Cultural Values, Coping Strategies, and HIV Risk Behaviors

in African-American and Hispanic Adolescents

by

Amy K. Sanchez

Department of Psychology and Neuroscience
Duke University

Date:_______________________

Approved:

___________________________
Timothy J. Strauman, Supervisor

___________________________
Kathleen J. Sikkema

___________________________
Gary Bennett

___________________________
Joanna Maselko

Dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the Department of Psychology and Neuroscience in the Graduate School of Duke University

2015
ABSTRACT

Cultural Values, Coping Strategies, and HIV Risk Behaviors in African-American and Hispanic Late Adolescents

by

Amy K. Sanchez

Department of Psychology and Neuroscience
Duke University

Date: ________________________

Approved:

___________________________
Timothy J. Strauman, Supervisor

___________________________
Kathleen J. Sikkema

___________________________
Gary Bennett

___________________________
Joanna Maselko

An abstract of a dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the Department of Psychology and Neuroscience in the Graduate School of Duke University

2015
Abstract

Utilizing data from The National Longitudinal Study of Adolescent Health (Add Health), the current study examined the relationship between cultural values, coping behavior, and HIV risk behaviors among African-American/Black and Hispanic/Latino adolescents \((N = 437)\). The goal of this research was to provide the first step towards testing the construct validity of a theoretical model in which values and cultural context contribute to coping behaviors and coping, in turn, mediates the association between values and HIV risk profile. African-American participants endorsed higher levels of Africentric and religious values than did Hispanic participants and endorsed higher utilization of religious coping. Cultural values including *familismo* and religiosity were associated with more adaptive coping behavior and lower sexual and substance use risk behaviors across racial/ethnic groups. Results for other cultural values were inconsistent. Coping behavior predicted substance use risk behaviors but was not associated with sexual risk behaviors. Mediation was not supported except in the case of religious coping and religiosity. Implications for HIV prevention and directions for future research are discussed.
Dedication

To my family, who helped me grow roots and wings.
## Contents

Abstract ................................................................................................................................. iv

Dedication .............................................................................................................................. v

Contents ............................................................................................................................... vi

List of Tables .......................................................................................................................... x

List of Figures ........................................................................................................................ xii

Acknowledgements .............................................................................................................. xiii

Introduction ........................................................................................................................... 1


Values and Coping: Evidence from Cross-Cultural Research ........................................ 17

Community, Family, and the Self .......................................................................................... 21

Familismo .............................................................................................................................. 21

Africentric worldview .......................................................................................................... 25

Religious Beliefs and Spirituality ......................................................................................... 28

Historical and Social Context ............................................................................................. 33

Value-Oriented Coping Strategies and Coping Effectiveness: Synthesizing the Findings ... 38

HIV Risk Factors in Minority Adolescents .......................................................................... 42

Coping and HIV Risk ............................................................................................................ 45

Coping ..................................................................................................................................... 45

Mental health ........................................................................................................................ 47
Sexual risk and substance use as a form of coping. ........................................... 50

Values and Risky Behaviors ............................................................................. 53

Summary ............................................................................................................. 58

The Current Project ........................................................................................... 61

Research Questions and Hypotheses ................................................................. 62

I. Which values do African-American and Hispanic adolescents endorse?.. 62

Interethnic Variation ......................................................................................... 62

Intraethnic Variation ......................................................................................... 63

II. How does cultural context influence coping? ............................................. 63

III. What is the association between values and coping? ............................... 64

Coping Strategies ............................................................................................. 64

Coping Flexibility .............................................................................................. 65

Coping Self-Efficacy .......................................................................................... 65

IV. How does coping influence HIV risk? ....................................................... 65

V. What is the association between values and HIV risk? ............................. 66

Method ............................................................................................................... 66

Sample and Procedure ..................................................................................... 66

Study Sample ..................................................................................................... 67

Measures ............................................................................................................ 68

Demographic Information ................................................................................ 68

Family Socioeconomic Status .......................................................................... 69
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Stressors</td>
<td>69</td>
</tr>
<tr>
<td>Perceived Social Support</td>
<td>70</td>
</tr>
<tr>
<td>Cultural Values</td>
<td>70</td>
</tr>
<tr>
<td>Coping</td>
<td>77</td>
</tr>
<tr>
<td>HIV Risk Behavior</td>
<td>79</td>
</tr>
<tr>
<td>Results</td>
<td>82</td>
</tr>
<tr>
<td>Missing Data</td>
<td>82</td>
</tr>
<tr>
<td>Preliminary Analyses</td>
<td>83</td>
</tr>
<tr>
<td>Cultural Context</td>
<td>85</td>
</tr>
<tr>
<td>Coping Profiles</td>
<td>86</td>
</tr>
<tr>
<td>HIV Risk Behaviors</td>
<td>86</td>
</tr>
<tr>
<td>Research Question 1: Which values do African-American and Hispanic</td>
<td>88</td>
</tr>
<tr>
<td>adolescents endorse?</td>
<td></td>
</tr>
<tr>
<td>Research Question 2: How does cultural context influence coping?</td>
<td>100</td>
</tr>
<tr>
<td>Research Question 3: What is the association between values and coping?</td>
<td>102</td>
</tr>
<tr>
<td>Research Question 4: How does coping influence HIV risk?</td>
<td>107</td>
</tr>
<tr>
<td>Research Question 5: What is the association between values and HIV risk?</td>
<td>111</td>
</tr>
<tr>
<td>Discussion</td>
<td>117</td>
</tr>
<tr>
<td>Values Endorsement</td>
<td>118</td>
</tr>
<tr>
<td>Interethnic Variation in Values Endorsement</td>
<td>118</td>
</tr>
</tbody>
</table>
List of Tables

Table 1: Interethnic Variability in Endorsement of Cultural Values ......................... 89
Table 2: Intraethnic Variability in Familismo Closeness ........................................... 93
Table 3: Variance in Values Endorsement Explained by Race/Ethnicity and Cultural Context with and without Interaction Terms Included in the Model .... 95
Table 4: Prejudice$^a$ and Ethnicity Predicting Cultural Values ............................... 99
Table 5: Cultural Context Predicting Coping Behavior ............................................. 101
Table 6: Religious and Spiritual Values Predicting Use of Religious Coping ....... 103
Table 7: Familismo and Traditional Gender Values Predicting Compensatory Coping$^a$ .............................................................................................................. 104
Table 8: Cultural Values Predicting Resilience and Coping Flexibility ............ 105
Table 9: Cultural Values Predicting Coping Self-Efficacy with Support and Gender Interaction Terms ................................................................. 108
Table 10: Cultural Values Predicting Coping Self-Efficacy with Exposure to Violence and Gender Interaction Terms .................................................. 109
Table 11: Coping Predicting HIV Risk Behavior ..................................................... 111
Table 12: Values Predicting HIV Risk Behavior ..................................................... 113
Table 13: Intraethnic Variability in Familismo Connectedness .............................. 157
Table 14: Intraethnic Variability in Gender Role Values: Premarital Cohabitation .................................................................................................................. 157
Table 15: Intraethnic Variability in Gender Role Values: Breadwinner .......... 158
Table 16: Intraethnic Variability in Africentric Values: Collectivism ............... 158
Table 17: Intraethnic Variability in Africentric Values: Community Orientation
.................................................................................................................................................. 159

Table 18: Intraethnic Variability in Religious Values: Religiosity ................................. 159

Table 19: Intraethnic Variability in Religious Values: Spirituality ................................. 160
List of Figures

Figure 1: Graphical Representation of Two-Way Interaction Effect between Support (mean-centered) and Race/Ethnicity in Predicting Familismo Closeness 97
Acknowledgements

I would like to thank my advisor, Timothy Strauman, and my dissertation committee, Kathleen Sikkema, Gary Bennett, and Asia Maselko, for their support throughout the multiple stages and iterations of this project and my graduate career. The research leading up to the final dissertation would not have been possible without their patience and input. I would also like to thank the administrative staff within the Department of Psychology and Neuroscience, particularly Peggy Morrell, for their unwavering support and expertise in helping to navigate the many behind-the-scenes aspects of graduate life.

I would like to thank all those involved with The National Longitudinal Study of Adolescent Health (Add Health). This research uses data from Add Health, a program project directed by Kathleen Mullan Harris and designed by J. Richard Udry, Peter S. Bearman, and Kathleen Mullan Harris at the University of North Carolina at Chapel Hill, and funded by grant P01-HD31921 from the Eunice Kennedy Shriver National Institute of Child Health and Human Development, with cooperative funding from 23 other federal agencies and foundations. Special acknowledgment is due Ronald R. Rindfuss and Barbara Entwisle for assistance in the original design. Information on how to obtain the
Add Health data files is available on the Add Health website (http://www.cpc.unc.edu/addhealth). No direct support was received from grant P01-HD31921 for this analysis.

Additionally, I am thankful for the financial support provided me through the Duke Endowment Fellowship, Duke Global Health Institute Fieldwork Grant, Sulzberger/Levitan Social Policy Graduate Research Fellowship, and Duke Graduate Summer Research Fellowship, all of which enabled me to broaden and enrich my research experiences. I would also like to thank Kathleen Sikkema as well as Glenda Gray and Janan Dietrich for facilitating my research collaboration at the Perinatal HIV Research Unit in Soweto, South Africa. Their guidance in international research provided invaluable fieldwork exposure that helped to shape my research and clinical career.

I am also profoundly grateful for the guidance and support provided by my clinical mentors, both at Duke University and during my internship training, who provided clinical insights and practical training that helped clarify and enrich my dissertation research. A special thanks to Erin Burns and Andrew Santanello, who are both stellar clinical supervisors and wonderful friends.
Additionally, I have been exceedingly fortunate to be surrounded by a truly wonderful group of friends and colleagues throughout my graduate career. From the moment Katrina P. P. S. Blomquist hosted me during interview weekend, she has been a best friend, sister, and partner in all of life’s absurdities. I cannot imagine graduate school, or life, without her delicious pastries and infectious laugh. Likewise, Molly Stroud Weeks has been an invaluable resource for practical advice and emotional support. This project would not have been possible without her brilliant feedback and neighborly breaks to discuss literature and dog videos. I am also thankful for my lab mates and my wonderful cohort, especially my dear friends Allison Detloff, Jackie Hersh, Andrea Young, Adam Mandel, and Pam Buck. Each of them has enriched my life both professionally and personally and I am fortunate to have benefitted from their friendship and support throughout my graduate career. I am also thankful for the network of friends and neighbors, including Tom Kerr, Jackie Leith, Liz Malouf, Berre Burch, Kristen Palmer, Kate Collins, and Jessica Jentsch, who helped turn Baltimore into a home away from home while I completed this project.
Most importantly I would like to thank my family, particularly my parents for their encouragement and unconditional support. They have believed in me every step of the way and helped make the impossible possible. I am also fortunate to have an extended network of support, especially mi hermana CG, my Tia Patricia, and my Nanna, all of whom have been my cheerleaders and my confidantes. Finally, I want to thank my favorite girls, Olivia and Pippa, who bring meaning to my life and who helped me keep my perspective and sense of humor during even the most frustrating moments. It takes a village to complete a dissertation, and I thank you all.
Introduction

Over 1,200,000 people are estimated to be living with HIV infection in the United States, including approximately 170,000 individuals (14%) who are unaware of their infection status (Center for Disease Control and Prevention [CDC], 2014). According to recent estimates, between 48,200 and 64,500 individuals become newly infected with HIV each year, and the overall incidence rate has remained fairly stable since 2000 (Hall, Hughes, Dean, Mermin, & Fenton, 2011; Hall et al., 2008). However, the burden of the domestic HIV epidemic disproportionately impacts racial minorities. Despite the introduction of widespread prevention initiatives aimed at reducing transmission risk behaviors (Kirby, Laris, & Rolleri, 2007), African-American and Hispanic/Latino communities remain especially affected by HIV. Though African-Americans and Hispanics make up only 12% and 16% of the United States population, respectively, they account for 44% and 21% of infections (CDC, 2014).

These disparities are particularly evident among adolescents and young adults. Among White Americans, the majority of new HIV infections each year occur in 30- to 39-year-olds (Hall et al., 2008). In contrast, among African-Americans and Hispanics most new infections occur in young people between
the ages of 13 and 29 years (Hall et al., 2011; Hall et al., 2008). In fact, African-Americans between the ages of 13 and 19 accounted for 67% of all new HIV infections in that age group in 2013 despite making up only 14% of the teenage population in the United States (CDC, 2015). Unfortunately, research indicates that disparities in the diagnosis of new infections continue to grow; for example, from 2005-2008, diagnosis rate among White males aged 13-24 increased 8.8% a year, while rates increased 13.5% and 17.0% annually for Hispanic and African-American males, respectively, in that age group (Hall, Walker, Shah, & Belle, 2012). Therefore, because HIV prevalence is higher in minority populations, the same risk behaviors such as unprotected sex or intravenous drug use actually confer a greater proportionate risk. Differential rates of HIV within the United States indicate that minority and underserved youth may have unique prevention needs that are not currently being met by existing programs.

Targeted interventions are therefore needed to counteract the growing prevalence of HIV among African-American and Hispanic youth. In a systematic review of behavioral and psychosocial interventions aimed at risk reduction and HIV prevention between 1988 and 2010, Wyatt, Williams, Gupta, and Malebranche (2011) found that 132 (66%) of the 166 interventions included no
mention of cultural beliefs or staff training to increase awareness of relevant cultural factors. Only six (4%) were tailored for use with a specific ethnic group (five targeting African-Americans and one targeting Hispanic/Latinos).

Researchers have identified a need to increase the effectiveness of HIV interventions for underserved groups by addressing cultural factors influencing HIV risk behaviors, such as traditional gender roles and attitudes about condom use, in a culturally-relevant way (Deardorff, Tschann, Flores, & Ozer, 2010; Herbst et al., 2007; Wyatt et al., 2011).

For tailored HIV interventions to be effective, their scope must extend beyond increasing access to HIV education because such programs, when they are available, are not sufficiently effective at bringing about change in HIV risk behaviors (DiClemente & Wingood, 1995; Rotheram-Borus & Koopman, 1991). Despite evidence that education programs increase knowledge about HIV prevention, knowledge per se does not directly lead to behavior change (Sayles et al., 2006). In fact, Lindberg (2000) found that education has little effect on risk reduction among adolescents with low self-efficacy, suggesting that knowledge of how to reduce HIV risk has little impact if adolescents do not feel confident in their ability to carry out such strategies. Likewise, unstable or underdeveloped
sense of self, poor interpersonal skills, poor self-efficacy, and limited coping skills are linked with elevated HIV risk behaviors in adolescents (Bandura, 1997; Briere, 2004), and such factors are not likely to be altered simply by increasing knowledge regarding HIV risk.

Poor coping skills are an area of particular concern in HIV risk reduction because risky behaviors, such as having sex with multiple partners, having unprotected sex, and substance use, may serve as compensatory strategies in the face of coping deficits (Briere, 2004; Lazarus & Folkman, 1984). Therefore, multi-level interventions that target both direct and indirect risk factors for HIV by incorporating a combination of education with psychosocial support are needed to reduce risk behaviors and HIV in these vulnerable groups. However, a general model of coping skills training as a component of HIV prevention may not be adequate to address the unique needs of minority adolescents. Cross-cultural research on the adaptation of existing interventions for use with underserved populations indicates that treatments developed and implemented within one group may not generalize to cultures with distinct values and norms (Marsella, Friedman, Gerrity, & Scurfield, 1996). As evidenced by intervention research conducted cross-culturally, an intervention that is highly effective within the
context that it was developed may have little effect in a separate cultural context (Igreja, Kleijn, Schreuder, Van Dijk, & Verschuur, 2004).

