports of higher religious support and self-rated religiosity.

Table 3.

Correlations between Intrapersonal PE, Interactional PE, and Tobacco Use for Full Sample.

	1 30DAY	2 AGE	3 GEN	4 ETH	5 FinAid	6 DSE	7 PSC	8 PC	9 KNW	10 AS	11 ADPF	12 ADPC	13 ADW
1	--	.01	.08*	-.32**	-.08*	-.32**	.06	.03	-.02	-.41**	-.31**	-.11**	-.40**
2		--	.03	-.03	.08*	-.03	-.06	.01	.03	-.002	.02	-.03	-.03
3			--	-.14**	-.05	.03	.11**	.004	-.02	-.13**	-.12**	.03	-.19**
4				--	.24**	.10**	-.05	-.06	.06	.28**	.07	.12**	.24**
5					--	.004	-.06	.05	.01	.10**	.05	.09*	.10**
6						--	-.15**	.16**	.21**	.45**	.24**	.17**	.38**
7							--	-.32**	-.16**	-.36**	-.14**	.03	-.26**
8								--	.19**	.31**	.12**	-.07*	.18**
9									--	.35**	.18**	.11**	.21**
10										--	.38**	.14**	.61**
11											--	.26**	.46**
12												--	.19**
13													--

* p < .05; ** p < .01

Note. 30DAY = Past 30-day cigarette smoking; AGE = age; GEN = gender; ETH = ethnicity (African American vs. white); FinAid = percentage of tuition paid with financial aid; DSE = domain-specific efficacy; PSC = perceived sociopolitical control; PC = participatory competence; KNW = knowledge of resources; AS = assertiveness; ADP = past participation in advocacy activities; ADW = willingness to participate in future advocacy activities

Psychological Empowerment as a Predictor of Current Tobacco Use

Question 1: What is the nature of the relationship between empowerment and past 30-day smoking for young adults?

When ethnicity, gender, financial aid, and the empowerment variables were included for the full sample, the regression model significantly predicted past 30-day cigarette smoking, $F(11,786) = 32.59$, p < .001. The model accounted for approximately 31% of the variance in past 30-day smoking, $R^2 = .31$. There were several main effects. Ethnicity significantly predicted past 30-day smoking, B = -.72, p < .001, $t(786) = -6.31$. Being African American predicted lower rates of past 30-day cigarette smoking. Of the intrapersonal empowerment variables, domain-specific efficacy and participatory competence were significant predictors of

current tobacco use. Knowledge of resources, assertiveness, past advocacy with family and peers, and advocacy willingness are the interactional components that significantly predicted current smoking. Greater domain-specific efficacy, assertiveness and advocacy predicted less smoking. Contrarily, greater participatory competence and knowledge of resources predicted more current tobacco use. See Table 4 for regression results.

Table 4.

Regression Results for Test of Empowerment as a Predictor of Current Smoking.

Regression Results for Test of Empowerment as a Predictor of Current Smoking				
Variable	*B*	*SE B*	β	*P*
Gender	-.066	0.11	-0.02	0.550
Financial Aid	-.002	0.03	-.002	0.947
Ethnicity	-0.72	0.11	-0.21	0.000
Domain-Specific Efficacy	-0.29	0.06	-0.15	0.000
Perceived Sociopolitical Control	-0.16	0.09	-0.06	0.077
Participatory Competence	0.31	0.08	0.12	0.000
Knowledge of Resources	0.23	0.06	0.13	0.000
Assertiveness	-0.56	0.10	-0.24	0.000
Past Advocacy (Family and Peers)	-0.29	0.06	-0.17	0.000
Past Advocacy (Community)	0.13	0.10	0.04	0.202
Advocacy Willingness	-0.25	0.07	-0.14	0.001

Ethnicity as a Moderator

Question 2. Does ethnicity moderate the relationship between empowerment and past 30-day smoking for young adults?

In the next regression analysis, interaction terms for the empowerment variables and ethnicity were added to the previous model; therefore, separate interaction terms were included for ethnicity and domain-specific efficacy, perceived sociopolitical control, participatory competence, knowledge of resources, assertiveness, past advocacy with family and peers, past advocacy in the community, and advocacy willingness. The full model significantly predicted current tobacco use, $F(19,778) = 23.03$, $p < .001$. (See Table 5).

Table 5.

Regression Results for Test of Ethnicity as a Moderator of the Relationship between

Empowerment and Current Smoking.

Regression Results for Test of Ethnicity as a Moderator of the Relationship between Empowerment and Current Smoking				
Variable	*B*	*SE B*	β	*p*
Ethnicity X Domain-Specific Efficacy	0.42	0.12	0.15	0.000
Ethnicity X Perceived Sociopolitical Control	0.07	0.12	0.02	0.540
Ethnicity X Participatory Competence	-0.20	0.11	-0.08	0.073
Ethnicity X Knowledge of Resources	-0.14	0.11	-0.05	0.220
Ethnicity X Assertiveness	0.22	0.16	0.07	0.161
Ethnicity X Past Advocacy (Family and Peers)	-0.06	0.11	-0.03	0.016
Ethnicity X	0.28	0.12	0.10	0.043

Approximately 36% of the variance in past 30-day cigarette smoking was accounted for by the model, $R^2 = .36$. All main effects remained significant. Significant interactions were determined for domain-specific advocacy, past advocacy with family and peers, and advocacy willingness. The interaction between domain-specific efficacy and ethnicity significantly predicted current smoking, $B = .42$, $p < .001$, $t(778) = 3.62$. (See Figure 3). Domain-specific efficacy had little predictive value for the current smoking of African Americans but higher efficacy did predict less smoking for Whites.
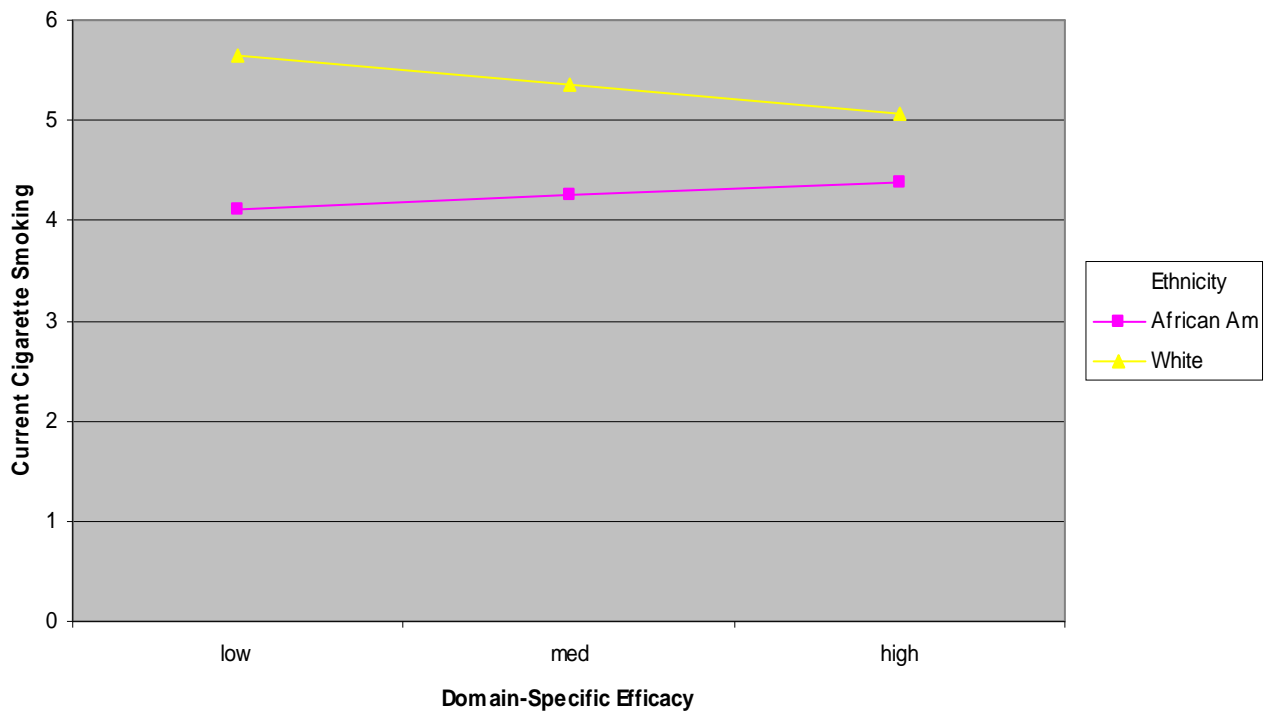
Figure 3. Ethnicity X Domain-Specific Efficacy as a Predictor of Current Smoking.