Culture-specific adaptation is particularly important when the issue being addressed is influenced by salient norms and stigmas impacting individuals’ potential receptiveness to treatment. Cultural messages about mental health and HIV treatments may impact a community’s willingness or sense of efficacy to utilize health care options. Many African-American and Hispanic individuals hold widely negative beliefs about mental health issues and treatment as well as mistrust of the mental healthcare system (Snowden, 2001). As a result, minority and low-income individuals are indeed less likely to access mental health resources even when they are available (Richman, Kohn-Wood, & Williams, 2007), have poorer expectancies for treatment outcomes (Nock & Kazdin, 2001), and are more likely to discontinue treatment early (Sue & Sue, 2003). These factors places minorities at higher risk for untreated mental illness and negative health repercussions such as those associated with coping deficits. Minorities in the United States are much more likely to seek out help from clergy or family (Neighbors, Musick, & Williams, 1998), who may not have the training to provide adequate support. Given that mental health issues often remain
unaddressed for minority adolescents due to negative norms and limited access to culturally-informed services (Saldaña, 1990; Snowden, 2001), underlying mental health risk and coping deficits may be particularly important in perpetuating minority adolescents’ HIV risk. For example, if self-efficacy impacts the effectiveness of HIV prevention education (Bandura, 1997; Sayles et al., 2006) but minority adolescents with poor self-efficacy do not have access to adequate services, mental health issues may disproportionately contribute to HIV risk for minority youth compared to adolescents that have more consistent treatment of such factors.

These risks are compounded by environmental risks often present for African-American and Hispanic adolescents. Within the United States, ethnicity and socio-economic status (SES) are frequently linked. Adolescents living in low-income environments are exposed to chronic and acute stressors such as unsafe neighborhoods far more than adolescents from other environments (Garbarino, Kostelny, & Dubrow, 1991). Minority youth are disproportionately represented in households living in poverty and residing in unsafe neighborhoods with greater exposure to stressors such as community violence and substance abuse (Contrada et al., 2000; Stein, Jaycox, Kataoka, Rhodes, & Vestal, 2003).
Additionally, many Hispanic and African-American adolescents face culturally-linked stressors such as racism and discrimination, both of which have been associated with mental health concerns such as depression, substance use, and hopelessness for African-American (Clark, Anderson, Clark, & Williams, 1999; Gibbons, Gerrard, Cleveland, Wills, & Brody, 2004; Nyborg & Curry, 2003) and Hispanic youth (Araújo & Borrell, 2006; Smokowski & Bacallao, 2007). Nyborg and Curry (2003) found that perceived racism also correlated with lower self-concept among African-American boys, and discrimination has been linked with poor physical health in minorities (Williams, Neighbors, & Jackson, 2008). Many Hispanic adolescents – including immigrants as well as second- or third-generation individuals – also face acculturation stressors, which have been linked to psychological maladjustment (Zayas, Lester, Cabassa, & Fortuna, 2005). Low income adolescents are also at increased risk for exposure to family conflict (Voydanoff & Donnelly, 1988). African-American and Hispanic adolescents may therefore require increased prevention supports in comparison with adolescents exposed to fewer environmental stressors, and psychological care is extremely important in HIV prevention within high-risk communities.
Nonetheless, members of the same ethnic group may perceive and react to similar stressors differently depending on their environmental and interpersonal context, and ethnically-linked risk factors such as racism may interact with structural factors to place minority adolescents in underserved communities at greatest risk. Indeed, low social support exacerbates the negative impact of discrimination on health (Finch & Vega, 2003), while high levels of involvement in Latino culture has been shown to be a protective factor for Hispanic youth (Umaña-Taylor & Updegraff, 2007). Likewise, African-American adolescents from higher SES families exhibit fewer externalizing coping strategies than those from lower SES families (Scott, 2004). Situational and environmental factors are therefore an important cultural component and likely contribute to coping patterns and vulnerabilities within diverse populations. As such, the myriad influences of environment and cultural norms on HIV risk must be addressed to optimize effectiveness of interventions with ethnic minority groups.

It is important to note that simply being a member of a minority group does not mean an individual is at increased risk for HIV. Risk factors such as family values, community norms, environment, and financial and social resources vary widely within ethnic groups and are deeply influential in
determining risk. As noted above, many of the additional risk factors present for minority adolescents are tied to social and financial circumstances and are not a function of ethnic background. Likewise, norms about mental health and utilization of health services may vary in relation to factors such as education and family values. Ethnicity and cultural background, together with environmental and contextual factors, contribute to an individual’s HIV risk profile, and the degree to which an adolescent subscribes to prevalent ethnic and community norms is central to this process. Cultural norms are, in large part, a function of values, which influence how individuals interpret and react to their environment (Roosa, Morgan-Lopez, Cree, & Specter, 2002).

Unfortunately, even in studies that have included cultural considerations in HIV prevention, culture is generally conceptualized as a concrete and uniform factor. Wyatt et al. (2011) found that only 12 of the 166 risk reduction interventions included more than one consideration of cultural influence (e.g., gender or sexual orientation and race/ethnicity). This overly simplistic view of “culture” does not take into account the heterogeneity of values, norms, and behavior that exists within broad ethnic groups. Environmental and individual factors simultaneously contribute to values, norms, and behavior. Wyatt et al.
therefore identified several factors necessary to accommodate a more complete understanding of cultural factors in HIV prevention. Culturally-tailored interventions should (1) include culturally-competent researchers with understanding of the target population; (2) clarify the mutual influence of multiple cultural factors (e.g., gender, race, and sexual orientation) on risk behaviors; (3) examine the role of environmental risk, including historical factors, in shaping behavior, and (4) draw upon culturally-congruent strategies utilizing the unique strengths and norms of the target culture. The extent to which an individual endorses normative beliefs of his or her ethnic group further influences the role culture plays in shaping risk behavior. Individual and cultural values, therefore, may provide greater insight into the association between culture and behavior than ethnicity alone.

Although individual differences must be taken into account, previous research indicates that different cultural and ethnic groups hold different value sets and norms. For example, “familismo” is a central value within many Hispanic cultures that emphasizes the importance of community-oriented over individual well-being and perceiving the family as part of the self (Sabogal, Marín, Otero-Sabogal, & Marín, 1987). A review by Lescano, Brown, Raffaelli, and Lima (2009)
on the impact of cultural factors in HIV prevention for Hispanic youth suggests that *familismo* is an important factor in shaping both sexual behavior and openness to family-based HIV prevention in Hispanic/Latino youth. Likewise, religious beliefs are central to many African-American and Hispanic value systems (Chatters, Taylor, Bullard, & Jackson, 2008) and influence norms for appropriate and socially acceptable behavior. In turn, specific cultural groups have been shown to endorse distinct coping profiles that reflect relevant norms, such as high levels of family support seeking among Hispanic adolescents and high levels of religious coping among both Hispanic and African-American adolescents (Copeland & Hess, 1995; Hawley, Chavez, & St. Romain, 2007). These patterns suggest that broad cultural values may inform the types and frequency of both adaptive and maladaptive coping strategies employed by diverse adolescents, thus implying that culturally-specific value sets may help to determine cultural differences in HIV risk behaviors as a function of coping efficacy.

As discussed above, the burden of HIV infection among American youth disproportionately affects African-American and Hispanic adolescents and young adults. Targeted interventions that take cultural factors, and cultural
values in particular, into account are needed to meet the health needs of ethnic and racial minority adolescents. Because mental health and behavioral factors such as coping and self-efficacy appear to influence HIV intervention effectiveness, these must be incorporated as components of comprehensive HIV prevention. The aim of the current research is to better understand how cultural values contribute to coping behavior and how coping strategies may, in turn, influence HIV risk behavior. Exploring these relationships among minority adolescents will help clarify how values-consistent coping may be incorporated as a mechanism for risk reduction in culturally-tailored intervention with higher-risk youth.

**Coping Effectiveness: What Works?**

Coping has been broadly defined as “conscious, volitional efforts to regulate emotion, cognition, behavior, physiology, and the environment in response to stressful events or circumstances” (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001). Extensive research has examined coping patterns in adolescents and explored specific coping strategies and profiles that are linked to more or less adaptive psychological and behavioral outcomes (Aldridge & Roesch, 2008b; Seiffge-Krenke & Klessinger, 2000; Tolan,
adolescent coping has focused on a two-factor model, with the factors commonly identified as approach oriented coping, in which individuals cope by directly addressing or “dealing with” a stressor or negative emotions related to the stressor, and avoidance oriented coping, in which individuals cope by distancing themselves or withdrawing cognitively or behaviorally from the stressful situation and related emotions (Roth & Cohen, 1986). Extant literature has typically characterized approach coping, such as problem solving or positive thinking, as associated with positive affect and favorable psychological outcomes (Compas & Harding Thomsen, 1999; Compas, Worsham, & Ey, 1992; Kliewer, 1997; Suls & Fletcher, 1985), while avoidant coping, such as distraction or wishful thinking, has been associated with increased negative affect and worse psychological outcomes (Lewis & Frydenberg, 2004). For example, Sandler, Tein, and West (1994) found that problem solving and involvement in the problem were associated with lower internalizing symptoms among adolescents, whereas seeking emotional support was associated with greater depressive symptomatology. Lewis and Frydenberg (2004) distinguished between “thriving” (well-being and contentment), “surviving” (lack of dysfunction), and
“going under” (dysfunction and distress) among adolescents. They classified coping strategies as productive, such as positive thinking, problem solving, and humor, and nonproductive, such as religious coping, distancing, and acceptance. Adolescents who frequently and effectively used productive coping strategies (“thivers”) had better mental health outcomes than those who used these strategies less frequently or those who used primarily nonproductive strategies like wishful thinking.

However, dichotomizing coping styles into two discrete categories may not adequately represent the patterns that link specific strategies with specific outcomes and may therefore obscure the mechanisms by which coping affects mental and behavioral health. Though some researchers have hypothesized that coping behavior is a stable trait, such that individuals consistently respond to stressors in accordance with a fixed style (Field, Alpert, Vega-Lahr, Goldstein, & Perry, 1988; Miller, Sherman, Combs, & Kruus, 1992), research supports a more dynamic process that is largely context-specific (Lazarus & Folkman, 1984). In contrast to the aforementioned coping orientations, Lazarus and Folkman (1984) identified two primary coping categories that encompass the major goals of coping behavior: emotion-focused coping represents the attempt to manage
internal concerns, such as emotional distress, while problem-focused coping is the attempt to manage external concerns, such as social conflicts or situational difficulties. Broad strategies such as social support may fall into both categories but function differently in each. For example, emotion-focused strategies include social support for emotional reasons (seeking comfort or validation) whereas problem-focused strategies include social support for instrumental reasons (seeking help from supportive figures in order to change or improve a situation).

Lazarus and Folkman’s (1984) transactional model of stress and coping posits that stress arises from a person-situation interaction, in which an individual’s subjective judgment of the environment, as opposed to the environment itself, leads to evaluation of whether or not a situation is stressful. Likewise, individuals may use different coping strategies in different contexts, and the effectiveness of each coping strategy will depend on the match between the focus of the coping strategy (emotional or problem-focused) and the unique situational characteristics. Based on this theory of “goodness of fit,” an individual who reacts by seeking emotional support in a situation that cannot be changed will therefore be more effective – and will experience more positive psychological outcomes – than an individual who reacts by attempting to change
the problem. According to the model, the reverse is true for a situation over which the individual does have some control. How a person reacts to each potentially stressful event, therefore, rather than a fixed coping style, will determine the adaptiveness of his or her response. Individuals who are adept at accurately appraising their level of control in a situation and tailoring their coping strategy to match that appraisal are therefore best equipped to cope effectively across a variety of potentially stressful situations.

The importance of context and meaning for coping effectiveness as discussed above holds clear implications for the manner in which culture and values may influence differential outcomes for similar coping strategies when used in diverse social environments. Because the effectiveness of a coping strategy may vary based on the context in which it is used, classifying specific strategies as exclusively adaptive or maladaptive is misleading and overly simplistic. Efforts to promote one coping style as exclusively beneficial and to discourage another as exclusively harmful obscure the contextual factors that impact when and why each strategy “works” and the meaning each strategy holds in different situations. In addition, such a perspective may obscure the possibility that coping strategies are likely to have both costs and benefits.
whenever they are used. Particularly within the context of intervention programs targeting coping in minority adolescents, sensitivity to these factors is imperative. Research on minority coping must therefore examine how specific coping strategies and profiles work within a given culture and context, in order to develop interventions that model flexibility and foster a variety of strategies that can be both effective and culturally relevant.

**Values and Coping: Evidence from Cross-Cultural Research**

Most of the research examining associations between cultural values and coping strategies has focused on differences between collectivist and individualistic values. Research has therefore consisted primarily of comparisons between Asian and Western cultures and how they influence preferred and socially reinforced coping strategies within a given cultural context. Core values surrounding autonomy and egalitarianism, for example, have been shown to predict the use of religious, emotion-focused, and avoidant coping strategies among late adolescents who had immigrated to England from 38 different countries, even when taking into account acculturation stressors and personality factors (Bardi & Guerra, 2011). Numerous studies have identified culturally distinct patterns of appraising and acting upon negative experiences (Cole,
Socialization to cultural beliefs regarding ideal emotions (Tsai, Louie, Chen, & Uchida, 2007) and normative ways of managing negative emotions (Joshi & MacLean, 1994) has been identified in children as young as preschool age, including the degree to which emotions should be communicated to others. In a study comparing children from two ethnic groups in Nepal (Brahman and Tamang) and children from the United States, Cole et al. (2002) found that first through sixth graders from each culture identified different emotions they should feel in response to various stressors and reported motivation to react in culturally-congruent ways. For example, Tamang children were more likely to positively evaluate shame and emotion-focused coping, while children from the United States were more likely to endorse feeling anger and using problem-focused and action-oriented coping strategies.

The goals that children endorse as ideal outcomes for coping with negative emotions also vary by culture. Asian cultures have been shown to value maintaining group well-being over individual well-being (Novin et al., 2009), a pattern that is reversed in US and European cultures. Both children (Novin et al., 2009) and adults (Kim et al., 2008) from Asian cultures endorse collectivist values.
and more frequent use of coping strategies that maximize group harmony and well-being. Compared with Dutch 10- and 11-year-olds, Novin et al. (2009) found that Iranian children were less likely to seek family support and more likely to conceal their emotions from their family, in order to protect the family unit. The ability to cope in a culturally-consistent manner (i.e., using coping strategies that support ideal outcomes either in relation to individual emotions or community well-being) defines “successful coping” within a given cultural context. In turn, self-efficacy likely increases in relation to the ability to cope using culturally-consistent strategies, and environmental factors (such as subsequent reinforcement in social contexts) compound the degree to which culture influences the effectiveness of distinct styles of coping.

Studies looking at intraethnic variations in coping support the assertion that values, and not culture alone, influence how individuals react to stressful events. For example, Han and Park (1995) found that Korean sixth graders who endorsed collectivist values used different strategies to resolve peer conflicts than those who endorsed individualistic values. Several studies have also begun to explore the relationship between values and coping strategies among group members with varying levels of acculturation within another culture (Safdar,
Comparing Iranian-Canadians with both Canadians and Iranians, Safdar et al. (2006) found that Iranian-Canadians’ level of intercultural contact predicted the degree to which they endorsed “acculturated” or “traditional” coping strategies. The authors hypothesized that, as more time is spent within a new culture, individuals internalize the social axioms of the majority culture, which in turn leads to the adjustment of coping strategies in a values-consistent manner.