The interaction between past family and peer advocacy and ethnicity was a significant predictor, $B = .28$, $p = .016$, $t(786) = 2.41$. (See Figure 4). Past participation in advocacy to dissuade family and peers from smoking tobacco was important in predicting tobacco use for

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Whites but not for African Americans. Moreover, the interaction between advocacy willingness and ethnicity significantly predicted current tobacco use, $B = .29$, $p = .043$, $t(786) = 2.03$. (See Figure 5). Similar to domain-specific efficacy and past advocacy, higher advocacy willingness was related to less current smoking for Whites but did not appear to be a significant predictor for the tobacco use of African Americans.
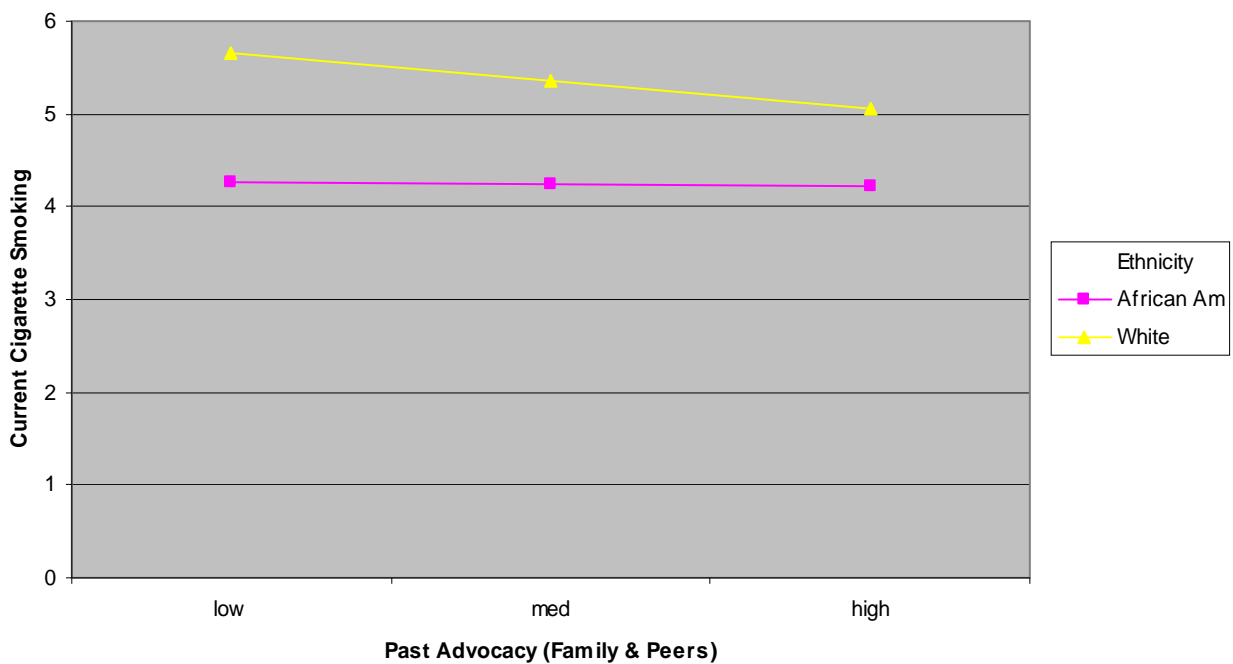
Figure 4. Ethnicity X Past Family & Peer Advocacy as a Predictor of Current Smoking.
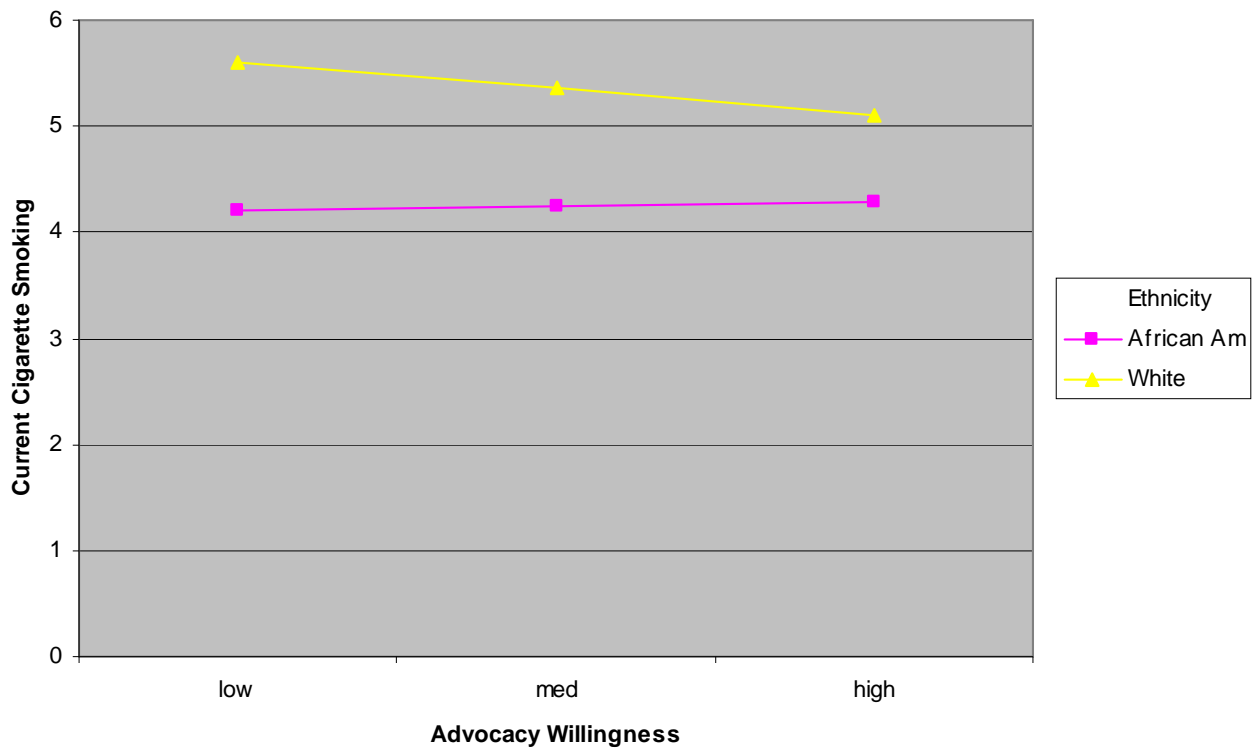
Figure 5. Ethnicity X Advocacy Willingness as a Predictor of Current Smoking.

Exploratory Analyses with African American Subsample: Religiosity as a Moderator

    Demographic Characteristics and Correlations. Analyses of religiosity variables as moderators, questions 3.1.and 3.2., were conducted with an African American subsample. The African American subsample consisted of 296 young adults. Approximately 74.7% were females and 25.3% were males. Of the participants, 92.2% were ages 18 to 21 and 7.8% were ages 22 to 25. Regarding the percentage of tuition paid with financial aid, 10.1% paid less than 25% of their tuition with financial aid, 10.5% used for financial aid for 25% to 50% of their tuition, and 17.97% paid 50% to 75% of their tuition with financial aid. Slightly more than a third of African American participants (35.8%) paid greater than 75% of their tuition with

financial aid and 25.7% either did not receive financial aid or was not sure if they received aid.

See Table 6 for demographic information and Table 7 for descriptive statistics on the African

American subsample.

Table 6.

Demographic Characteristics of African American Subsample

Demographic Characteristics of African American Subsample		
	N	Percentage
Age		
18 to 21 years old	273	92.2%
22 to 25 years old	23	7.8%
Gender		
Female	221	74.7%
Male	75	25.3%
Financial Aid		
None or unsure	76	25.7%
Less than 25%	30	10.1%
Between 25% and 50%	31	10.5%
Between 50% and 75%	53	17.9%
Greater than 75%	106	35.8%

Table 7.

Descriptive Statistics for All Variables for African American Subsample

Descriptive Statistics for All Variables for African American Subsample								
Variable	N	Mean	St. Dev.	Range	Skewness	Number of Items in Scale	Likert Scale	Reliability
Past-30 Day Smoking	296	1.26	0.94	6.00	3.28	1	--	--
Intrapersonal Empowerment								
Domain-Specific Efficacy	296	2.86	0.92	4.00	0.07	3	1-5	0.77
Perceived Sociopolitical Control	296	2.56	0.58	3.60	0.05	5	1-5	0.58
Participatory Competence	296	3.88	0.73	4.00	-0.84	2	1-5	0.78
Interactional Empowerment								
Knowledge of Resources	296	3.14	0.95	4.00	-0.01	2	1-5	0.69
Assertiveness	296	3.51	0.65	4.00	-0.31	6	1-5	0.81
Advocacy								
Past Family	296	2.19	0.99	3.00	0.36	1	1-5	--
Past Community	296	1.28	0.63	3.00	2.29	1	1-5	--
Willing	296	3.46	0.86	4.00	-0.45	2	1-5	0.76
Religiosity								
Total Religious Support	296	3.92	0.72	4.00	-0.81	21	1-5	0.96
God Support	296	4.40	0.87	4.00	-1.61	7	1-5	0.96
Congregation Support	296	3.65	0.81	4.00	-0.29	7	1-5	0.94
Church Leader Support	296	3.72	0.83	4.00	-0.24	7	1-5	0.96

Bivariate correlations were conducted for the African American subsample. (See Table 8). None of the demographic variables were significantly correlated with past 30-day smoking for African Americans. Also, there were no significant correlations between the intrapersonal empowerment variables and current tobacco use. A majority of the interactional empowerment indicators were significantly related to current tobacco use. Assertiveness ($r = -.16$), past participation in advocacy with family and peers ($r = -.16$), and willingness to participate in future advocacy activities ($r = -.12$) were significantly negatively correlated with past 30-day smoking, such that reports of higher assertiveness, advocacy with family and peers in the past and advocacy willingness were associated with reports of less current tobacco use. Knowledge of resources was not correlated with tobacco use. Religious support, God support, congregational

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current smoking.

Table 8.

Correlations between Intrapersonal PE, Interactional PE, Religiosity, and Tobacco Use for

African American Subsample

	1 30DAY	2 AGE	3 GEN	4 FinAid	5 DSE	6 PSC	7 PC	8 KNW	9 AS	10 ADPF	11 ADPC	12 ADW	13 TRSUP	14 GSup	15 CSup	16 CLSup
1	--	.08	.09	.01	-.09	.05	-.02	.04	-.16**	-.16**	-.02	-.12*	-.06	-.04	-.11	-.02
2		--	.10	.12*	-.09	-.01	-.06	-.01	-.07	-.001	-.08	-.09	-.05	-.004	-.07	-.07
3			--	-.01	-.02	.16**	-.01	-.08	-.18**	-.18**	.06	-.22**	-.17**	-.26**	-.08	-.10
4				--	-.05	-.06	.08	.02	-.04	.02	.07	-.01	.06	.03	.08	.05
5					--	-.10	.22**	.26**	.45**	.20**	.22**	.34**	.25**	.22**	.23**	.19**
6						--	-.25**	-.15*	-.44**	-.15*	.11*	-.29**	-.24**	-.15**	-.25**	-.23**
7							--	.30**	.49**	.13*	-.07	.28**	.39**	.25**	.28**	.30**
8								--	.39**	.19**	.14*	.27**	.18**	.14*	.14*	.18**
9									--	.30**	.03	.54**	.35**	.29**	.33**	.31**
10										--	.27**	.44**	.20**	.20**	.15*	.19**
11											--	.12*	.04	-.01	.08	.05
12												--	.38**	.38**	.29**	.32**
13													--	.80**	.89**	.91**
14														--	.51**	.55**
15															--	.82**
16																--

*p < .05; **p <.01
Note. 30DAY = Past 30-day cigarette smoking; AGE = age; GEN = gender; FinAid = percentage of tuition paid with financial aid; DSE = domain-specific efficacy; PSC = perceived sociopolitical control; PC = participatory competence; KNW = knowledge of resources; AS = assertiveness; ADP = past participation in advocacy activities; ADW = willingness to participate in future advocacy activities; TRSUP = Total Religious Support; GSup = God support; CSup = congregational support; CLSup = church leader support

Question 3.1.: Of what significance is religious support, defined as God support, congregational support, and church leader support, in determining the relationship between empowerment and past 30-day smoking for young adults?

First a multiple regression was conducted to test for main effects of empowerment and

religious support. When all empowerment variables, God support, congregational support, and

church leader support were included, the model significantly predicted current tobacco use, $F(11,$

$284) = 2.27$, $p = .011$. Approximately eight percent of the variance in current smoking was

accounted for by the model, $R^2 = .08$. There were no main effects of intrapersonal empowerment

variables. Of the interactional empowerment variables, assertiveness significantly predicted current smoking, $B = -.27$, $p = .028$, $t(284) = -2.21$. Past advocacy activity with family and peers also significantly predicted current smoking, $B = -.13$, $p = .036$, $t(284) = -2.11$. There were also religious support main effects. Congregational support significantly predicted past 30-day tobacco use, $B = -.32$, $p = .009$, $t(284) = -2.63$. Furthermore, church leader support was a significant predictor of past 30-day smoking, $B = .26$, $p = .031$, $t(284) = 2.17$. Higher levels of assertiveness, advocacy, and congregational support predicted less past 30-day smoking whereas higher levels of church leader support predicted higher rates of current smoking. See Table 9 for main effects for the African American subsample.

Table 9.

Regression Results for Religious Support Components and Empowerment as Predictors of

Current Smoking.

Regression Results for Religious Support Components and Empowerment as Predictors of Current Smoking				
Variable	*B*	*SE B*	B	*p*
God Support	0.04	0.08	0.03	0.651
Congregational Support	-0.32	0.12	-0.27	0.009
Church Leader Support	0.26	0.12	0.23	0.031
Domain-Specific Efficacy	-0.003	0.07	-0.002	0.971
Perceived Sociopolitical Control	-0.11	0.10	-0.07	0.288
Participatory Competence	0.06	0.09	0.05	0.474
Knowledge of Resources	0.11	0.06	0.10	0.096
Assertiveness	-0.27	0.12	-0.19	0.028
Past Advocacy (Family and Peers)	-0.13	0.06	-0.14	0.036
Past Advocacy (Community)	0.05	0.09	0.03	0.591

In the next regression analysis, separate interaction terms for assertiveness and past family and peer advocacy by the religious support components were added to the previous model to test the three components of religious support as moderators. The full model significantly predicted past 30-day smoking, $F(11, 284) = 2.45$, $p = .006$ (See Table 10.). Approximately nine percent of the variance in tobacco use was accounted for $R^2 = .09$. Past family and peer advocacy, congregational support, and church leader support remained significant predictors of current smoking. The interaction between past family and peer advocacy and God support was a significant predictor, $B = .15$, $p = .050$, $t(284) = 1.97$. (See Figure 6).