Research on the links between values and coping strategies within Hispanic and African-Americans is more limited, particularly among adolescents. As in every culture, numerous socialization factors influence minority adolescents’ perceptions, beliefs, and behaviors, and there is no cohesive, theoretically-based literature reflecting what shapes Hispanic and African-American’s coping strategies and coping effectiveness. A wide variety of subpopulations (e.g., college students or homeless youth), social contexts (e.g., violent neighborhoods), and coping strategies have been examined within distinct theoretical frameworks (e.g., approach v. avoidance, problem-focused v. emotion-focused, context by situation interaction; Aldridge & Roesch, 2008b; Cabassa, Lester, & Zayas, 2007; Crean, 2004), leading to a muddied picture of
which strategies are most likely to benefit minority adolescents and in which contexts. Community and family values, religion, and historical and social context, in particular, have been examined in relation to Hispanic and African-American adolescents’ coping and mental health and are reviewed below organized using a framework of values and context.

**Community, Family, and the Self**

*Familismo*. Though, as previously discussed, the majority of research on collectivist and individualistic values has compared Eastern and Western countries, Hispanic and African-American cultures share many of the collectivist beliefs found within Asian cultures (Boyd-Franklin, 2003; Steidel & Contreras, 2003). Specifically, Hispanic cultures traditionally revolve around the concept of *familismo* (Sabogal et al., 1987), which reflects the central role of family in the social and institutional structure of Hispanic communities. *Familismo* comprises a sense of interdependence in which the family is integral to the individual’s self-identity and organizes and shapes individual choices and behavior (Steidel & Contreras, 2003). Within this framework, family loyalty, closeness, and well-being are emphasized, with primary obligations placed upon the needs of the family unit over needs of the self or outsiders (Cauce et al., 2002; V. Guilamo-
Ramos et al., 2007). The focus on communal well-being cultivated through *familismo* has been associated with psychological benefits such as belonging and familial pride (Santiago-Rivera, 2003). *Familismo* fosters strong ties among immediate family as well as a solid extended family network, which offers multiple sources of support and has been shown to be protective of adolescents’ well-being (Parsai, Voisine, Marsiglia, Kulis, & Nieri, 2009). Family closeness, for example, has been found to help with the adjustment process following immigration and to increase resiliency against suicidality among Hispanic youth (Locke & Newcomb, 2005). In a study with Hispanic adolescents and their parents, Ayón and Aisenberg (2010) found that higher levels of *familismo* were protective against internalizing symptoms for both parent and child when faced with external stressors such as anti-immigrant sentiment and legislation as well as discrimination. A sense of family unity is protective against marginalization and alienation from the majority culture.

Consistent with a family-centered model for behavior, when dealing with life stress Hispanic families are likely to look within the family network for informal support instead of seeking out formal treatment (Cabassa et al., 2007). Research shows that Hispanic adolescents rely on both more frequent and more
varied forms of family support than do other youth. For example, Hispanic adolescents frequently turn to family when experiencing depressive symptoms or relationship problems (Rew, Resnick, & Blum, 1997). In a study with Hispanic middle schoolers, Crean (2004) found that social support was associated with approach coping strategies, which in turn was negatively associated with psychological symptomatology. Crean suggested that a solid social support system optimizes Hispanic adolescents’ ability to obtain feedback about coping strategies and thereby improve coping effectiveness. In addition to emotional support, Hispanic adolescents are more likely than Whites or African-Americans to engage the family in problem-solving and actively coping with a stressor (Harker, 2001; Hawley et al., 2007; Munsch & Wampler, 1993). Indeed, Gonzalez and Padilla (1997) found that Hispanic youth were more likely to use family support as a coping strategy than White adolescents, regardless of the stressor.

Though family support is often protective, the pressure to rely exclusively on the family can limit alternative support sources that could be more adaptive in certain situations, especially in the event that family support begins to break down (Kaniasty & Norris, 1993). In fact, research shows Hispanic adolescents may be particularly vulnerable when facing breakdowns in the family unit.
When interviewing 10th grade Mexican American students about their perceived stress and coping, Kobus and Reyes (2000) found that girls most frequently identified negative events associated with the family as their most difficult recent life stressor. Hispanic adolescents have also been shown to experience more negative effects than adolescents from other ethnicities following family conflict (Mechanic & Hansell, 1989). The centrality of the family unit can be particularly detrimental to adolescents who have been socialized to place familial goals and well-being over individual ones when those goals come into conflict and the family is not able to provide adequate support. For example, acculturation stressors and concerns about expectations of family obligations have been linked to suicidality in Hispanic girls (Zayas et al., 2005). Hispanic adolescents from low SES backgrounds may be at even greater risk, as the link between internalizing symptoms and exposure to family conflict is greater among minority adolescents with high levels of poverty-related stress (Santiago & Wadsworth, 2009). Language barriers, lack of familiarity with the formal mental healthcare system, and stigma against needing external treatment may contribute to reluctance among Hispanic youth or their parents to seek external treatment.
Therefore, *familismo* appears to strengthen and protect adolescents’ well-being when the family unit is intact. However, in times of family stress, relying solely upon internal social resources may increase the risk of unmet mental health needs, particularly among low income youth. Wadsworth and Compas (2002) found that low SES adolescents who engaged secondary control strategies such as acceptance, cognitive restructuring, and positive thinking experienced fewer internalizing symptoms when dealing with family conflict. Therefore, a mixture of traditional family support and more emotion-focused strategies may enhance Hispanic adolescents’ ability to maintain personal well-being in the context of family stress.

**Africentric worldview.** Collectivist beliefs are also influential in African-American culture, reflected in what is known as the Africentric worldview. Africentric values are “grounded in the historical, cultural, and philosophical tradition of people of African descent” (Gaylord-Harden & Cunningham, 2009) and refer to, among others, the importance of communalism, collectivism, unity, and harmony (Constantine, Gainor, Ahluwalia, & Berkel, 2003; Utsey, Adams, & Bolden, 2006). Similar to *familismo*, Africentric values emphasize placing priority on group well-being and fostering strong community
ties (Constantine, Wallace, & Kindaichi, 2005). As such, family and community constitute traditional sources of support and research shows that, like Hispanics, African-Americans are more likely to seek out primarily informal resources to cope with psychological distress (Utsey et al., 2006).

In general, the use of culturally-relevant strategies, such as communalistic coping, is protective against discrimination stress in African-American adolescents and predictive of more positive quality of life indicators (Utsey, Bolden, Lanier, & Williams, 2007). For example, Africentric coping strategies have been associated with better self-esteem and fewer depressive symptoms in adolescents (Constantine, Donnelly, & Myers, 2002; Gaylord-Harden & Cunningham, 2009). Compared to adolescents with a greater orientation to individualistic values, Scott (2003b) found that African-American adolescents with higher orientation to Africentric values were also more likely to use adaptive mainstream strategies to cope with discrimination stress. Specifically, Africentric values were associated with the use of more problem-solving coping and less externalizing coping. Adolescents with greater frequency of socialization messages from parents about racism, another form of exposure to
Africentric values, were also more likely to engage in adaptive coping strategies (Scott, 2003a).

However, at high levels of exposure to stressors, communalistic coping was not shown to be protective against mental health concerns (Gaylord-Harden & Cunningham, 2009). In fact, although at low levels of stress exposure communalistic coping was associated with significantly less anxiety, at high levels of stress exposure communalistic coping was associated with higher levels of anxiety. Similar to the risk for Hispanic adolescents facing breakdowns in familial support, the authors suggested that, within high stress environments, communalistic and support seeking coping may not be adaptive. Because family and community members may simultaneously be struggling with high levels of stress exposure, they are less likely to be able to provide adequate coping support to adolescents (Landis et al., 2007).

Another facet of Africentrism relates to the importance of preserving collective well-being. Wallace and Constantine (2005) found that African-Americans who endorsed high levels of Africentric values also endorsed greater self-concealment, the tendency to withhold personal experiences or problems from others so as to avoid burdening them and to maintain harmony within the
group. Unfortunately, these individuals also reported greater stigma surrounding mental illness and counseling. African-Americans who identify more strongly with prioritizing group unity may therefore feel less comfortable seeking culturally-acceptable support (from the community) and more stigmatized seeking professional help. In a qualitative study with African-American male college students, Watkins and Neighbors (2007) found that some young men viewed self-concealment as an example of good mental health because it evidences the ability to control how the world sees you. Students reported being socialized to rely on distracting, nonverbal strategies such as art, music, or sports – consistent with the Africentric value of creativity – to cope privately with distress. Likewise, they endorsed a belief in the importance of showing a happy face to others regardless of internal feelings. Although this value is consistent with the desire to maintain group harmony, it may place African-American youth at risk for suffering with unmet psychological needs.

Religious Beliefs and Spirituality

Much like family and community support, religion has been shown to play a significant role within both African-American and Hispanic communities and cultures in the United States (Chatters et al., 2008). Recent estimates indicate
that 85 percent of African-Americans said that religion was very important in their lives (Gallup & Newport, 2006) and approximately 90 percent of Hispanics self-identify as either Catholic (70 percent) or Protestant (20 percent; Perl, Greely, & Gray, 2006). Additionally, among African-Americans not formally affiliated with a religious congregation, many characterize themselves as spiritual and identify as having a personal relationship with God (Brisbane & Womble, 1985; Chatters et al., 2008). In fact, spirituality comprises a second major component of Africentric values. Together, social support and religion are the strategies most frequently identified by African-American and Hispanic adolescents to cope with psychological distress (Copeland & Hess, 1995; Hawley et al., 2007). Among minority adults, spiritual beliefs have been linked with comfort and resiliency in the context of racism, discrimination, environmental stressors, trauma, and loss (Bowen-Reid & Harrell, 2002). The influence of historical African religious traditions can be seen in the continued belief among many African-Americans that spirituality and mental health are intrinsically connected (Boyd-Franklin, 2010).

Religion holds a distinct place among minority mental health resources not only indirectly through spiritual beliefs but also through direct support
systems from religious organizations. Discomfort with formal psychological treatment leads many Hispanics and African-Americans to seek out counseling from a spiritual perspective if family and social networks are not sufficient to manage life stress (Wimberly, 1997). Individuals who utilize more religious coping and endorse the belief that life events are reflective of God’s will express more negative attitudes towards mental health treatment (Schnittker, Freese, & Powell, 2000). Unfortunately, in situations where structured interventions or medication would be helpful, adolescents with more severe mental health concerns may be left feeling hopeless and stigmatized. Therefore, relying on religious coping may be fine in the context of less severe mental health concerns, but as psychological risk rises, it is unlikely to provide adequate emotional and behavioral support for adolescents with greater treatment needs.

Additionally, traditional religious beliefs among Hispanic cultures often encompass the concept of fatalism, a perspective in which personal agency is secondary to more universal, externally controlled forces such as God or nature (Pepitone & Triandis, 1987). Unfortunately, fatalism is consistently associated with poorer adjustment outcomes than more agentic coping strategies because it does not promote action-oriented or problem-solving methods for reacting to
negative events or situations (Wheaton, 1982). Saldaña (1990) found that Hispanic college students relied more on wishful thinking, emphasizing the positive, and tension reduction strategies than did African-American or White students. Though this represents a mix of adaptive and maladaptive emotion-focused strategies, none include a change-oriented approach.

It is possible that religious adolescents may be more likely to interpret life stressors as unchangeable and to engage in avoidance and emotion-focused coping strategies. A combination of multiple culturally-related coping strategies therefore may be more adaptive than religious coping alone. According to an ecological model developed by Jones (2007) that draws upon Africentric values and coping behaviors, changeable and unchangeable factors interact to shape minority youth’s mental health and coping. Racism, community violence, and low SES are seen as uncontrollable environmental factors that interact with protective, culturally-linked coping resources such as family and community support as well as spirituality. Jones found that family support, spirituality, and general Africentric-consistent support were protective against maladjustment among youth exposed to community violence. Scott (2003b) likewise found that a combination of spirituality, communalistic coping, and effort optimism (belief in
the ability to positively change life stressors) was linked to adaptive behaviors and reduced psychological distress.

However, not all religious coping is linked with improved well-being in minority adolescents. As discussed above, some research indicates protective health effects while other studies indicate more negative health outcomes (Aldridge & Roesch, 2008a). Research supports a distinction between positive or collaborative religious coping (e.g., praying and trusting that God is an active partner in resolving problems) and negative or self-directed religious coping (e.g., viewing stressors as an indication of guilt or punishment and believing that God grants individuals the freedom to resolve life stress; Molock et al., 2007; Pargament, Smith, Koenig, & Perez, 1998). Positive religious coping has been associated with better physical and emotional health as well as reduced suicidality in African-American adolescents, whereas negative religious coping is associated with psychological distress, hopelessness and worse physical health (Molock et al., 2007). Interestingly, African-Americans have been shown to engage in more positive religious coping than White individuals (Chapman & Steger, 2010), which may account for some of the ethnic differences in the extent to which individuals employ religious and spiritual coping.
Historical and Social Context

The historical backdrop of the role of African-American and Hispanic communities within the United States also contributes to cultural values linked with coping behavior. Longstanding exposure to adversity and discrimination has contributed to a stigma against weakness within the African-American community, which has translated to reactions of isolation and concealment among individuals suffering from psychological distress (Matthews, Corrigan, Smith, & Aranda, 2006). African-American college students report a feeling of responsibility to their ethnic group to maintain an image of strength and resiliency so as to counteract negative stereotypes and prejudices (Watkins & Neighbors, 2007). They report that there is a pressure among African-American males to personify the strong “Black Man” (Watkins & Neighbors, 2007) and to maintain the reputation the African-American men are tough. Breland-Noble (2004) documented the importance of appearing self-sufficient for some African-American male adolescents, which may be expressed in the development of hypermasculine behaviors. However, Seaton (2007) found that hypermasculinity and dangerous behaviors including gun carrying actually constitute a coping strategy to manage fears in the face of acute environmental stressors such as
community violence. Such behaviors are protective against victimization in the short term, but interfere with the development of adaptive long term coping strategies.

In a qualitative study, Watkins and Neighbors (2007) found that most African-American college students reported they would not admit to others if they entered therapy because it is unheard of in the African-American community, and many endorsed the belief that, on a whole, African-Americans do not suffer from mental health problems because they are stronger than other races. The presence of chronic stressors such as racism or community violence for many minority youth may influence high-risk adolescents to engage in avoidant strategies to deny their distress (i.e., “toughing it out”) to keep from seeming weaker than family and peers who face the same stressors but do not seek out support. In line with Lazarus and Folkman’s (1984) cognitive theory of stress and coping, values that frame stressors as unchangeable are therefore likely to promote more frequent use of emotion-focused coping strategies. Given the systemic, uncontrollable nature of many of the environmental stressors confronting African-American adolescents, it is not surprising that many such adolescents react with avoidant coping responses.
Contrary to most research on the limited effectiveness of avoidant coping strategies, a number of studies have shown that avoidant coping can actually be adaptive when used by minority and inner-city adolescents. In a study with homeless youth, Dashora, Erdem, and Slesnick (2011) found that, within a high stress environment, adolescents who engaged in avoidant coping strategies displayed fewer symptoms of depression and anxiety, less substance use, and fewer risk behaviors. Likewise, Gonzales, Tein, Sandler, and Friedman (2001b) found that avoidance was adaptive for minority adolescents within high stress environments but not those within lower stress environments. Within high stress environments, adolescents who employed avoidant strategies such as cognitive restructuring and distraction displayed lower levels of depression and anxiety, fewer behavioral problems, and higher grades (Edlynn, Gaylord-Harden, Richards, & Miller, 2008; Gonzales et al., 2001b). Coping strategies that correlate with poorer health outcomes in most adolescents may therefore be adaptive for youth faced with acute, uncontrollable stressors. Among minority adolescents, particularly African-Americans, with exposure to chronic violence, Grant et al. (2000) found that avoidance was protective in the short term by allowing adolescents to temporarily tolerate their distress. However, long term use of such
strategies and failure to incorporate or switch to active coping led to poorer outcomes. Adolescents who do not possess alternative long term approach strategies are likely at greater risk for mental health concerns and poorer functioning.