Table 10.

Regression Results for Test of Religious Support Components as Moderators of the Relationship between Empowerment and Current Smoking.

Regression Results for Test of Religious Support Components as Moderators of the Relationship between Empowerment and Current Smoking				
Variable	*B*	*SE B*	β	*p*
God Support X Assertiveness	-0.11	0.06	-0.12	0.090
Congregational Support X Assertiveness	0.001	0.11	0.002	0.989
Church Leader Support X Assertiveness	-0.04	0.11	-0.05	0.696
God Support X Past Advocacy (Family & Peers)	0.15	0.08	0.16	0.050
Congregational Support X Past Advocacy (Family & Peers)	0.08	0.10	0.08	0.448
Church Leader Support X Past Advocacy (Family & Peers)	-0.15	0.10	-0.16	0.165
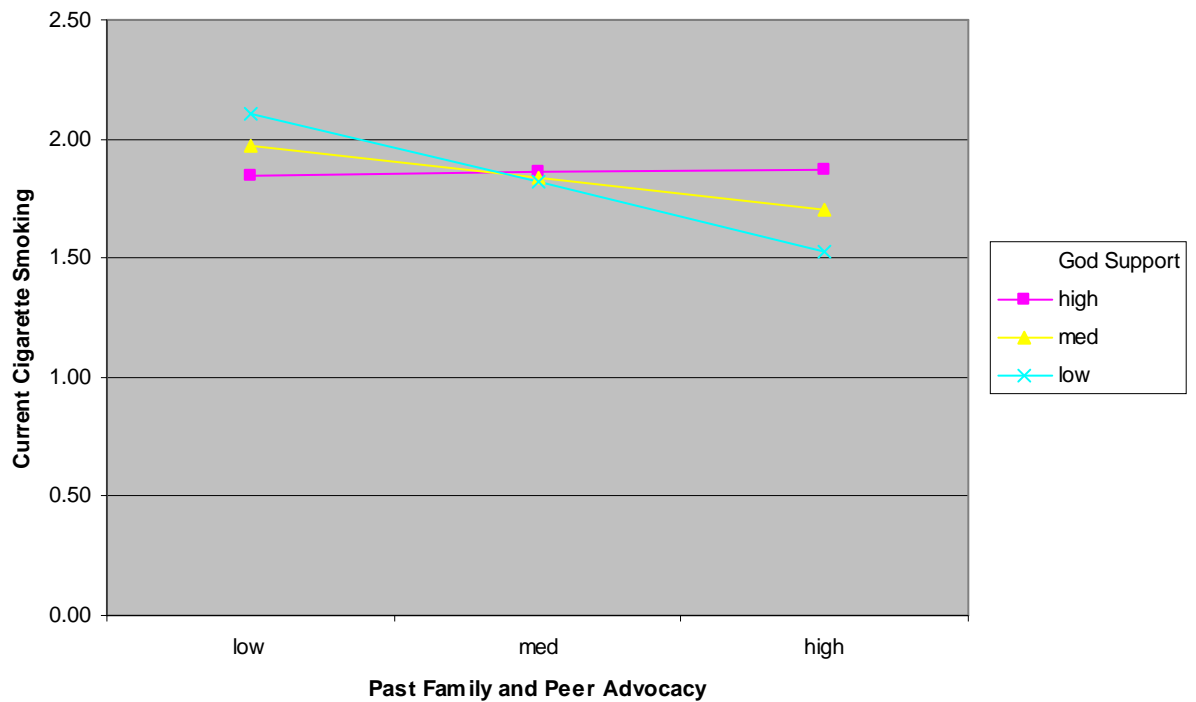
Figure 6. God Support X Past Family & Peer Advocacy as a Predictor of Current Smoking.

Past advocacy participation was unrelated to tobacco use for African Americans with higher God support; however, past advocacy was and important protective factor for those with lower God support. The interaction between assertiveness and God support approached significance, $B = -.11$, $p = .090$, $t(284) = -1.70$. (See Figure 7). The trend indicated that assertiveness was unimportant in individuals with lower God support but individuals with higher God support and assertiveness tended to report less current smoking. There were no significant interactions between congregational and church leader support and the empowerment variables.

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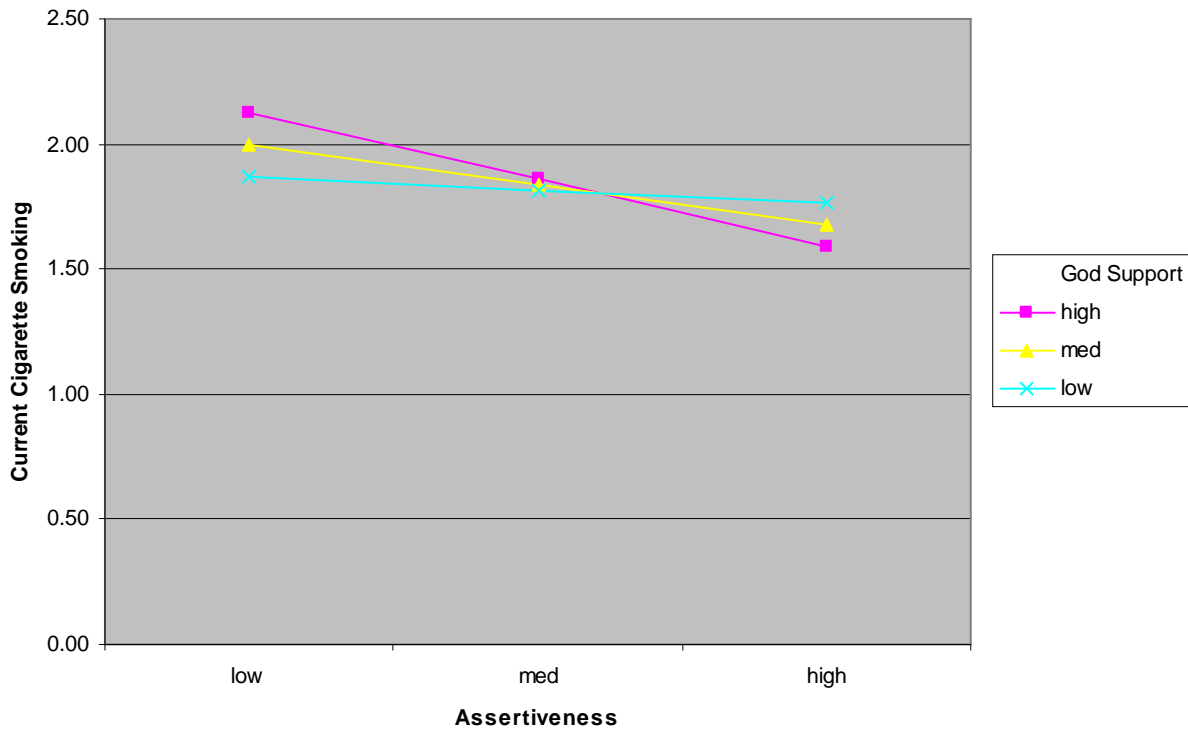
Figure 7. God Support X Assertiveness as a Predictor of Current Smoking.

Question 3.2.: Of what significance is religious support, defined as total religious support in determining the relationship between empowerment and past 30-day smoking for young adults?