In contrast to the long history of African-Americans in the United States, Hispanics are a relatively new immigrant group that has become the fastest growing minority in the nation (U.S. Census Bureau, 2004). In fact, Hispanics account for nearly half of all U.S. population growth since 2000, and Hispanics are expected to make up 25% of the American population by 2050 (Bernstein, 2008). Such a notable increase has resulted in a backlash in some portions of mainstream culture due to a mixture of prejudice and concerns over illegal immigration and workforce issues (Massey, 2009; Takei, Saenz, & Li, 2009). Many of the factors contributing to life stress among Hispanics in the United States surround issues of acculturation, including language barrier, adjustment issues and family disruption, lack of familiarity with health and social resources, low SES, intergenerational values conflicts, and discrimination. Recent increases in strict immigration policies have contributed to a sense of alienation and discrimination among many Hispanics (Rubio-Goldsmith, Romero, Rubio-
Goldsmith, Escobedo, & Khoury, 2009) and they represent very real legal stressors for a subset of undocumented immigrants.

Disruption to the Hispanic family unit and integration into a new culture has been associated with conflicts between traditional and mainstream values (Smokowski, Chapman, & Bacallao, 2007). Traditional gender norms, including rigid gender roles and greater focus on obedience towards men, have been found to be more common among Hispanics who are less acculturated and less educated (Kaplan, Erickson, & Juarez-Reyes, 2002; Upchurch, Aneshensel, Mudgal, & McNeely, 2001). Traditional gender roles within many Hispanic/Latino cultures are clearly defined and broken down along the dimensions of marianismo for females and machismo for males. Marianismo constitutes a behavioral style emphasizing nurturing, respectful, and well-mannered qualities (Castro & Alarcon, 2002) as well as deference and obedience to men (Upchurch et al., 2001), whereas machismo is reflective of strong, decisive, and protective qualities (Torres, Solberg, & Carlstrom, 2002). However, among more acculturated Hispanic girls, familial pressures to exhibit features of marianismo may conflict with social influences and mainstream norms of female adolescent behavior and independence, and in turn contribute to elevated
distress. Likewise, Hispanic boys face similar stressors to African-American boys in the expectation not to show signs of weakness or mental health concerns despite exposure to chronic stressors. Disenfranchisement related to discrimination and low SES may also contribute to a sense of failure in some Hispanic males at not being able to fulfill the role of powerful family protector. Finally, much like African-American adolescents facing chronically high-stress environments, Hispanic youth frequently engage in avoidant coping to deal with elevated levels of life stress (Dashora et al., 2011), which could place them at risk for overusing avoidant strategies even when facing changeable stressors.

**Value-Oriented Coping Strategies and Coping Effectiveness: Synthesizing the Findings**

Despite numerous studies examining which coping strategies Hispanic and African-American adolescents are likely to use, little research has directly examined values differences in coping among underserved groups. Values associated with minority coping styles are integral to cultural beliefs and traditions, and in many cases they can be influential in developing protective, culturally-congruent coping behaviors among Hispanic and African-American adolescents. Research consistently supports the use of coping strategies
consistent with *familismo* among Hispanic adolescents and Africentric values among African-American adolescents. For example, in a study examining ethnic differences in coping, Chapman and Mullis (2000) found that African-American adolescents reported Africentric-consistent strategies such as solving family problems, seeking out close friends, self-reliance, spiritual support, and distraction (engaging in demanding activities) more frequently than White adolescents did. Such values should be honored as part of the rich traditions associated with each culture and incorporated into culturally-relevant interventions with underserved youth.

Despite the positive contributions that cultural values make to coping in minority populations, it is increasingly clear that cultural values may also contribute to the selection of maladaptive strategies in certain contexts. Stigmas against formal mental health treatment, for example, and norms that encourage high levels of self-concealment and hypermasculinity all contribute to a tendency for minority adolescents to hide as opposed to treat psychological distress. Static as opposed to situational perceptions of stressors as uncontrollable, as may happen within a fatalist perspective, are associated with passive and avoidant coping that is maladaptive in the context of stressors that can actually be
changed. Likewise, the use of traditional coping strategies such as *familismo* or spirituality at the exclusion of other coping methods may put adolescents at a disadvantage, especially in high risk communities where informal support systems are more likely to falter. Both culturally-linked and mainstream coping strategies may therefore be adaptive for minority adolescents based on the specific context and the particular coping goals involved.

Considering intraethnic variability in coping sheds light on which strategies are most likely to be adaptive for a specific cultural group within various contexts. Aldridge and Roesch (2008a) found that Mexican American adolescents who were skilled at using a range of diverse coping strategies experienced more positive affect than those who relied more consistently on only a limited set of strategies. A mix of positive thinking, acceptance, problem solving, and humor was associated with greatest positive affect. Such strategies integrate behavioral approach coping (problem solving), emotion-focused cognitive restructuring (humor), and secondary coping aimed at reinterpreting negative events (positive thinking and acceptance). Together, flexibly selecting specific strategies to fit the situation allows adolescents to manage both changeable and unchangeable stressors in an effective way.
Because many minority adolescents are exposed to a greater number of stressors, such as poverty, community violence, and racism, than are White adolescents, they may be in particular need of a flexible coping style and set of coping skills. Interventions designed for high-risk minority adolescents must therefore provide assistance in distinguishing between acute and chronic stressors and in identifying coping strategies most likely to help in each context. Saldaña (1990) suggested that blended coping profiles may be linked to positive outcomes in Hispanic adolescents. Likewise, Tolan et al. (2002) found that African-American adolescents were more likely to endorse complex coper profiles, indicating that individuals exposed to multiple stressors are in need of a broader coping repertoire to be successful. Intraethnic differences in adolescents’ ability to employ such variable strategies show that coping interventions may be beneficial to reduce maladaptive coping and increase strategy flexibility.

A better understanding of the etiology of mental health disparities for minority adolescents is still needed both to improve well-being and reduce secondary health outcomes, such as increased risk for HIV, that stem from poor psychological health. Regardless of the source of these disparities, greater prevention efforts are required to meet the needs of minority adolescents.
struggling with mental health concerns. An important next step is extending the exploration of values- and culturally-linked coping strategies to secondary outcomes of psychological well-being, including examining compensatory high-risk coping and psychological factors that may contribute to greater HIV risk.

**HIV Risk Factors in Minority Adolescents**

Behavioral risk factors for HIV include both direct risk behaviors in which the virus is passed from one individual to another, such as unprotected sex and injection drug use, and indirect risks that may increase the likelihood of direct risk behaviors, such as substance use before or during sexual intercourse. Direct sexual risk behavior includes inconsistent condom use or failure to use condoms, having multiple sex partners, engaging in transactional sex, or having risky sex partners (e.g., sex with injection drug users or HIV-positive individuals who have not disclosed their risk) while indirect risks include early sexual debut and substance use before or during sex (Dillon et al., 2010; Kotchick, Shaffer, Forehand, & Miller, 2001). Research also suggests that having older partners increases adolescents’ HIV risk because younger partners are less able to negotiate condom use. For example, Begley, Crosby, DiClemente, Wingood, and Rose (2003) found that over 60% of African-American female adolescents
reported having partners that were at least two years older, and girls with older partners were more likely to report never using condoms. Also, due to higher rates of economic pressures, minority women are more likely to engage in transactional sex or to remain in a relationship for financial reasons, both of which are associated with more sexual partners, higher levels of HIV and other sexually transmitted infections (STIs), anal sex, reduced condom use, concurrent sexual partners, substance abuse, and having high risk sexual partners (Dunkle, Wingood, Camp, & DiClemente, 2010).

Primary transmission routes vary by demographic factors. For example, females of all ages and ethnicities are most likely to contract HIV through heterosexual contact while males are more likely to contract HIV through homosexual contact (CDC, 2004). Among sexual behaviors, anal sex, as well as engaging in multiple kinds of sex (oral, vaginal, and anal), have been shown to increase risk for transmission of HIV and other STIs (Diclemente et al., 2009; Lescano et al., 2009; Salazar et al., 2009). For example, Begley et al. (2003) found that African-American adolescent girls who engaged in anal sex had higher rates of vaginal sexual transmission of STIs. Likewise, among African-American girls, high quantities of alcohol use has been linked with higher rates of STIs, as well as
anal sex, inconsistent condom use, risky sexual partners, and substance use during sex (Seth et al., 2011). Cooper (2002) found that these associations were particularly strong for younger adolescents, suggesting that early sexual debut interacts with other risk factors to place sexually active early adolescents at particular risk for HIV. The frequency, amount, and use of illicit substances such as marijuana during sex also increase HIV risk among adolescents (Hendershot, Magnan, & Bryan, 2010).

Unfortunately, evidence shows that many minority adolescents do continue to engage in risky sexual behaviors. (Teitelman, Ratcliffe, Morales-Aleman, & Sullivan, 2008) found that 50% of Hispanic adolescents reported inconsistent condom use, and according to the 2007 Youth Risk behavior Survey, 17% of Hispanic high school students report already having had more than four sexual partners (CDC, 2010). Hispanic youth, in particular, report greater use of alcohol, cigarettes, and illicit substances than African-Americans or Whites.

Likewise, Hispanic and African-American adolescents report earlier sexual debut than White youth and Hispanics report lower levels of condom use than any other ethnic group (CDC, 2006). Trends in minority HIV risk profiles are of primary concern. Although overall the prevalence of multiple partners in
young people decreased between 1991 and 2009, this pattern was not found for Hispanic youth (Eaton et al., 2011). Condom use among African-American adolescents increased between 1991 and 1999, but then decreased again between 1999 and 2009, and condom use among Hispanic adolescents has decreased during that time period (Eaton et al., 2011). Rates of injection drug use have also increased among minority adolescents (Eaton et al., 2011). Risk behaviors are particularly pronounced among more acculturated Hispanic youth (Lee & Hahm, 2010).

**Coping and HIV Risk**

**Coping.** Specific coping strategies as they relate to HIV risk have been primarily studied among men who have sex with men. Among HIV-negative gay men, those who use disengagement strategies to cope with concerns about HIV risk are more likely to engage in unprotected anal intercourse (Yi, Sandfort, & Shidlo, 2010). In general, avoidant coping has been linked with greater sexual risk (Patterson & Grant, 2000; Williams, Elwood, & Bowen, 2000). However, given the impact of culture on coping profiles and coping effectiveness, the link between coping strategies and HIV risk cannot be assumed to generalize to
Hispanic and African-American adolescents. Very little research has examined direct associations between coping and HIV risk among minority youth. One study with minority adolescents did find a link between emotion-focused coping and lower levels of condom use (Koniak-Griffin & Stein, 2006).

Among African-American and Hispanic adults, emotion-focused coping and passive coping styles have been linked with higher levels of injection drug use and sexual risk behaviors (Nyamathi, 1992; Nyamathi, Stein, & Brecht, 1995a). Emotion-focused coping has also been linked to lower self-esteem and greater perceived risk for HIV among African-American and Hispanic women (Nyamathi, Stein, & Swanson, 2000). Environmental factors, such as low SES, have also been linked to HIV risk among minority women. Ickovics et al. (2002) found that women with lower income reported more risky sexual partners than those with higher SES. These factors, however, must be examined more closely among African-American and Hispanic adolescents. For example, because avoidant coping is adaptive for minority youth in context of high level, acute stressors, its link to HIV risk may differ from the impact of such coping among adults with greater ability to change life stressors.
Mental health. Because there is limited research on the direct links between specific coping strategies and HIV risk behaviors among adolescents, it is important to consider as well the indirect link of general psychological factors related to coping that, in turn, influence behavioral risk. Perceived stress and stressors such as family disruption, low SES, and community violence have been associated with risky sexual behaviors among minority adolescents (Rotheram-Borus, Mahler, & Rosario, 1995). As discussed above, coping deficits have been linked to poorer psychological health in Hispanic and African-American youth. In turn, research supports a robust association between mental health symptoms and risky behaviors. Among high-risk adolescents involved in the criminal justice system, individuals with depressive symptoms report greater substance use, including use during sex and less frequent condom use (Tolou-Shams, Brown, Houck, Lescano, & Project SHIELD Study Group, 2008). Houck et al. (2006) found that mental health and externalizing symptoms were associated with greater substance use and sexual risk behaviors among adolescents. African-American adolescent females with depressive symptoms have been shown to have higher prevalence of STIs as well as riskier sexual partners (Seth, Raiji, DiClemente, Wingood, & Rose, 2009). Associations between mental health
and risk behaviors have been found with both male and female minority adolescents (Brown et al., 2006; Lehrer, Shrier, Gortmaker, & Buka, 2006). Elkington, Bauermeister, and Zimmerman (2010) found that substance use, itself an example of avoidant coping, mediated the association between psychological distress, sexual frequency, and condom use and partially mediated the association between distress and number of sexual partners. Evidence exists that external locus of control is also linked to increased number of sexual partners (Rubin, Gold, & Primack, 2009).

The observed association between mental health and sexual risk behaviors has also been found among minority adolescents with a variety of other psychological concerns, including conduct disorders, anxiety, posttraumatic stress disorder (Brown et al., 2006), and suicidality (Houck et al., 2008). Individuals with a history of trauma or mental illness report both maladaptive coping strategies and higher HIV risk behaviors, a combination of physical abuse, sexual abuse, and neglect has been linked with particularly elevated levels of sexual risk taking (Hahm, Lee, Ozonoff, & Van Wert, 2010). In the case of traumatic stress, childhood abuse has been causally linked to greater HIV risk behaviors and higher rates of HIV in adulthood (Wilson & Widom, 2009). Some
research suggests that, among adolescent girls, depression and poor self-efficacy mediate the association between child maltreatment and HIV risk behaviors (Newcomb, Locke, & Goodyear, 2003). Distress linked to cultural stressors, such as discrimination, has also been linked to higher levels of sexual risk behaviors and substance use in minority adolescents (Flores, Tschann, Dimas, Pasch, & de Groat, 2010).

One factor that contributes to HIV risk among individuals with poor mental health or high exposure to stressors is their level of self-efficacy (Bandura, 1997). In the context of HIV prevention, self-efficacy encompasses both coping self-efficacy (a belief in one’s ability to cope to successfully cope with life stressors empowerment to manage negative situations) and condom self-efficacy (a belief in one’s ability to negotiate condom use effectively). Research on adolescent self-efficacy shows that adolescents with higher coping self-efficacy report fewer traumatic stress symptoms following exposure to negative events (Saigh, Mroueh, Zimmerman, & Fairbank, 1995). Likewise, African-American adolescent girls with higher self-esteem are likely to report greater belief in their ability to negotiate condom use with partners (Salazar et al., 2005). Further
research that directly examines the associations among coping, self-efficacy, and risk behaviors is needed.

**Sexual risk and substance use as a form of coping.** A number of researchers have hypothesized that HIV risk behaviors actually serve as compensatory attempts to cope with distress or interpersonal difficulties in the absence of more adaptive coping skills (Lazarus & Folkman, 1984). Among HIV-positive gay men, greater engagement of risk behaviors has been linked with men’s reports of using drugs and having sex to relieve tension (McKusick, Horstman, & Coates, 1985; Robins et al., 1994). Briere (2004) hypothesized that risky sexual behaviors following childhood trauma may serve as maladaptive strategies to cope with trauma symptoms or may stem from negative self-evaluations resulting from trauma and maltreatment. Indeed, many of the psychological difficulties associated with trauma and child maltreatment, including denial, avoidance, helplessness, hopelessness, and low self-esteem have been directly linked to HIV risk behavior (Briere, 2004). Therefore, individuals with unaddressed depression or other psychological concerns, populations with increased prevalence of chronic stressors or fewer support resources, and communities with lower access to or utilization of health services
are at increased risk for engaging in risk behaviors as a form of compensatory coping. Unfortunately, as discussed earlier in this paper, the above factors are present for many minority adolescents and may increase their risk for HIV. While the association between mental health concerns and HIV risk behaviors suggests that coping deficits may contribute to HIV risk, the relationship between specific coping strategies and adolescent risk behaviors requires further study.

Existing research indicates that coping interventions can lead to meaningful positive changes in coping behavior and coping effectiveness (Lazarus & Folkman, 1984; Sikkema et al., 2007). Building upon Lazarus and Folkman’s (1984) cognitive theory of stress and coping, Folkman et al. (1991) developed a Coping Effectiveness Training program (CET) to help individuals distinguish between stressors that can be changed and those that cannot and to then tailor coping responses to particular stressors. CET has been found to reduce stress and anxiety while improving coping self-efficacy among HIV positive gay men (Chesney, Chambers, Taylor, Johnson, & Folkman, 2003). CET has also been associated with increases in active and acceptance coping,
decreases in behavioral disengagement (Carrico et al., 2006) and reductions in depressive symptoms (Cruess et al., 2002). Likewise, a number of other coping interventions have been shown effective in reducing mental health symptoms and improving coping skills (de Guzman et al., 2006; Sikkema et al., 2007; Smith, Tarakeshwár, Hansen, Kochman, & Sikkema, 2009). For example, Sikkema et al. (2007) developed Living in the Face of Trauma (LIFT), a group coping intervention also modeled on Lazarus and Folkman’s (1984) cognitive theory of stress and coping that is designed for people living with HIV and a history of sexual abuse. It combines cognitive-behavioral group therapy with adaptive coping skills and situation appraisal training. LIFT has been associated with reductions in traumatic stress as well as long-term reductions in HIV risk behaviors (Sikkema et al., 2008) even though the intervention does not directly target risk reduction strategies. In line with the theoretical model proposed in this paper, Sikkema et al. (2008) suggested that mental health and coping interventions constitute valuable components of effective HIV prevention.

However, fewer coping effectiveness interventions have been developed for use with minority adolescents (Cardemil, Reivich, Beevers, Seligman, & James, 2007). In an intervention designed to teach cognitive and social coping
skills to low-income minority middle-school children, Cardemil et al. (2007) found fewer depressive symptoms in Hispanic adolescents both immediately after the intervention and at a six-month follow-up, although there were no differences in African-American adolescents’ well-being either immediately post-intervention or six months later. A combined program teaching coping skills and promoting HIV transmission risk reduction in HIV-positive, primarily minority youth ages 13-24 found that individuals used more adaptive coping strategies and reported fewer HIV risk behaviors after receiving the intervention (Rotheram-Borus et al., 2001). These results are promising, although more research is needed specifically targeting coping effectiveness with minority adolescents in high risk environments.

Values and Risky Behaviors

The present review was unable to identify coping interventions that include an explicit values-component to increase effective culturally-relevant strategies for coping in adolescents. However, some research has begun to explore links between values and adolescents’ HIV risk behaviors. For example, Guilamo-Ramos, Bouris, Jaccard, Lesesne, and Ballan (2009) explored four dimensions of familismo and found that Hispanic girls who endorsed the belief
that they should defer to their parents ("subjugation to the family") reported lower levels of sexual risk behavior. Likewise, Hispanic adolescents’ level of acculturation is related to both positive and negative HIV risk factors. Rojas-Guyler, Ellis, and Sanders (2005) found that more acculturated Hispanics report better communication about sex with their partners but they also report more sexual partners. A meta-analysis of links between acculturation and risk behaviors indicated that Hispanics who endorse more acculturated values report greater risk behaviors but also more consistent condom use. Traditional Hispanic values may contribute to parent’s expectations that adolescents (particularly girls) will remain abstinent until marriage, and therefore discourage adolescents’ sexual debut. However, it may also decrease their likelihood of discussing safe-sex practices and risk factors with their children (Guilamo-Ramos, Jaccard, Turrisi, Johansson, & Bouris, 2006; Raffaelli & Ontai, 2001). Religion tends to be a protective factor against adolescent risk behaviors, and McCree, Wingood, DiClemente, Davies, and Harrington (2003) found that religious minority adolescents had higher condom self-efficacy and were more likely to report later sexual debut and more consistent condom use. However, some religions actively
denounce condom use, and so situations when religious beliefs promote or discourage condom use in adolescents should be explored further.

Cultural beliefs about gender roles may also contribute to HIV risk behaviors, particularly because both Hispanic and adolescent norms frequently reinforce power differentials between males and females, making it hard for girls to negotiate condom use (Deardorff et al., 2010). Teitelman et al. (2008) found that Hispanic girls whose mothers held more egalitarian beliefs about gender decision making in relationship were more likely to use condoms. Consistent with marianismo, Hispanic girls may internalize the belief that girls should not discuss sex (Deardorff, Tschann, & Flores, 2008). Girls’ fears about domestic violence related to the belief that men are in charge of sexual decision making may also discourage condom use. Crosby et al. (2008) found that high-risk African-American adolescent females reported power differentials in their romantic relationships and concerns that trying to negotiate condom use might put them at risk for partner violence. Research on links between values and sexual risk behaviors improves understanding of some contributing factors to ethnic disparities in HIV prevalence among adolescents.
Prado et al. (2010) tested the applicability of ecodevelopmental theory, which posits that multiple systems interact to determine individual behavior, to Hispanic adolescents’ sexual behavior and substance use. They found that family-related factors such as social support and generational differences in acculturation were significant predictors of adolescent risk behaviors. These authors suggested that intervening at a family-systems level would result in improved adolescent health behaviors. Indeed, Prado et al. (2007) incorporated family involvement in HIV prevention with Hispanic adolescents to utilize potential protective benefits of *familismo*. In comparison to either a drug-use or sexual behavior-focused intervention combined with English Language training, the family-focused intervention targeting risk behaviors resulted in reductions in cigarette and drug use as well as unsafe sex.

Likewise, DiClemente and colleagues (2004) developed a skills-based intervention for African-American adolescent girls that draws upon Africentric values to promote healthy sexual behaviors, ethnic and gender pride, and healthy relationships. Compared to participants who received an information-based treatment, adolescents receiving the values-oriented intervention reported
more consistent condom use, fewer new sexual partners, greater condom self-
efficacy, more frequent communication with partners about HIV prevention, and
greater HIV knowledge. A similar intervention for Hispanic adolescents
incorporated familismo and gender norms in a skills-based program based on
social cognitive theory and the theories of reasoned action and planned behavior
(Villarruel, Jemmott, & Jemmott, 2005). The authors collaborated with Hispanic
youth to establish relevant cultural values and found that adolescents in the
values-oriented intervention engaged in less frequent intercourse, reported more
consistent condom-use and had greater condom self-efficacy. Increases in
condom use were particularly evident among Spanish-speaking adolescents.

These studies provide promising evidence that inclusion of cultural values
in HIV prevention can be an effective means of reducing sexual risk and
substance use among minority adolescents. However, they have focused
primarily on discouraging HIV risk behaviors and less so on promoting mental
health and adaptive culturally-relevant coping strategies. Though incorporating
a combination of values with coping effectiveness training may offer ways of
further enhancing the benefits of HIV prevention with minority youth, no studies
were found to explore values in relation to specific coping strategies that are
related to HIV risk. Notably, a study on the association between acculturation and risky behaviors in Latinas living with HIV found that more acculturated Latinas displayed worse health outcomes with riskier behavior, but that coping mediated this relationship (Sánchez, Rice, Stein, Milburn, & Rotheram-Borus, 2010). Specifically, the researchers found that more acculturated individuals (as measured by country of birth, time in the US if not born here, and whether the participant elected to complete the interview in English or Spanish) were less likely to report “positive coping” behaviors and more likely to report “negative coping” behaviors than less acculturated participants, which in turn predicted higher risk behaviors. While this research does not specifically explore values, it does suggest that coping behavior can serve as a potential mechanism to target the influence of cultural factors on health outcomes among Latinas. Clearly, more research is needed on the links between particular coping profiles and minority adolescent risk behavior.

Summary

Ethnic disparities in rates of HIV infection in the United States continue to place a heavy burden on African-American and Hispanic youth. For many minority adolescents, these disparities are further compounded by frequent
exposure to community, economic, and social stressors. Cultural factors, such as values and social support, shape the way adolescents react to both chronic and acute stressors, and culturally-linked influences on coping have been reviewed and discussed above. Preferred or “appropriate” coping methods have been shown to vary in accordance with cultural norms about mental health, social and family structure, and even historical context. A review of the literature suggests that these differences reflect individuals’ socialization to culturally-congruent methods of coping. Engaging relevant norms such as Africentrism, familismo, and religious beliefs provides the opportunity to tailor risk prevention to fit the needs of minority adolescents. Cultural values are associated with both adaptive and maladaptive coping responses, and many coping strategies serve both protective and risk-heightening roles depending on the situational context. Deficits in coping effectiveness have in turn been associated with greater HIV risk behaviors, including unsafe sexual behavior and substance use, which have been suggested to serve as maladaptive, compensatory attempts to cope with psychological distress. Understanding the associations among values, coping and positive health behaviors, however, is complicated by substantial variability in how coping strategies are conceptualized and operationalized across studies.
Consideration of both the specific strategies used as well as flexibility in applying strategies across contexts is needed to determine the ways in which values influence how adolescents cope with stressors and how their coping relates to HIV risk behaviors.

Although limited, existing research does provide insight into the types of broad coping approaches that may be helpful with minority adolescents in specific contexts. The ability to flexibly engage coping strategies that fit the context has been identified as generally adaptive for minority adolescents. Research also suggests that individuals who are able to accurately appraise and respond to the situation when choosing how to react to stressors are most likely to experience positive health outcomes. In turn, this pattern of findings indicates that interventions aimed at improving coping can be effective. Values-focused interventions are less well studied, but show encouraging results surrounding the utility of engaging personal values to promote healthy behavior. Unfortunately, research suggests that existing interventions lack clarity regarding the cultural values and norms that may influence HIV risk and how these values should be incorporated into prevention efforts. Greater awareness of cultural norms and value-sets shared by many Hispanic and African-
American youth can be incorporated into the broader design of culturally-appropriate interventions, which will likely increase participation and retention in interventions with underserved groups at high risk for HIV. In order to inform development of interventions that draw upon personal values to maximize the effective of HIV prevention, further research is needed to clarify the link between Hispanic and African-American cultural values and minority adolescent coping behaviors.

The Current Project

As discussed, research supports a link between cultural values and coping strategies, as well as a link between specific coping strategies and HIV risk behaviors. However, the pattern of associations among all three factors, including how cultural values may influence HIV risk, has not been adequately explored. Such research is an essential prerequisite to identifying the mechanisms of behavior change most likely to be effective in reducing HIV risk among Hispanic and African-American adolescents. Given the evidence reviewed above, there is reason to hypothesize that cultural values may influence Hispanic and African-American adolescents’ HIV risk by shaping the use of specific adaptive or maladaptive coping strategies that are, in turn, associated
with health outcomes and behavior. In other words, because coping is a mechanism through which values influence behavior, HIV risk behaviors may be influenced by cultural values via their impact on coping strategies. The current research is intended to provide the first step towards testing the construct validity of a theoretical model in which values and cultural context contribute to coping behaviors and coping, in turn, mediates the association between values and HIV risk profile. The specific predictions to be tested in the current study are as follows:

**Research Questions and Hypotheses**

I. **Which values do African-American and Hispanic adolescents endorse?**

In order to establish normative value sets within and across ethnic groups, the first goal of the current study will be to examine the extent to which participants endorse culturally-specific and non-culturally specific values within four domains: (1) *familismo*, (2) traditional gender roles, (3) religiosity, and (4) Africentrism. Hypotheses regarding these values are described below.

**Interethnic Variation.**

Adolescents will endorse normative values from their primary ethnicity more strongly than normative values from another ethnicity.
Specifically, African-American adolescents are expected to identify more strongly with Africentric values, while Hispanic adolescents are expected to identify more strongly with familismo and traditional gender role values. No between-group difference is expected for religiosity.

**Intraethnic Variation.**

Intra-ethnic variability is expected within ethnic groups, with stronger endorsement of normative values among adolescents who (1) report exposure to more ethnicity-linked and environmental stressors, (2) are immigrants and have spent less time in the US, and (3) report greater social support from their family or community. Among Hispanic adolescents, individuals who speak both English and Spanish are also expected to endorse normative values more than individuals who speak only English.

**II. How does cultural context influence coping?**

Participants reporting greater exposure to cultural risk factors, including lower socioeconomic status and greater exposure to life stressors, as well as lower levels of social support will display less adaptive coping profiles. Specifically, they will endorse lower perceived coping flexibility, decreased use
of problem-focused coping, lower reported resilience, greater use of avoidant coping and compensatory coping, and lower coping self-efficacy.

III. What is the association between values and coping?

In order to examine the association between cultural values and coping behavior, level of endorsement of each values subset will be examined in relation to (1) specific coping strategies, (2) coping flexibility, (3) resilience, and (4) coping self-efficacy. Hypotheses regarding these factors are presented below.

Coping Strategies.

Participants who report stronger identification with normative values will be more likely to engage in culturally-congruent coping strategies. Specifically, (1) individuals more strongly endorsing religious values will report greater use of religious coping strategies and (2) individuals more strongly endorsing values consistent with familismo and traditional gender roles will report lower use of compensatory coping. Additionally, higher levels of familismo, Africentric values, and religious or spiritual values are expected to endorse greater use of problem-focused coping, greater resilience, and lower use of avoidant coping.
Coping Flexibility.

Adolescents who endorse normative values more strongly are expected to report less coping flexibility.

Coping Self-Efficacy.

Adolescents with higher levels of *familismo*, Africentric values, and religious or spiritual values are expected to report greater coping self-efficacy. An interaction is predicted, such that adolescents with higher levels of *familismo* and Africentric values will report less coping self-efficacy among those who endorse higher levels of exposure to violence and lower perceived social support. An interaction is also predicted for endorsement of traditional gender roles, wherein girls with greater endorsement of gender roles will endorse less coping self-efficacy while boys with greater endorsement of gender roles will endorse greater coping self-efficacy.

IV. How does coping influence HIV risk?

Higher levels of HIV risk behavior, including increased sexual risk behaviors and increased substance use, are hypothesized to be associated with lower perceived coping flexibility, decreased use of problem-focused coping,
lower reported resilience, greater use of avoidant coping and compensatory coping, and lower coping self-efficacy.

V. What is the association between values and HIV risk?

Higher endorsement of the values of *familismo*, Africentrism, traditional gender roles, and religious or spiritual beliefs are expected to be associated with lower HIV risk behavior. However, coping is expected to mediate this relationship. Specifically, individuals with greater endorsement of traditional values who also endorse higher levels of avoidant and compensatory coping and lower levels of coping flexibility, religious coping, problem-focused coping, resilience, and coping self-efficacy are expected to report higher levels of HIV risk.

Method

*Sample and Procedure*

The National Longitudinal Study of Adolescent Health (Add Health) is a nationally representative sample of health and behavior among adolescents in the United States in grades 7-12 (Harris et al., 2009). Wave I of the study was conducted in 1994-95 using school-based multistage stratified sampling of 80
high schools and 52 middle schools within the United States. These sampling methods were used to establish a sample that is representative of U.S. schools with respect to region of country, urbanicity, school size, school type, and ethnicity (Harris et al., 2009). Data were collected using school-based self-report questionnaires and a subset of participants was selected to complete home-based interviews with both the adolescent and a resident parent (usually the mother) in 1995. Subsequent waves of data collection were conducted in 1996 (Wave II), 2001-02 (Wave III), 2007-08 (Wave IV), and 2015-18 (Wave V, currently underway).