A multiple regression was conducted to test for main effects of empowerment and total religious support. When all empowerment variables and total religious support were included, the model significantly predicted current tobacco use, $F(9,286) = 1.95$, $p = .045$. The model accounted for approximately six percent of the variance in current cigarette smoking , $R^2 = .06$. There were no main effects of intrapersonal empowerment variables. Of the interactional empowerment variables, assertiveness significantly predicted current smoking, $B = -.29$, $p = .016$, $t(286) = -2.42$. See Table 11 for regression results. There were no additional main effects

for the other interactional empowerment variables or total religious support. No subsequent

analyses were conducted for total religious support.

Table 11.

Regression Results for Test of Total Religious Support and Empowerment as Predictors of

Current Smoking.

Regression Results for Test of Total Religious Support and Empowerment as Predictors of Current Smoking				
Variable	B	$SE\ B$	β	p
Total Religious Support	-0.01	0.09	-0.01	0.899
Domain-Specific Efficacy	-0.01	0.07	-0.01	0.835
Perceived Sociopolitical Control	-0.09	0.10	-0.05	0.396
Participatory Competence	0.07	0.09	0.06	0.408
Knowledge of Resources	0.12	0.06	0.12	0.060
Assertiveness	-0.29	0.12	-0.20	0.016
Past Advocacy (Family and Peers)	-0.12	0.06	-0.13	0.060
Past Advocacy (Community)	0.03	0.09	0.02	0.786
Advocacy Willingness	-0.01	0.08	-0.01	0.876

Discussion

Review of Theory and Research Questions

Zimmerman's (1995) theory of psychological empowerment provides a framework based on interdependent components for understanding empowerment. The three components of the theory interact in complex ways to provide a comprehensive conceptualization of empowerment. Intrapersonal empowerment involves the individual's perceptions of their abilities and power. The interactional component includes one's ability to interact with the surrounding social and political environment. Behavioral empowerment involves an individual's capacity to draw on their competencies and abilities in participation with other community members. An individual may be empowered in all, none, or some of the components as time varies.

Several important assumptions must be considered for Zimmerman's (1995) theory. Empowerment varies in representation and meaning across individuals. Various factors, such as the nature of empowering activities or leadership experience, may affect the manifestation of empowerment in individuals. Furthermore, not only does empowerment differ across individuals, but also across contexts. Psychological empowerment varies over time in representation and meaning. Finally, in maintaining consistency with the previous assumptions, there is no global measure of empowerment.

Especially relevant to this study, Holden and colleagues' (2005) extensions to Zimmerman's theory enable us to understand psychological empowerment as it applies to tobacco control. They identify three components of intrapersonal empowerment, including domain-specific efficacy, perceived sociopolitical control, and participatory competence. Additionally, the researchers delineate knowledge of resources, assertiveness, and advocacy within the interactional component of empowerment. Holden and colleagues' work enhances

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conceptualizations of empowerment and provides researchers with tobacco control-specific measures of empowerment.

There are several research questions in this study pertaining to the general relationships between empowerment and tobacco use. Furthermore, the moderating effects of ethnicity and religiosity on those relationships were investigated. The research questions are as follows:

Question 1: What is the nature of the relationship between empowerment and past 30-day smoking for young adults?

Question 2: Does ethnicity moderate the relationship between empowerment and past 30-day smoking for young adults?

Question 3: Of what significance is religious support in determining the relationship between intrapersonal empowerment and past 30-day smoking for young adults?

Main Effects

The first question addressed the predictive relationship between empowerment and tobacco use. It was hypothesized that intrapersonal empowerment would be negatively correlated with the rate of past 30-day smoking. Furthermore, young adults who reported higher intrapersonal empowerment would report less past 30-day tobacco use. Based on the results, the hypothesis is supported for domain-specific efficacy but not the other intrapersonal variables. Higher levels of domain-specific efficacy predicted less smoking; however, greater participatory competence predicted more past 30-day smoking. Perceived sociopolitical control did not significantly predict tobacco use. Very little empirical research exists on empowerment and tobacco use. Research on constructs related to empowerment, such as self-efficacy and tobacco refusal efficacy, supports the main effect finding that intrapersonal empowerment predicts current tobacco use (Winkleby et al., 2004; Nebot et al., 2004; Nasim et al., 2006).

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Zimmerman (1995) purports that intrapersonal empowerment means feelings of competency and power for the individual. Participants who reported less current smoking should have been more likely to have average levels of intrapersonal empowerment that were higher than those who reported more current tobacco use; therefore, these participants should experience a greater sense of control and agency in making decisions regarding tobacco use. Domain-specific efficacy may have been associated with greater confidence in resisting tobacco use and peer pressure. Furthermore, individuals who report higher domain-specific efficacy may be able to better articulate the reasons for their decision not to smoke. These individuals may also be more likely to associate with peers who do not smoke. Perceived sociopolitical control should have predicted tobacco use but maybe individuals do not explicitly associate this construct with the possibility to affect tobacco control policies or smoking behaviors. Moreover, higher participatory competence was expected to predict less tobacco use but did not. Perhaps participants who reported greater participatory competence are more likely to work in groups than those who reported less participatory competence. Frequent experiences in groups may increase the likelihood of being influenced to smoke by people in group settings who may be smokers. Additionally, young adults may not have had many opportunities to employ participatory competence in anti-tobacco group work; therefore, their participatory competence may not relate to their perceptions of tobacco use or their own smoking behaviors.

The primary research question also involved an examination of the relationship between interactional empowerment and tobacco use. It was hypothesized that interactional empowerment would be negatively correlated with the rate of past 30-day smoking. Specifically, young adults who reported higher interactional empowerment would be less likely to report current tobacco use. Linear regression results supported this hypothesis for some of the

interactional empowerment variables and not others. Higher assertiveness, past advocacy with family and peers, and advocacy willingness predicted less past month smoking; however, greater knowledge of resources predicted more past month smoking.

Most of the available research related to empowerment and tobacco use addresses youth participation in advocacy activities. In a study of teens' participation in advocacy activities, Dunn and Pirie (2005) found that developing materials with anti-tobacco messages on them and working to change school smoking policies were associated with the teen's increased sense of influence on their peers and in the community. Participants' in this study who indicated participation in advocacy regarding family and peers or willingness to participate in advocacy activities may gain a greater sense of influence or control through that participation. Winkleby and colleagues (2001) found that girls reported increased self-efficacy and boys reported increased leadership competence following participation in a combined tobacco education and advocacy intervention. Additionally, Winkleby et al. (2004) reported that youth smoking decreased 4.8% at a six-month follow-up assessment after advocacy participation. These findings support this study's finding that several components of interactional empowerment predict current tobacco use. Individuals who participate in advocacy activities may develop the efficacy and competence to abstain from tobacco use.

Moreover, Zimmerman's theory and Holden's extensions support findings of interactional empowerment variables as significant predictors of current tobacco use. Greater assertiveness, past advocacy, and advocacy activities may indicate a stronger ability to be assertive and bold in resisting peer pressure to smoke or maintaining a non-smoker status. Additionally, participation in advocacy activities to dissuade family members and peers from smoking may reinforce assertiveness. Advocacy activities may serve as additional deterrents

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against tobacco use as these the techniques used may be more persuasive coming from an individual who does not smoke. Advocacy willingness did not significantly predict current smoking as theory would suggest. Individuals may indicate willingness to participate but have no intention of participating in advocacy activities. Furthermore, because the scale asks about future activities, such activity may only affect future tobacco use. Perhaps greater knowledge of resources predicted more smoking because smokers represent the individuals who know where to go to obtain assistance in quitting smoking.

Interactions

Ethnicity. A secondary aim of this study was to investigate ethnicity as a moderator of the relationships between empowerment and tobacco use. It was hypothesized that ethnicity would moderate the relationship between intrapersonal empowerment and tobacco use. Moreover, African Americans would report less past 30-days than whites when they report the same levels of intrapersonal empowerment. Additionally, it was hypothesized that ethnicity would moderate the relationship between interactional empowerment and tobacco use. Specifically, among participants who reported the same levels of interactional empowerment, African Americans would report having less past 30-day smoking than Whites.