**Study Sample**

For the current project, data collected at the initial in-home interview and parent interview (Wave I) as well as data from Waves III and IV were used. All items were selected from the Wave I in-home interview unless otherwise indicated. Only participants who self-identified as Hispanic/Latino ($N = 149$) and/or Black/African-American ($N = 298$) and who had been interviewed for all three waves were included in the analyses ($N = 437$). Ten participants (2.3%) identified as both Hispanic/Latino and Black/African-American; when conducting analyses based on ethnicity, these participants were classified as
Hispanic/Latino. Twenty-three participants (5.3%) selected more than one race. Among participants who identified as Hispanic/Latino, 45.6% identified their race as White (N = 68), 6.7% identified their race as Black (N = 10), 7.4% identified their race as American Indian (N = 11), 2.0% identified their race as Asian (N = 3), and 46.3% identified their race as Other (N = 69). Among the 19 participants who selected both Black/African-American and another race, 84.2% (N = 16) marked Black as their primary race.

The majority of participants were ages 13 to 19 years at Wave I (N = 429, 98.5%, M = 16.1 years). One participant was age 12, five participants were age 20, and one participant was age 21 at Wave I. The overall sample was 63.4% female (N = 277); among Hispanic/Latino participants, 54.4% of adolescents were female (N = 81) and among Black/African-American (non-Hispanic) participants, 68.1% of adolescents were female (N = 196).

**Measures**

**Demographic Information.** During the in-home interview, participants were asked to indicate their date of birth; gender; whether or not they are of Hispanic or Latino origin (and if so, their Hispanic/Latino background); their primary racial background; primary language spoken at home (English, Spanish,
or other); and country of birth (if outside the United States, they were also asked to indicate how long they had lived in the U.S.).

**Family Socioeconomic Status.** Parents were asked to indicate their family’s total annual income in Wave I. For any participant with missing income data, this was supplemented by their answers in Wave III or Wave IV. Because Wave IV income was reported in categories instead of on a continuous scale, reported incomes from the prior waves were adjusted into those categories, as follows: *Less than $5,000; $5,000-$9,999; $10,000-$14,999; $20,000-$24,999; $25,000-$29,999; $30,000-$39,999; $40,000-$49,999; $50,000-$74,999; $75,000-$99,999; $100,000-$149,999; and $150,000 or more.*

**Life Stressors.** To measure exposure to violent life stressors, adolescents were asked the frequency of their exposure to violence over the previous 12 months, including witnessing or being the victim of six violent situations (e.g., *you saw someone shoot or stab another person; you were jumped*) and perpetrating two violent situations (e.g., *you pulled a knife or gun on someone*). Adolescents indicated whether each of these situations happened never, once, or more than once over the previous year. A composite score ranging from 0-8 was created by summing
the number of items endorsed, with higher scores indicating greater exposure to violence.

To measure exposure to prejudice, adolescents were asked to indicate how much they agree with the statement, “Students at your school are prejudiced,” with 1=Strongly Agree to 5=Strongly Disagree.

**Perceived Social Support.** Adolescents were asked, “How much do you feel that…” “adults care about you;” “your teachers care about you;” “your parents care about you;” “your friends care about you;” “the people in your family understand you;” “you want to leave home” (reverse coded); “you and your family have fun together;” “your family pays attention to you.” Responses were recorded on a 5-point Likert scale from 1=Not at all to 5=Very much. A sum score ranging from 8-40 was computed, with higher scores indicated greater perceived social support. Internal reliability was adequate (α = .76).

**Cultural Values.** Participants were asked to indicate the degree to which they endorsed values in the following domains: (a) Traditional gender roles; (b) Religion; (c) *Familismo*; and (d) Africentrism. For consistency across African-American and Hispanic participants and to facilitate comparison between value sets, in addition to studies suggesting similarities in collectivist
values between African-American and Hispanic ethnic groups, all participants' responses were included in all four values domains.

Traditional Gender Roles. Two items from Wave III were used to measure participants' values about gender roles. On a 5-point Likert scale ranging from 1=Strongly Agree to 5=Strongly Disagree, participants were asked to indicate how much they agreed with the following statements: “It is all right for an unmarried couple to live together even if they aren’t interested in considering marriage,” and “It is much better for everyone if the man earns the money and the woman takes care of the home and family (reverse coded).” They were also asked to indicate on a 7-point Likert scale ranging from 1=Never or almost never, to 7=Almost always how much they endorsed the statement, “I am conventional.” Internal reliability among all three items was low and they were therefore considered to represent separate facets of traditional gender roles and were entered as separate values in all analyses.

Religion. Adolescents were asked to indicate their identified religion (including 27 identified denominations, no religion, or “Other”).

To measure fundamentalism, participants were asked, “Do you agree or disagree that the sacred scriptures of your religion are the word of God and are
completely without any mistakes?" They were given a score of 1 for “agree” and 0 for “disagree” or if they indicated they were not religious or their religion does not have sacred scriptures.

To measure their general religiosity and religious values, participants were asked to indicate how frequently they attended religious services in the past 12 months (0=Never; or no religion, to 3=Once a week or more) as well as how important religion is to them (0=Not important at all, to 3=Very important) and how often they pray (0=Never, to 4=At least once a day). During Wave III, participants were also asked to indicate the extent to which they agree with three statements about religious beliefs, from 4=Strongly agree, to 0=Strongly disagree, including, “What seem to be coincidences in my life are not really coincidences; I am being ‘led’ spiritually;” “I employ my religious or spiritual beliefs as a basis for how to act and live on a daily basis;” and “Angels are present to help or watch over me.” A composite score for religiosity was created by summing the scores for all six items, resulting in possible scores ranging from 0-21, with higher scores indicated greater religiosity. Internal reliability was adequate (α =.75).

Participants were also asked during Wave III, “How important is your spiritual life to you?” (0=Not important, to 3=More important than anything else);
and “Which statement best describes your belief about God?” from the following options: “I don’t believe in God now and I never have,” “I don’t believe in God now, but I used to,” “I’ve never been sure if there is a God or not,” “I believe in God, but I didn’t before,” and “I believe in God and I always have.” Reliability was low between these two items and the religiosity items above, which is consistent with research suggesting that spirituality and religiosity are distinct constructs (Benson, Roehlkepartain, & Rude, 2003; Wong, Rew, & Slaikeu, 2006). Therefore, spirituality and belief in god were retained as single items.

_Familismo_. Three components of _familismo_ were measured, including _familismo_: closeness; _familismo_: connectedness; and _familismo_: referent. Family connectedness and family closeness have been used in prior studies to approximate certain aspects of _familismo_ (Bacio, Mays, & Lau, 2013; Stevens-Watkins & Rostosky, 2010). Referent stems from the prioritization within _familismo_ of interdependence and deference to the family unit over autonomous decision-making (Steidel & Contreras, 2003). To measure closeness, adolescents were asked to indicate, from 1=Not at all, to 5=Very much, how close they feel to their mother (or female caregiver) and how much the adolescent thinks she cares about him/her as well as how close they feel to their father (or male caregiver)
and how much the adolescent thinks he cares about him/her. They were also asked to indicate how much they agree (from 1=Strongly Agree, to 5=Strongly Disagree) with two statements: “Most of the time, your mother is warm and loving toward you,” and “Most of the time, your father is warm and loving towards you.” These items were reverse coded and for adolescents with only one primary caregiver, only one response was included. Higher scores indicate greater endorsement of familismo: closeness. Internal reliability was good (α = .80).

To measure connectedness, adolescents were asked to indicate how many of a list of 10 common activities they had done with their mother (or female caregiver) and father (or male caregiver) over the past 4 weeks. These items included activities such as going shopping, playing a sport, talking about personal problems, working on a project for school, etc. Scores were averaged across caregivers, with possible scores ranging from 0 (adolescent denied engaging in any of the activities with a caregiver over the past 4 weeks) to 1 (adolescent endorsed engaging in all of the activities with all primary caregivers over the past 4 weeks). Higher scores indicate greater endorsement of familismo: connectedness. Internal reliability was adequate (α =.73).
To measure referent values, adolescents were asked whether their parents let them make their own decisions about seven areas of life, as follows: “the time you must be home on a weekend night;” “the people you hang around with;” “what you wear;” “how much television you watch;” “which television programs you watch;” “what time you go to bed on week nights;” and “what you eat.” One point was given for each item endorsed, such that scores ranged from 0 (parents do not let adolescent make his/her own decisions about any of these areas) to 7 (adolescent endorses making all his/her own decisions about these areas). Higher scores indicate greater autonomy and lower endorsement of familismo: referent. Internal reliability was moderate (\( \alpha = .66 \)). However, items were dichotomous which can reduce internal reliability. This alpha was therefore deemed adequate for inclusion.

_Africentrism_. Two components of Africentrism were measured, including collectivism and community orientation (communalism). Parents’ responses on the parent in-home interview at Wave I were used as a proxy for adolescents’ exposure to collectivism values. Parents were asked, “If you saw a neighbor’s child getting into trouble, would you tell your neighbor about it?” and “If a neighbor saw your child getting into trouble, would your neighbor tell you about it?” Responses
were recorded on a 5-point Likert scale and ranged from 1=Definitely would, to 5=Definitely would not. A composite variable taking the mean of both items was created, with scores ranging from 1-5 and higher scores indicating lower levels of collectivism. Internal reliability was moderate (α =.62). However, with only two items it is difficult to establish high internal reliability. Because the items were so conceptually similar, they were deemed to represent participants’ exposure to collectivist values within the home (parent’s response) as well as within their neighborhood (parent’s assessment of neighbor’s likely response) and using the composite variable was deemed appropriate.

To measure community orientation, adolescents were asked to indicate whether each of three statements was true or false: “You know most of the people in your neighborhood,” “In the past month you have stopped on the street to talk with someone who lives in your neighborhood,” and “People in the neighborhood look out for each other.” One point was assigned for each item endorsed as “true” and a composite with scores ranging from 0-3 was created, where higher scores indicate greater community orientation. Internal reliability was low moderate (α =.51). However, the items were dichotomous and only three items were included in the sum variable, both of which are factors that can reduce internal reliability.
The items themselves also measure three separate facets of the same construct, which together represent an overall orientation to participating in and engaging with one’s community. The alpha was therefore not expected to reach traditionally established limits of acceptability.

**Coping.** Research on coping encompasses a broad and multi-faceted set of approaches to measuring and conceptualizing coping behavior, including individual strategies, coping profiles, and trait or situation-specific coping styles. For the purpose of the current study, coping behavior will be examined using items that represent the following constructs: Coping Self-Efficacy, Coping Flexibility, Religious Coping, Avoidant Coping, Problem-Focused Coping, Compensatory Coping, and Coping Resilience.

**Coping Self-Efficacy.** Three items from Wave IV were used to measure coping self-efficacy/perceived controllability. Participants were asked how often in the past 30 days that they “…felt that you were unable to control the important things in your life,” “…felt confident in your ability to handle your personal problems?” and “…felt that difficulties were piling up so high that you could not overcome them?” Responses were recorded on a 5-point Likert scale ranging from 0=Never, to 4=Very Often. The first and third items were reverse coded and a sum score was
created ranging from 0-12 so that higher scores indicated greater coping self-efficacy. Internal reliability was moderate (α = 0.66)

*Coping Flexibility.* To measure participants’ perceived coping flexibility, they were asked at Wave III how often the statement “I am adaptable.” is true of them, with answers ranging from 1=Never or almost never, to 7=Always or almost always. Higher scores indicated greater coping flexibility.

*Religious Coping.* To measure religious coping, participants were asked at Wave IV, “How often do you turn to your religious or spiritual beliefs for help when you have personal problems, or problems at school or work?” Responses were recorded on a 5-point Likert scale ranging from 0=Never, to 4=Very Often. Higher scores indicated greater use of religious coping.

*Avoidant Coping.* To measure avoidant coping, adolescents were asked to indicate how much they agree with the statement, “You usually go out of your way to avoid having to deal with problems in your life.” Responses were recorded on a 5-point Likert scale ranging from 1=Strongly Agree, to 5=Strongly Disagree, with lower scores indicating greater use of avoidant coping.

*Problem-Focused Coping.* To measure problem-focused coping, adolescents were asked to indicate how much they agree with the statement, “When you are
attempting to find a solution to a problem, you usually try to think of as many different ways to approach the problem as possible." Responses were recorded on a 5-point Likert scale ranging from 1=Strongly Agree, to 5=Strongly Disagree, with lower scores indicating greater use of problem-focused coping.

**Compensatory Coping.** To measure compensatory (risk-behavior-based) coping, adolescents were asked to indicate how much they agree with the statement, “If you had sexual intercourse, you would feel less lonely.” Responses were recorded on a 5-point Likert scale ranging from 1=Strongly Agree, to 5=Strongly Disagree, with lower scores indicating greater use of compensatory coping.

**Coping Resilience.** To measure coping resilience, adolescents were asked to indicate how much they agree with the statement, “Difficult problems make you very upset.” Responses were recorded on a 5-point Likert scale ranging from 1=Strongly Agree, to 5=Strongly Disagree, with high scores indicating greater coping resilience.

**HIV Risk Behavior.** Adolescents were asked about their sexual behavior and substance use. These responses were then used to create a composite risk score for both sexual behavior and substance use.
Sexual Risk Index. Responses from 15 items were included in the sexual risk score, including questions about sexual self-efficacy and sexual behavior. To measure self-efficacy, adolescents were asked, “How sure are you that you could resist sexual intercourse if your partner did not want to use some form of birth control?” with responses ranging from 1=Very sure, to 5=Very Unsure, and 6=I never want to use birth control. Sexual behavior questions included whether the adolescent has ever had sexual intercourse; age at sexual debut; whether a condom was used at first sexual intercourse; whether a condom has ever been used for sexual intercourse; what proportion of the time a condom is used during sex; whether the adolescent has ever been diagnosed with a sexually transmitted disease; whether the adolescent has ever traded sex in exchange for drugs or money, and if so how many times; total number of sexual partners; whether the adolescent had been drinking or using drugs the first time s/he had sex, as well as the most recent time s/he had sex; and whether the adolescent has ever been forced to have sex against her will (if female) or has ever forced someone to have sex (if male). There was no item in Add Health that asked whether males had been forced to have sex against their will, and no item asking if females had forced someone else to have sex. Therefore, it was not possible to include these
questions in the composite risk score. Sexual risk scores were calculated based on adolescents’ reported behaviors and ranged from a possible 0 (lowest risk) to 22 (highest risk). Tests of skewness and kurtosis indicated that sexual risk scores were not normally distributed, with skewness of 1.30 ($SE=.12$) and kurtosis of 1.90 ($SE=.23$). To resolve this, categories of risk were created including low (sexual risk index of 0, $N = 159$), moderate (sexual risk index of 1-3, $N = 170$), and high (sexual risk index over 3, $N = 108$). This process eliminated problems with skewness (skewness = .20, $SE=.12$) and reduced kurtosis to -1.30 ($SE=.23$).

*Substance Use Risk Index.* Responses from 15 items were included in the substance use risk score, including questions about cigarette, alcohol, and illegal drug use. Substance use questions included whether the adolescent had ever smoked cigarettes regularly; whether they ever had a drink of alcohol (not just a sip); how many days they drank alcohol in the past 12 months; average number of drinks consumed when drinking; number of times they have used marijuana in their life; number of times they used marijuana in the past 30 days; number of times they have used cocaine in their life; number of times they used cocaine in the past 30 days; number of times they have used inhalants such as glue or solvents in their life; number of times they used inhalants in the past 30 days;
number of times they have used other illegal drugs in their life; number of times they used other illegal drugs in the past 30 days; whether they have ever injected any illegal drug, such as heroin or cocaine, with a needle; how many times they have injected any illegal drug in their lives; and how many times they injected any illegal drug in the past 30 days. Substance use risk scores were calculated based on adolescents’ reported behaviors and ranged from a possible 0 (lowest risk) to 43 (highest risk). Tests of skewness and kurtosis indicated that reported substance risk behavior was not normally distributed, with skewness of 3.01 ($SE=.12$) and kurtosis of 13.55 ($SE=.23$). To resolve this, categories of risk were created including low (substance use risk index of 0, $N = 159$), moderate (substance use risk index of 1, $N = 111$), and high (substance use risk index over 1, $N = 147$). This process eliminated problems with skewness (skewness = .14, $SE=.12$) and significantly reduced kurtosis to -1.64 ($SE=.23$).

**Results**

**Missing Data**

Examination of the dataset did not reveal a pattern within the missing data. Approximately 1.9% of the data were missing (i.e., approximately 1.9% of cells in the overall dataset spreadsheet did not contain quantitatively meaningful
values). Specifically, examination of the dataset as downloaded using PROC FREQ, PROC MEANS, and PROC MI in SAS version 9.3 indicated that data were missing at random at the dataset and variable levels. The most common cause for missing data was a failure on the part of the participant to complete a particular questionnaire item on a given day. Missing data were imputed where necessary using multiple imputation (MI) based upon fully conditional Markov chain Monte Carlo (MCMC; Schafer, 1997) modeling. Predictor variables were imputed using the other predictor variables included in our data analytic models (see below); outcome variables were imputed using the other outcome variables to avoid contamination between predictors and outcome variables within the imputation process. The final dataset contained imputed values which had been based upon the averaged values of 100 separate imputations using a standard SAS procedure (Rubin, 2004).

Preliminary Analyses

Descriptive statistics were generated to further examine participant demographics. The majority of participants were born in the United States ($N = 389, 89\%$). A chi-square test of independence was conducted and results indicated that the percentage born in the US varied by ethnicity $\chi^2 (1, N = 437) =$
63.20, \( p < .001 \). Among Hispanic/Latinos, 27.5\% of participants were born outside the US \((N = 41)\) while only 2.4\% of Black/African-American participants were born outside the US \((N = 7)\). Among Hispanic/Latino participants born outside the US, 51.2\% \((N = 21)\) were born in Mexico and 48.8\% \((N = 20)\) were born in Central and South America. Black/African-American participants born outside the US reported countries of birth in Europe \((N = 4)\) and Western/Northern Africa \((N = 2)\). One Black/African-American participant born outside the US did not report a country of birth. Participants born outside the US reported living in the US between 1-18 years \((M = 8.91, SD = 4.73)\). The majority of participants reported speaking English at home \((N = 369, 84.4\%)\). Sixty-three participants \((14.4\%)\) reported speaking Spanish at home and five participants \((1.1\%)\) reported speaking another language at home. The majority of participants \((N = 384, 87.9\%)\) identified as Christian; 149 \((34.1\%)\) identified as Baptist, 99 \((22.7\%)\) identified as Catholic, 56 \((12.8\%)\) identified as Disciples of Christ, and 80 \((18.3\%)\) identified as another Christian religion. Additionally, 16 \((3.7\%)\) participants endorsed a non-Christian religion and 33 \((7.6\%)\) endorsed no religion. Four participants \((< 1\%)\) refused to answer or did not know their religion.
Cultural Context

The median total family income reported was $30,000-$39,999, and a third of participants reported total family income of less than $24,999 annually ($N = 144, 33.0\%). Overall participants reported low levels of exposure to violence, with participants endorsing on average one out of eight possible types of exposure to violence in the past year ($M = 1.28, SD = 1.90$). Participants endorsed moderately high levels of perceived social support on a scale ranging from 8-40 possible points ($M = 31.77, SD = 4.94$). Participants also endorsed moderate levels of exposure to prejudice at school on a scale of 1-5, with lower scores indicating greater exposure to prejudice ($M = 3.17, SD = 1.19$).

Analysis of variance was used to compare cultural context variables across race/ethnicity. Hispanic/Latino students reported more exposure to prejudice at school ($M = 2.88, SD = 1.15$, lower score indicates higher levels of reported exposure to prejudice) than Black/African-American students ($M = 3.32, SD = 1.19$), $F(1,435) = 13.74, p < .001, \eta^2 = .031$. Between-group differences for perceived support, total family income (SES) and exposure to violence were not statistically significant.
Coping Profiles

Participants on average reported moderately high levels of coping self-efficacy ($M = 8.43, SD = 2.39$). On average they reported high levels of coping flexibility ($M = 5.49, SD = 1.41$) and endorsed high levels of problem-focused coping ($M = 1.95, SD = 0.74$; lower score indicates greater use of problem-focused coping). They endorsed moderate levels of avoidant coping ($M = 2.76, SD = 1.09$), religious-based coping ($M = 2.59, SD = 1.37$), and resilience ($M = 2.34, SD = 1.03$) and moderately low levels of compensatory coping ($M = 3.46, SD = 1.07$; lower scores indicate greater use of compensatory coping).

Analysis of variance was used to compare endorsement of specific coping behavior across race/ethnicity. There was a statistically significant difference in frequency of reported religious coping, with Black/African-Americans reporting more use of religious coping ($M = 2.84, SD = 1.24$) than Hispanic/Latinos ($M = 2.09, SD = 1.49$), $F(1,435) = 31.32, p < .001, \eta^2 = .067$. Between-group differences for all other coping behaviors were not statistically significant.

HIV Risk Behaviors

Overall, the sample reported low levels of HIV risk behaviors. Approximately half of the sample reported ever having sex (50.6%, $N = 221$)
although among those participants, average age of sexual debut was somewhat early at 14.1 years ($SD = 2.37$). Only 9.50% of sexually active participants ($N = 21$) reported ever using condoms and 8.60% of sexually active participants reported ever having a sexually transmitted disease ($N = 19$). Only 1.1% of the total sample (2.26% of sexually active participants, $N = 5$) reported ever trading sex for money or other goods.

The sample reported generally low levels of substance use, with 10.30% ($N = 45$) of all participants reporting ever having smoked regularly (daily for 30 days) and 54.00% ($N = 236$) of all participants reporting having had a drink of alcohol more than 2-3 times in their lives. Additionally, 22.20% ($N = 97$) of all participants endorsed ever having tried marijuana, 2.29% ($N = 10$) ever having tried cocaine, 4.12% ($N = 18$) ever having tried inhalants, 3.66% ($N = 16$) ever having tried other illegal drugs, and just 0.45% ($N = 2$) ever injected a drug.

Analysis of variance was used to compare HIV risk across race/ethnicity. Although both groups reported low levels of risk, there was a statistically significant difference in level of reported substance use between racial/ethnic groups. Hispanic/Latino students reported higher levels of substance use risk ($M = 1.11$, $SD = .89$) than did Black/African-American students ($M = 0.83$, $SD = .89$),
\( F(1,435) = 10.93, p = .001, \ \eta^2 = .025. \) Between-group differences for sexual risk behavior were not significant.

**Research Question 1: Which values do African-American and Hispanic adolescents endorse?**

To gain a clearer picture of normative values among African-American and Hispanic participants, means and standard deviations were calculated for the endorsement of each value. To examine interethnic variability, a series of one-way analyses of variance were then conducted to compare Hispanic and African-American participants’ endorsement of *familismo*, Africentric values, religiosity/spirituality, and traditional gender roles. The results are presented in Table 1. Contrary to expectations, Hispanics endorsed lower levels of *familismo* connectedness, \( F(1,435) = 7.60, p = .006, \ \eta^2 = .017, \) although the effect size was small and accounted for only 1.7% of the variance in the connectedness. Hispanic participants also endorsed lower levels of collectivism, \( F(1,435) = 11.26, p = .001, \ \eta^2 = .025, \) community orientation, \( F(1,435) = 6.45, p = .011, \ \eta^2 = .015, \) spirituality, \( F(1,435) = 29.39, p < .001, \ \eta^2 = .063, \) religiosity, \( F(1,435) = 52.73, p < .001, \ \eta^2 = .108, \) and the traditional gender role value that it is not okay to live together without the intention of getting married \( F(1,435) = 10.77, p = .001, \ \eta^2 = .024, \) than did
### Table 1: Interethnic Variability in Endorsement of Cultural Values

<table>
<thead>
<tr>
<th></th>
<th>Hispanic</th>
<th>African-American</th>
<th>F</th>
<th>$\eta^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Familismo</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Closeness</td>
<td>4.46 (0.65)</td>
<td>4.50 (0.63)</td>
<td>0.47</td>
<td>.001</td>
</tr>
<tr>
<td>Connectedness</td>
<td>.33 (0.19)</td>
<td>.38 (0.20)</td>
<td>7.60**</td>
<td>.017</td>
</tr>
<tr>
<td>Referent$^a$</td>
<td>4.98 (1.76)</td>
<td>4.91 (1.60)</td>
<td>1.56</td>
<td>.000</td>
</tr>
<tr>
<td><strong>Africentric Values</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collectivism$^a$</td>
<td>1.93 (0.86)</td>
<td>1.62 (0.72)</td>
<td>11.26**</td>
<td>.025</td>
</tr>
<tr>
<td>Community Orientation</td>
<td>2.15 (1.01)</td>
<td>2.38 (0.82)</td>
<td>6.45*</td>
<td>.015</td>
</tr>
<tr>
<td><strong>Religious Values</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religiosity</td>
<td>13.30 (4.24)</td>
<td>16.4 (3.69)</td>
<td>52.73***</td>
<td>.108</td>
</tr>
<tr>
<td>Spirituality</td>
<td>1.48 (0.75)</td>
<td>1.88 (0.73)</td>
<td>29.39***</td>
<td>.063</td>
</tr>
<tr>
<td>Fundamentalism</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Belief in God</td>
<td>2.92 (0.53)</td>
<td>2.98 (0.27)</td>
<td>3.54</td>
<td>.008</td>
</tr>
<tr>
<td><strong>Traditional Gender Roles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Premarital Cohabitation</td>
<td>2.64 (1.25)</td>
<td>3.07 (1.31)</td>
<td>10.77**</td>
<td>.024</td>
</tr>
<tr>
<td>Conventionality</td>
<td>4.56 (1.63)</td>
<td>4.84 (1.54)</td>
<td>2.49</td>
<td>.006</td>
</tr>
<tr>
<td>Man as Breadwinner</td>
<td>2.87 (1.37)</td>
<td>2.38 (1.34)</td>
<td>12.72***</td>
<td>.028</td>
</tr>
</tbody>
</table>

*Note.* *p* < .05, **p** < .01, ***p*** < .001. *a*Higher score indicates lower endorsement.

African-American participants. In contrast, Hispanics endorsed higher levels of the traditional gender role value that men should be the breadwinner and women should take care of the family, $F(1,435) = 12.72, p < .001, \eta^2 = .028$, than
did African-Americans. There were no statistically significant differences between Hispanic and African-American participants in their endorsement of *familismo* closeness or *familismo* referent values, conventionality, or belief in God. A chi-square test of independence was conducted comparing Hispanic and African-American participants' endorsement of fundamentalism because it was measured dichotomously. Levels of fundamentalism did not differ significantly between Hispanic and African-American participants, $\chi^2(1, N = 437) = 3.14, p = .077$.

To examine intraethnic variability and the impact of cultural context on values endorsement, a series of hierarchical multiple regression analyses was conducted. A set of 11 separate regression analyses was conducted, predicting each of the 11 target values from race/ethnicity, cultural context, and the interaction between each cultural context factor and race/ethnicity. Because the fundamentalism was measured dichotomously and cannot serve as an outcome variable using linear regression, logistic regression was instead used to examine intraethnic variability in endorsement of fundamentalism. The cultural predictors in each regression analysis were: exposure to violence, country of birth (inside or outside the US), perceived social support, total family income
(socio-economic status) and language spoken in the home. All continuous variables were mean-centered prior to creating the interaction terms to limit problems with collinearity.

For each analysis, all cultural context variables and participants’ race/ethnicity were entered in Step 1 of the analysis. In Step 2, the interaction terms between cultural context and race/ethnicity were added. Because there was extremely low variability in language spoken at home and country of birth within ethnic groups, interaction terms were not created for those variables. There were a total of three interaction terms included in each analysis.

Omnibus effects of race/ethnicity and cultural context on cultural values were significant for eight of the 11 target values, including familismo closeness, $R^2_{\text{adj}} = .271$, $F(6,430) = 28.04$, $p < .001$; familismo connectedness, $R^2_{\text{adj}} = .028$, $F(6,430) = 3.12$, $p = .005$; premarital cohabitation, $R^2_{\text{adj}} = .041$, $F(6,430) = 4.14$, $p < .001$; man as breadwinner, $R^2_{\text{adj}} = .083$, $F(6,430) = 7.60$, $p < .001$; collectivism, $R^2_{\text{adj}} = .020$, $F(6,430) = 2.50$, $p = .022$; community orientation, $R^2_{\text{adj}} = .019$, $F(6,430) = 2.39$, $p = .028$; religiosity, $R^2_{\text{adj}} = .117$, $F(6,430) = 10.67$, $p < .001$; and spirituality, $R^2_{\text{adj}} = .072$, $F(6,430) = 6.62$, $p < .001$. For familismo referent, $R^2_{\text{adj}} = -.006$, $F(6,430) = 0.57$, $p = .755$; conventionality, $R^2_{\text{adj}} = -.009$, $F(6,430) = 1.69$, $p = .123$; and belief in God, $R^2_{\text{adj}} = \ldots$
omnibus effects of race/ethnicity and cultural context were not statistically significant. Results of the logistic regression predicting fundamentalism from ethnicity and cultural context showed that for the omnibus effect, testing the full model against a constant only model was not statistically significant, $\chi^2(6, N = 437) = 9.99, p = .125$.

In terms of individual predictors in each of these analyses, cultural context factors were significantly predictive of values for five of the eight values for which omnibus effects were significant. For the other three values (collectivism, religiosity, and spirituality), race/ethnicity was the only significant individual predictor in Step 1 of the analyses. Because 11 separate hierarchical multiple regression analyses were conducted, 8 of which revealed significant results for the omnibus effect, standardized regression coefficients and variance explained by the individual predictors within each statistically significant model are presented in the Appendix, in Tables 13-19, with the exception of ethnicity and cultural context predicting familismo closeness, which is presented in Table 2.

Throughout this dissertation, standardized regression coefficients were reported to facilitate comparison of magnitude of effects between variables. The variance explained by the 11 overall models is presented in Table 3.
Table 2: Intraethnic Variability in *Familismo* Closeness

<table>
<thead>
<tr>
<th></th>
<th>Step 1</th>
<th></th>
<th>Step 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>t</td>
<td>sr²</td>
<td>β</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>-.02</td>
<td>-.37</td>
<td>&lt;.01</td>
<td>-.03</td>
</tr>
<tr>
<td>Country of Birth</td>
<td>.02</td>
<td>.41</td>
<td>&lt;.01</td>
<td>.00</td>
</tr>
<tr>
<td>Language in Home</td>
<td>-.04</td>
<td>-.81</td>
<td>&lt;.01</td>
<td>-.03</td>
</tr>
<tr>
<td>Perceived Support</td>
<td>.52</td>
<td>12.41***</td>
<td>.26</td>
<td>.72</td>
</tr>
<tr>
<td>SES</td>
<td>.01</td>
<td>.28</td>
<td>&lt;.01</td>
<td>-.02</td>
</tr>
<tr>
<td>Violence Exposure</td>
<td>-.02</td>
<td>-.56</td>
<td>&lt;.01</td>
<td>-.04</td>
</tr>
<tr>
<td>Violence*Ethnicity</td>
<td>.03</td>
<td>0.59</td>
<td>&lt;.01</td>
<td></td>
</tr>
<tr>
<td>Support*Ethnicity</td>
<td>-.28</td>
<td>-4.67***</td>
<td>.03</td>
<td></td>
</tr>
<tr>
<td>SES*Ethnicity</td>
<td>.07</td>
<td>1.40</td>
<td>&lt;.01</td>
<td></td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>.271***</td>
<td></td>
<td>.306***</td>
<td></td>
</tr>
<tr>
<td>Δ$R^2$</td>
<td></td>
<td></td>
<td>.039***</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* *p* < .05, **p** < .01, ***p** < .001.