Ethnicity did moderate the relationship between empowerment and current smoking for domain-specific efficacy, past family and peer advocacy participation, and advocacy willingness. The interaction between domain-specific efficacy and empowerment demonstrated that domain-specific efficacy matters for Whites but is virtually unimportant for African Americans' tobacco use. Higher domain-specific efficacy was associated with less current tobacco use for Whites. Furthermore, the significant interaction between past family and peer advocacy and ethnicity indicated that Whites' past advocacy efforts to persuade family members and peers not to smoke

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affects their actual smoking behavior. Past advocacy activity was not related to African Americans' current tobacco use. Similarly, advocacy willingness was related to tobacco smoking for Whites but not for African Americans.

There is no research available comparing empowerment for African Americans and Whites; however, there is some consistency between the findings and empowerment theory. According to theory, empowerment may differ by ethnicity. Zimmerman's (1995) assumptions emphasize the importance of cultural and contextual variance in experiences and displays of empowerment. Empowerment has often been considered in research and interventions for African Americans. Several economic, social, and political factors may suppress some African Americans' sense of agency. Much of the structure of society, neighborhood segregation, employment practices, and other factors may reinforce efficacy and power for white Americans and reinforce the lack of empowerment for African Americans; therefore, African Americans may benefit more from empowerment.

Furthermore, the African American community is traditionally of a collective nature and members work together to help to achieve goals. African Americans could potentially benefit more from interactional empowerment as they have more opportunities to exercise and cultivate it relative to white Americans who are traditionally more individualistic. Also, the strong sense of community among African Americans is deeply embedded into various facets of their lifestyles, including religious environments, inner-city housing environments, and even beauty salons and barber shops. All of these contexts allow African Americans opportunities to exercise interactional empowerment and reinforce empowerment-building. Advocacy activities may be another forum for individuals to foster empowerment.

Given the communal nature of the African American community, African Americans past advocacy and advocacy willingness would be expected to be an important predictor of their tobacco use. Furthermore, Zimmerman (1995) posits that interactions within an individual's surrounding social and political environment bring about a sense of agency and calls upon efficacy and power the individual already possesses. Therefore, it would be expected that domain-specific efficacy would be relevant to African Americans. This study's findings may imply a "do as I say and not as I do" mentality in the African American community. Such a mentality would allow African Americans to work to persuade their peers and family members not to smoke but not associate this anti-tobacco message with their own tobacco use. That is, a "do as I say and not as I do" mentality may alleviate the contradiction associated with believing that people should not engage in tobacco use enough to participate in advocacy activities, but still engaging in personal tobacco use. It is important to note that additional information regarding the nature of participants' past advocacy experiences was not collected. Characteristics about the activities, such as the tasks involved or the culture relevance, may explain the importance of advocacy for Whites and the seemingly insignificant impact advocacy has on African Americans' tobacco use.

Religiosity. Religiosity was also investigated as a moderator of the relationship between empowerment and tobacco use. It was hypothesized that religiosity, as defined as God support, congregational support, and church leader support, would moderate the relationship between empowerment and smoking behavior. African Americans who reported higher support would be less likely to report having smoked in the past 30 days than African Americans who reported lower support when both reported the same level of intrapersonal empowerment. An identical hypothesis was made for interactional empowerment.

The hypothesis for interactional empowerment was supported by an analysis of God support as a moderator. God support significantly moderated the relationship between past family and peer advocacy and tobacco use. Past participation in advocacy activities virtually had no effect on the tobacco use of African Americans who experienced higher God support. For those who reported lower God support, past advocacy participation was negatively correlated with tobacco smoking. Advocacy participation is an important protective factor for individuals with lower God support but is of little to no importance for African Americans who experience higher God support.

There was not a significant main effect for God support but there was a significant interaction; therefore, God support and advocacy participation are dependent on one another and perhaps religiosity is a part of the content of the advocacy activities. God support and participation in advocacy activities may be compensatory protective factors because the necessity for one depends on the presence or lack of the other. Moreover, it is difficult to consider either God support or past advocacy participation without considering both; however, when an individual lacks either support or participation, the other is more important. Furthermore the compensatory nature of God support and past advocacy participation for African Americans suggests that the previously discussed interactions between ethnicity, past advocacy, and advocacy willingness did not fully explain the relationship between empowerment and advocacy. Past participation in advocacy activities is important in predicting African Americans' tobacco use when religiosity is considered.

The interaction between God support and assertiveness approached significance. The trend indicated that assertiveness and God support are linked; therefore, the two must be considered together, particularly given the absence of a main effect for God support. African

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Americans who reported higher God support and assertiveness tended to smoke less. The context of life on a college campus may include less attention to religiosity, as that time previously devoted to religious activities and quiet meditation may be occupied by school work or other activities. Although these students may still report a sense of God support, they may not cultivate and rely on that God support to handle day to day life as much as they would in the home environment. Therefore, students may smoke as a way of handling the stress and pressure associated with college, despite God support and high assertiveness. Additional research on African Americans who are not in college may lead to the discovery of a significant interaction between assertiveness and God support in the African American community.

Previous research on the relationship between religiosity and tobacco use supports the finding that God support moderates the relationships between both empowerment variables and current smoking. For instance, Rostosky, Danner, and Riggle (2007) found religiosity to be protective against smoking for heterosexual young adults, such that each unit increase in religiosity decreased the odds of cigarette smoking by 13%. It can be inferred that increased religiosity would be associated with increased God support; therefore, individuals who report higher religiosity may report higher God support and less current use of tobacco. Furthermore, Belgrave and colleagues (2010) found that religious support moderated the effects of stress and neighborhood disorganization on current tobacco use. Religious support protected against stress and neighborhood disorganization to affect smoking.

Zimmerman's theory does not directly address religious support as a source of empowerment; however, his theory does emphasize power and ability. Oftentimes in religious environments and texts, particularly for those of the Christian faith, God is put forth as the source of all power and control. Individual's who report higher levels of God support may feel

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empowered by working through God, particularly to abstain from smoking as it may conflict with Christian beliefs. In the Christian Bible, Philippians 4:13 reads "I have strength for all things in Christ Who empowers me [I am ready for anything and equal to anything through Him Who infuses inner strength into me; I am self-sufficient in Christ's sufficiency]" (Amplified Bible). Christian theology such as this may foster a sense of power and capability. Moreover, beliefs in God and the Bible may be a source of moral directives, such as those described by Smith (2003). Themes of purity, nature, and cleanliness may cultivate certain morals and beliefs that compel individuals to abstain from tobacco use.

Furthermore, it makes theoretical sense that God support would also moderate the relationship between interactional empowerment and current tobacco use. The same Bible verse previously referenced may boost assertiveness and decisions to participate in advocacy activities by increasing an individual's confidence in their abilities. Also, the very nature of religious participation is based on individuals coming together and connecting because they all believe in God. Perhaps individuals who report a greater sense of God support experience a greater need to congregate with others who understand this support so that they might together rely on that support to conduct ministry work.

Several of the interactions tested between religious support and empowerment variables were insignificant predictors of current tobacco use. Particularly, congregational and church leader support did not moderate the relationships between any of the empowerment variables and tobacco smoking. Whooley, Boyd, Gardin, and Williams (2002) found that religious attendance was associated with lower rates of current smoking and risk of smoking initiation. It is reasonable to suggest that religious attendance provides opportunities for interaction with congregation members and church leaders. Religious attendance may be a pathway to gaining

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congregational and church leader support; therefore, as church attendance is associated with lower rates of smoking, it is expected that congregational and church leader support are also associated with lower smoking rates. However, certain characteristics of the individual, congregation members, or church leaders may negatively impact the supportive relationship. Rostosky et al. (2007) found religiosity to be protective against smoking for heterosexual young adults, it was not protective for homosexual young adults. Such findings support the idea that there may be person-level characteristics that negatively affect relationships between congregation members. Many identity-related traits are stigmatized in churches. Young adults who are homosexuals, drug users, or tobacco smokers may find difficulty building supportive relationships with congregation members or church leaders due to feeling condemned by these people. Although religiosity is generally protective for tobacco use, important individual- and congregation-level differences must be considered that may affect the protective benefit of religiosity.

According to Smith's (2003) theory, it is expected that God support, congregational support and church leader support would interact with empowerment to predict past month tobacco use. Smith posits that religion is effective through the provision of moral order, learned competencies, and social and organizational ties. God support should aid in the establishment of moral directives that would govern individuals' decisions about tobacco use. Congregational and church leader support should be important in providing mentors from whom individuals can gain competencies and skill. Moreover, congregational and church leader support should lead young adults to form important social connections with others who may keep them accountable in making positive decisions about smoking.

Perhaps the insignificant findings for congregational and church leader support are a result of these religious support variables not being as explicitly related to tobacco use as God support. The personal relationship with God may be where individuals receive the actual morale and value system to believe smoking is a negative behavior, as Smith (2003) suggests. Additional thought or direct verbal connection may be necessary for individuals to relate congregational support and church leader support to their current tobacco use. Tobacco use may not typically be explicitly discussed in sermons or Bible study. Furthermore, the direct statement of potential reliance on the congregation and church leaders for education and support specific to tobacco use is not common. The nature of the sample is also important. It is likely that as many young adults attend college outside of their home states, they do not join new congregations; therefore, the college student sample may be less connected to congregation members and church leaders from whom they can receive support related to their tobacco use behaviors.

Limitations

The insignificant findings may be due to several limitations to the study. There is a paucity of research on empowerment as it relates to tobacco use, as well as on measures of empowerment. Holden's (2005) measures that were employed in this study were not validated for the ethnic groups included. Moreover, little information was provided about validity and reliability for the scales. Reliability for perceived sociopolitical control in the African American subsample was .58, which may limit the utility of this scale. Also, the measures of religious support were not validated on an African American sample. The wording of the items may not reflect African American's experience of support within the religious context, which may explain insignificant findings. Furthermore, religiosity and religious support may be such a subjective experiences that it is difficult to obtain accurate self-report.

Additionally, the religious support measures assume that the participants are of the Christian faith. The name God and terms such as congregation and church leader are typically associated with Christianity. If some participants were not Christians or did not identify with any religious faith, it is likely that they would report low ratings for each scale. Therefore, caution is necessary to not interpret the results as if everyone is religious and a Christian. Internal and external validity are affected as responses may not reflect the true experience of religious support; therefore, it is difficult to generalize the results to African Americans or Christians.

The study sample consisted of college students. College students are typically young adults; however, their identity as a college student may infer different experiences of empowerment and religiosity than young adults who are not in college. College students may be more empowered than non-students. Conversely, young adult non-students in the workforce may have job-related experiences that foster greater empowerment than the college experience. Regarding religiosity, many college students who attend colleges far from their homes may not unite with new religious bodies around campus. Alternately, many college campuses have religious organizations and communities that are very tight-knit and active in the community. It is important to consider the potential variation in college students' experiences of empowerment and religiosity compared to non-students' experiences that may be unique to their context.

Implications

Youth and young adult tobacco use. The study findings have important implications for tobacco research and intervention strategies. Some components of intrapersonal and interactional empowerment were predictive of having not smoked in the past month. Therefore, these two components of empowerment may act in some ways as protective factors for the

tobacco use of young adults. Although the effect sizes of the results were small, some benefit from empowerment is indicated. Psychological empowerment theory and practice may be drawn upon to cultivate innovative ways of understanding and researching tobacco use in youth and young adult populations. Moreover, additional research may help to advance theory and assessment, which will enable researchers to find stronger relationships between empowerment and tobacco use.

African American tobacco use. Ethnicity moderated the relationship between some empowerment variables and tobacco use, such that empowerment conferred greater protective benefit to Whites than African Americans. Psychological empowerment may be a valuable protective factor for tobacco use, and should be especially important for the tobacco use of African Americans. A lack of a sense of competency or control may be a stronger reason for African Americans' tobacco use rather than a lack of knowledge about the associated risks or other factors. However, African Americans' agency and efficacy does not seem to translate or manifest in their smoking behaviors. A better understanding of empowerment as it relates to tobacco use in the African American community may provide researchers with the ability to strengthen the relationship or replicate it for other risky behaviors such as illegal substance abuse or risky sex behaviors.

Research on protective factors for tobacco use. Protective factors research has traditionally emerged from deficit models of tobacco use, particularly for African Americans. Deficit models focus on qualities or competencies individuals supposedly lack that lead to maladaptive behaviors or outcomes. For instance, a deficit model for African American tobacco use may suggest that African Americans do not know the health risks associated with tobacco use; therefore, they engage in tobacco use with no caution for negative health outcomes. More

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recently, there have been shifts toward asset-based approaches. Findings supporting intrapersonal and interactional empowerment as protective factors for tobacco use are an addition to existing literature on protective factors for tobacco use. Moreover, given the greater benefit of empowerment for African Americans and the nature of empowerment, this research provides an asset-based approach to studying tobacco use in this community. Empowerment involves cultivating competencies, skills, and power that may be pre-existing but have not been realized by the individual. Many of the skills and knowledge that foster empowerment may be related to abilities and cultural values of African Americans that can be useful in abstaining from tobacco use.

The investigation of religiosity as a moderator has implications for research on protective factors as well. The results indicated only God support as a moderator of the relationship between past advocacy activity and tobacco use. Findings on congregational support, and church leader support as moderators were all insignificant. God support may be a more foundational component of religiosity than congregational support or church leader support. It directly indicates spirituality where as congregational support and church leader support are social indicators and can exist without spirituality or a connection to God. Perhaps, African Americans do not directly connect that support and the skills experienced with tobacco use behaviors. God support may be related to the moral directives Smith (2003) discusses. If the morale for not smoking comes from God, then developing ways to foster God support may be more important in preventing smoking behavior than congregation support or church leader support.

Furthermore, oftentimes in traditional African American churches, the power and control of youth and young adults is often limited. Older adults typically manage the church and dictate what goes on during all religious activity. If this is the type of religious environment participants

belong to, perhaps congregation and church leader support is ineffective as it may seem unrealistic to youth and young adults. Adults may encourage them to participate and be creative but not actually allow them the space or support to do so. Additionally, individuals with higher reports of smoking may seek more support to aid in managing stress. Congregational and church leader support may alleviate some stress but not affect tobacco use. The mechanisms by which religious support relates to empowerment may be complex and require additional research, specifically qualitative research. Initiatives to mediate relationships between congregation members and church leaders may aid in increasing the protective benefit of congregational and church leader support.

      Smoking interventions for youth and young adults. Some support for intrapersonal and interactional empowerment as predictors of current tobacco use implies the need for the use of empowerment in smoking interventions for youth and young adults. Empowerment theory is relatively new to research and provides a framework to potentially reconstruct the ways researchers develop smoking interventions. Empowerment interventions take a more participatory approach to capitalize on the individual's strengths and reinforce empowerment through their involvement in all parts of the intervention process. Inclusion of members from the population of interest in intervention development, dissemination, and evaluation helps individuals to realize the agency and ability they have and reinforces these capacities throughout the process. Such a participatory approach to research and program development may aid in understanding whether empowerment is actually protective for African Americans and what types of empowerment methods are salient to this community. Additionally, perhaps developing interventions within a religious context might maximize the protective benefits of empowerment. Explicit training to apply religiosity and support to decisions about tobacco use may lead to

stronger findings about the moderating effects of religiosity on the relationship between empowerment and tobacco use.

Future Research

Research on psychological empowerment is relatively novel. Existing empowerment literature is scarce and there is even less literature applying empowerment to tobacco use or youth and young adults. Further study should be conducted to elucidate the mechanisms by which empowerment functions in tobacco control and sort out mixed findings. Additional research should also be conducted that is specific to youth and young adults. Future study should begin with qualitative methodology. Given the novel nature of the empowerment theory and application, as well as the small effect sizes obtained in this study, qualitative research is necessary to develop a more comprehensive understanding of psychological empowerment. Moreover, qualitative study may inform the development of measurement tools that may be more reliable and allow for higher effect sizes.

Additional study of psychological empowerment as it varies across ethnicity is necessary. One of the assumptions of Zimmerman's (1995) theory is that empowerment differs by context. Findings indicated that empowerment may confer greater protection for African Americans. Future research should entail study of the cultural variability in experiences of empowerment. Furthermore, exploration is necessary to understand the mechanisms by which religiosity may reinforce psychological empowerment such that it may provide greater protective benefit for African Americans. Such research may enable investigators to determine why empowerment is more beneficial for African Americans and how to empower African Americans who are at greater risk for tobacco use. Moreover, a greater understanding of the protective nature of

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empowerment for African Americans might be helpful in applying empowerment theory to other minority groups.

Finally, future intervention development should include more research on the potential utility of empowerment in prevention and cessation programs for youth and young adults. Additional research should bring about a consensus across the field that empowerment is protective against tobacco use. The implementation of empowerment theory in intervention is very different than typical tobacco intervention programs based in providing knowledge. Participation and agency are central to empowerment intervention. Future research is necessary to develop ways to apply empowerment theory in intervention strategies to obtain desirable effects on tobacco use behaviors.

When researchers have a more comprehensive understanding of empowerment, its mechanisms, and its application to intervention, they will then be able to take advantage of the universal adaptability of empowerment theory. Qualitative research is the prerequisite to greater knowledge and insight about the caveats and nuances that underlie empowering mechanisms. Investigators will be better equipped to apply empowerment principles to other research fields such as risky sex behaviors. The benefits of empowerment strategies in intervention, because they can be adapted to various research areas, may spill over into areas other than tobacco use in the participants' lives and confer greater benefit than intended in a given study. Empowered participants can then go on to aid in empowering others in their environment, thus developing a cycle of empowerment in the community.

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Appendix 1

Measures

Psychological Empowerment Measures

Domain-Specific Efficacy Subscale					
	Definitely Not Sure	Not Sure	Maybe	Sure	Definitely Sure
1. How sure are you that you could convince family members not to smoke?	1	2	3	4	5
2. How sure are you that you could convince your friends not to smoke?	1	2	3	4	5
3. If asked, how confident are you that you could work effectively against the tobacco industry?	1	2	3	4	5

Perceived Sociopolitical Control Subscale					
	Definitely Not True	Not True	Maybe	True	Definitely True
1. So many college students are active in local issues that it doesn't matter whether I participate or not.	1	2	3	4	5
2. I like to wait and see if someone else is going to solve a problem so that I don't have to be bothered.	1	2	3	4	5
3. I enjoy participation because I want to have as much to say in my community or school as possible.	1	2	3	4	5
4. I find it very hard to talk in front of a group.	1	2	3	4	5
5. People who try to take on big corporations, such as the tobacco industry, are just wasting their time.	1	2	3	4	5

Participatory Competence Subscale					
	Definitely Not True	Not True	Maybe	True	Definitely True
1. I can work with people in a group to get things done.	1	2	3	4	5
2. I can influence the decisions my group makes.	1	2	3	4	5
3. I would enjoy working with others my age to prevent smoking among college students.	1	2	3	4	5

Knowledge of Resources Subscale					
	Definitely Not True	Not True	Maybe	True	Definitely True
1. If someone close to me wanted to quit smoking, I know where available resources (e.g., pamphlets, hotlines, etc) are located to assist them in quitting.	1	2	3	4	5
2. If I wanted to participate in an anti-smoking campaign, I know of organizations on campus and/ or in the community where I can volunteer and lend a helping hand.	1	2	3	4	5

Assertiveness Subscale					
	Definitely Not True	Not True	Maybe	True	Definitely True
1. I can talk with other people my age about issues I believe in.	1	2	3	4	5
2. I could organize a group to work on tobacco prevention.	1	2	3	4	5
3. I can start discussions with others about tobacco prevention.	1	2	3	4	5
4. I am comfortable asking strangers to follow non-smoking policies in buildings and other locations.	1	2	3	4	5
5. I would not hesitate to ask my server to move me and my party to a different table in a restaurant if I smelled cigarette smoke.	1	2	3	4	5
6. If asked, I would wear something like a cap, T-shirt, or button-pin that has an anti-smoking or anti-tobacco message, logo, or symbol on it.	1	2	3	4	5

Past Advocacy Subscale				
	None	Once or Twice	Several Times	A Lot
1. In the past year, how many times have you tried to convince other students, your family, or friends to be more concerned about tobacco?	1	2	3	4
2. In the past year, how many times have you tried to convince school officials, local businesses, community agencies, or governmental officials to be more concerned about tobacco use?	1	2	3	4

Advocacy Willingness Subscale					
	Definitely Not Willing	Not Willing	Maybe	Willing	Definitely Willing
3. How willing would you be to make an effort to persuade students, your family, or friends to quit smoking?	1	2	3	4	5
4. How willing would you be to try and convince school officials, local businesses, community agencies, or governmental officials to be more concerned about tobacco use?	1	2	3	4	5

Religiosity Measures

God Support Subscale					
	Definitely Not True	Not True	Maybe	True	Definitely True
1. God gives me a sense that I belong.	1	2	3	4	5
2. I have worth in the eyes of God.	1	2	3	4	5
3. God cares about my life.	1	2	3	4	5
4. If something went wrong, God would help me.	1	2	3	4	5
5. I feel appreciated by God.	1	2	3	4	5
6. I can turn to God for advice when I have problems.	1	2	3	4	5
7. I do not feel close to God.	1	2	3	4	5

Congregational Support Subscale					
	Definitely Not True	Not True	Maybe	True	Definitely True
1. Others in the congregation give me the sense that I belong.	1	2	3	4	5
2. I have worth in the eyes of others in my congregation.	1	2	3	4	5
3. Others in my congregation care about my life and situation.	1	2	3	4	5
4. If something went wrong, others in my congregation would give me assistance.	1	2	3	4	5
5. I feel appreciated by others in my congregation.	1	2	3	4	5
6. I can turn to others in my congregation for advice when I have problems.	1	2	3	4	5
7. I do not feel close to others in my congregation.	1	2	3	4	5

Church Leader Support Subscale					
	Definitely Not True	Not True	Maybe	True	Definitely True
1. My church leaders give me the sense that I belong.	1	2	3	4	5
2. I have worth in the eyes of my church leaders.	1	2	3	4	5
3. My church leaders care about my life and situation.	1	2	3	4	5
4. If something went wrong my church leaders would give me assistance.	1	2	3	4	5
5. I feel appreciated by my church leaders.	1	2	3	4	5
6. I can turn to church leadership for advice when I have problems.	1	2	3	4	5
7. I do not feel close to my church leaders.	1	2	3	4	5

Current Tobacco Use						
	None	1-5 Days	6-10 Days	11-19 Days	20-29 Days	All 30 Days
During the last 30 days, on how many days did you smoke cigarettes, even 1 or 2 puffs?	1	2	3	4	5	6

Vita

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