For *familismo* closeness, perceived support was the only cultural context factor that was a significant predictor, and results indicated that participants higher in perceived social support reported higher levels of *familismo* closeness ($\beta = .52, t = 12.41, p < .001$). Likewise, perceived support was the only individually significant predictor of *familismo* connectedness, such that participants higher in perceived support reported higher levels of *familismo* connectedness ($\beta = .12, t = 2.43 p = .016$).
For the traditional gender role value regarding premarital cohabitation, SES was the only individually significant predictor. Participants with higher SES were more likely to endorse traditional values that it is not okay to live together before marriage ($\beta = .114$, $t = 2.37$, $p = .018$). This finding may reflect the reality of financial constraints in lower income communities that encourage premarital cohabitation for practical financial purposes. In contrast, exposure to violence was related to greater endorsement of traditional gender role divisions. Participants higher in exposure to violence were more likely to endorse the traditional gender role value that men should be the primary breadwinner and women should take care of the family ($\beta = .23$, $t = 4.78$, $p < .001$). For the remainder of values, no predictors aside from race/ethnicity were individually significant in Step 1.

The addition of interaction terms between cultural context and race/ethnicity added significantly to the prediction of values for the *familismo* closeness value only ($R^2_{adj} = .306$, $\Delta R^2 = .039$, $p < .001$). The variance explained by each model and the change in variance explained when interaction terms were added is presented in Table 3. Additionally, results of the logistic regression predicting fundamentalism from ethnicity and cultural context showed that
testing the full model including interaction terms against a constant only model was not statistically significant, $\chi^2(9, N = 437)= 15.90, p = .069.$

**Table 3: Variance in Values Endorsement Explained by Race/Ethnicity and Cultural Context with and without Interaction Terms Included in the Model**

<table>
<thead>
<tr>
<th>Measure</th>
<th>$R^2_{adj}$</th>
<th>$\Delta R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Familismo</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Closeness</td>
<td>.271***</td>
<td>.039***</td>
</tr>
<tr>
<td>Connectedness</td>
<td>.028**</td>
<td>.007</td>
</tr>
<tr>
<td>Referent</td>
<td>-.006</td>
<td>.015</td>
</tr>
<tr>
<td><strong>Africentric Values</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collectivism</td>
<td>.020*</td>
<td>.004</td>
</tr>
<tr>
<td>Community Orientation</td>
<td>.019*</td>
<td>.002</td>
</tr>
<tr>
<td><strong>Gender Role Values</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cohabitation</td>
<td>.041***</td>
<td>.001</td>
</tr>
<tr>
<td>Breadwinner</td>
<td>.083***</td>
<td>.007</td>
</tr>
<tr>
<td>Conventionality</td>
<td>.009</td>
<td>.005</td>
</tr>
<tr>
<td><strong>Religious Values</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Religiosity</td>
<td>.117***</td>
<td>.003</td>
</tr>
<tr>
<td>Spirituality</td>
<td>.072***</td>
<td>.004</td>
</tr>
<tr>
<td>Belief in God</td>
<td>.007</td>
<td>.006</td>
</tr>
<tr>
<td>Fundamentalism</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

*Note.* *$p < .05,$ $**p < .01,$ $***p < .001.$*

Inspection of individual parameter estimates in the model predicting *familismo* closeness revealed a significant interaction effect between support and
race/ethnicity ($\beta = -.28, t = -4.67, p < .001$). None of the other interaction terms was statistically significant. To determine whether the relationship between support and *familismo* closeness was significant for Hispanic participants and for African-American participants, the 2-way interaction effect between support and race/ethnicity was probed using the interaction utility created by Preacher, Curran, and Bauer (Preacher, Curran, & Bauer, 2006) by calculating the simple intercept and simple slope for each group. The relationship was significant for both groups, with both Hispanic and African-American adolescents endorsing higher levels of *familismo* closeness when they endorsed higher levels of perceived support. However, this association was stronger among African-American participants (simple slope = 0.08, $SD = .01, t = 12.14, p < .001$) than Hispanic participants (simple slope = 0.04, $SD = .01, t = 6.39, p < .001$). The interaction effect is presented in Figure 1.

A fifth cultural predictor, exposure to prejudice, was removed from the above series of regressions due to problems with collinearity in the prejudice by race/ethnicity interaction term (Tolerance = .13 VIF = 7.74). A separate series of hierarchical multiple regression analyses was conducted predicting each of the 11 target values from race/ethnicity, prejudice, and the interaction between
prejudice and race/ethnicity. Logistic regression was again conducted to examine
the effect of race/ethnicity and prejudice on fundamentalism because it was
measured as a dichotomous variable. Problems with collinearity remained for
the prejudice by race/ethnicity interaction (Tolerance = .13, VIF = 7.65). Therefore,
only the omnibus effects were considered for this second series of regressions.

Figure 1: Graphical Representation of Two-Way Interaction Effect between
Support (mean-centered) and Race/Ethnicity in Predicting Familismo Closeness
Omnibus effects of race/ethnicity and prejudice on cultural values were statistically significant for eight of the 11 target values, including *familismo* connectedness, $R^2_{\text{adj}} = .014$, $F(2,434) = 4.11$, $p = .017$; premarital cohabitation, $R^2_{\text{adj}} = .020$, $F(2,434) = 5.38$, $p = .005$; man as breadwinner, $R^2_{\text{adj}} = .024$ $F(2,434) = 6.36$, $p = .002$; collectivism, $R^2_{\text{adj}} = .024$, $F(2,434) = 6.32$, $p = .002$; community orientation, $R^2_{\text{adj}} = .021$, $F(2,434) = 4.38$, $p = .004$; religiosity, $R^2_{\text{adj}} = .105$, $F(2,434) = 26.64$, $p < .001$; belief in God, $R^2_{\text{adj}} = .009$, $F(2,434) = 0.46$, $p = .047$; and spirituality, $R^2_{\text{adj}} = .060$, $F(2,434) = 14.86$, $p < .001$. For *familismo* closeness, $R^2_{\text{adj}} = .008$, $F(2,434) = 2.68$, $p = .070$; *familismo* referent, $R^2_{\text{adj}} = -.001$, $F(2,434) = 0.73$, $p = .480$; and conventionality, $R^2_{\text{adj}} = .002$, $F(2,434) = 3.53$, $p = .236$; omnibus effects of race/ethnicity and prejudice were not statistically significant. Likewise, results of the logistic regression predicting fundamentalism from race/ethnicity and prejudice showed that for the omnibus effect, testing the full model against a constant only model was not statistically significant, $\chi^2(2, N = 437) = 3.08$, $p = .214$.

Prejudice was a significant predictor for only one value, community orientation ($\beta = .11$, $t = 2.22$, $p = .027$; lower prejudice score indicates higher endorsement of exposure to prejudice), such that lower levels of prejudice were associated with higher levels of community orientation value endorsement.
Standardized regression coefficients and variance explained by the individual predictors within each statistically significant model are presented in Table 4.

**Table 4: Prejudice and Ethnicity Predicting Cultural Values**

<table>
<thead>
<tr>
<th></th>
<th>β</th>
<th>t</th>
<th>sr²</th>
<th>R²adj</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Familismo Connectedness</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>-.12</td>
<td>-2.57*</td>
<td>.01</td>
<td>.014*</td>
</tr>
<tr>
<td>Prejudice</td>
<td>.04</td>
<td>0.80</td>
<td>&lt;.01</td>
<td></td>
</tr>
<tr>
<td><strong>Premarital Cohabitation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>-.15</td>
<td>-3.21**</td>
<td>.02</td>
<td>.020**</td>
</tr>
<tr>
<td>Prejudice</td>
<td>.01</td>
<td>1.11</td>
<td>&lt;.01</td>
<td></td>
</tr>
<tr>
<td><strong>Man as Breadwinner</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>.167</td>
<td>3.47**</td>
<td>.03</td>
<td>.024**</td>
</tr>
<tr>
<td>Prejudice</td>
<td>-.01</td>
<td>-0.20</td>
<td>&lt;.01</td>
<td></td>
</tr>
<tr>
<td><strong>Collectivism</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>.15</td>
<td>3.10**</td>
<td>.02</td>
<td>.024**</td>
</tr>
<tr>
<td>Prejudice</td>
<td>-.06</td>
<td>-1.17</td>
<td>&lt;.01</td>
<td></td>
</tr>
<tr>
<td><strong>Community Orientation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>-.10</td>
<td>-2.13*</td>
<td>.01</td>
<td>.021**</td>
</tr>
<tr>
<td>Prejudice</td>
<td>.10</td>
<td>2.18*</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td><strong>Religiosity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>-.34</td>
<td>-7.28***</td>
<td>.11</td>
<td>.105***</td>
</tr>
<tr>
<td>Prejudice</td>
<td>-.04</td>
<td>-0.77</td>
<td>&lt;.01</td>
<td></td>
</tr>
<tr>
<td><strong>Belief in God</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>-.08</td>
<td>-1.57</td>
<td>.01</td>
<td>.009*</td>
</tr>
<tr>
<td>Prejudice</td>
<td>.08</td>
<td>1.61</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td><strong>Spirituality</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>-.25</td>
<td>-5.23***</td>
<td>.06</td>
<td>.060***</td>
</tr>
<tr>
<td>Prejudice</td>
<td>.03</td>
<td>0.60</td>
<td>&lt;.01</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* * p < .05, ** p < .01, *** p < .001. *Higher score indicates lower endorsement.
Research Question 2: How does cultural context influence coping?

A series of seven multiple regression analyses was conducted to determine how well cultural context (exposure to prejudice; SES; exposure to violence; and social support) predicts each component of coping, including coping self-efficacy, coping flexibility, religious coping, problem-focused coping, resilience, avoidant coping, and compensatory coping. In each analysis, all four components of cultural context were entered simultaneously in a single step predicting, separately, each coping component. Results of these analyses are presented in Table 5.

Cultural context contributed significantly to the regression model for four of the seven components of coping, including coping self-efficacy, $R^2_{adj} = .021$, $F(4,432) = 3.38, p = .010$, coping flexibility, $R^2_{adj} = .037$, $F(4,432) = 5.16, p < .001$, religious coping, $R^2_{adj} = .050$, $F(4,432) = 6.68, p < .001$, and compensatory coping, $R^2_{adj} = .026$, $F(4,432) = 6.68, p = .004$. Cultural context variables accounted for between two and five percent of the variance in these coping behaviors.

In terms of individual predictors, less exposure to prejudice at school ($\beta = .10, t = 2.16, p = .031$) and greater social support ($\beta = .13, t = 2.61, p = .009$) predicted more coping self-efficacy. Less exposure to violence ($\beta = -.16, t = -3.25, p$
Table 5: Cultural Context Predicting Coping Behavior

<table>
<thead>
<tr>
<th></th>
<th>β</th>
<th>t</th>
<th>sr²</th>
<th>R²adj</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coping Self-Efficacy</strong></td>
<td></td>
<td></td>
<td></td>
<td>.021*</td>
</tr>
<tr>
<td>Prejudice</td>
<td>.10</td>
<td>2.16*</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>Support</td>
<td>.13</td>
<td>2.61**</td>
<td>.02</td>
<td></td>
</tr>
<tr>
<td>Exposure to Violence</td>
<td>.08</td>
<td>1.58</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>SES</td>
<td>.04</td>
<td>0.89</td>
<td>&lt;.01</td>
<td></td>
</tr>
<tr>
<td><strong>Coping Flexibility</strong></td>
<td></td>
<td></td>
<td></td>
<td>.037***</td>
</tr>
<tr>
<td>Prejudice</td>
<td>-.02</td>
<td>-0.37</td>
<td>&lt;.01</td>
<td></td>
</tr>
<tr>
<td>Support</td>
<td>.02</td>
<td>0.33</td>
<td>&lt;.01</td>
<td></td>
</tr>
<tr>
<td>Exposure to Violence</td>
<td>-.16</td>
<td>-3.25**</td>
<td>.02</td>
<td></td>
</tr>
<tr>
<td>SES</td>
<td>.11</td>
<td>2.36*</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td><strong>Religious Coping</strong></td>
<td></td>
<td></td>
<td></td>
<td>.050***</td>
</tr>
<tr>
<td>Prejudice</td>
<td>-.03</td>
<td>-0.60</td>
<td>&lt;.01</td>
<td></td>
</tr>
<tr>
<td>Support</td>
<td>.14</td>
<td>2.88**</td>
<td>.02</td>
<td></td>
</tr>
<tr>
<td>Exposure to Violence</td>
<td>-.09</td>
<td>-1.76</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>SES</td>
<td>.14</td>
<td>2.89**</td>
<td>.02</td>
<td></td>
</tr>
<tr>
<td><strong>Compensatory Coping</strong></td>
<td></td>
<td></td>
<td></td>
<td>.026**</td>
</tr>
<tr>
<td>Prejudice</td>
<td>-.04</td>
<td>-0.78</td>
<td>&lt;.01</td>
<td></td>
</tr>
<tr>
<td>Support</td>
<td>.02</td>
<td>0.39</td>
<td>&lt;.01</td>
<td></td>
</tr>
<tr>
<td>Exposure to Violence</td>
<td>-.09</td>
<td>-1.87</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>SES</td>
<td>.14</td>
<td>2.89**</td>
<td>.02</td>
<td></td>
</tr>
<tr>
<td><strong>Avoidant Coping</strong></td>
<td></td>
<td></td>
<td></td>
<td>-.003</td>
</tr>
<tr>
<td>Prejudice</td>
<td>-.01</td>
<td>-0.13</td>
<td>&lt;.01</td>
<td></td>
</tr>
<tr>
<td>Support</td>
<td>-.03</td>
<td>-0.65</td>
<td>&lt;.01</td>
<td></td>
</tr>
<tr>
<td>Exposure to Violence</td>
<td>-.01</td>
<td>-0.12</td>
<td>&lt;.01</td>
<td></td>
</tr>
<tr>
<td>SES</td>
<td>.07</td>
<td>1.47</td>
<td>&lt;.01</td>
<td></td>
</tr>
<tr>
<td><strong>Coping Resilience</strong></td>
<td></td>
<td></td>
<td></td>
<td>.003</td>
</tr>
<tr>
<td>Prejudice</td>
<td>.01</td>
<td>0.30</td>
<td>&lt;.01</td>
<td></td>
</tr>
<tr>
<td>Support</td>
<td>.07</td>
<td>1.39</td>
<td>&lt;.01</td>
<td></td>
</tr>
<tr>
<td>Exposure to Violence</td>
<td>-.02</td>
<td>-0.43</td>
<td>&lt;.01</td>
<td></td>
</tr>
<tr>
<td>SES</td>
<td>.07</td>
<td>1.36</td>
<td>&lt;.01</td>
<td></td>
</tr>
<tr>
<td><strong>Problem-focused Coping</strong></td>
<td></td>
<td></td>
<td></td>
<td>-.004</td>
</tr>
<tr>
<td>Prejudice</td>
<td>-.04</td>
<td>-0.85</td>
<td>&lt;.01</td>
<td></td>
</tr>
<tr>
<td>Support</td>
<td>-.03</td>
<td>-0.61</td>
<td>&lt;.01</td>
<td></td>
</tr>
<tr>
<td>Exposure to Violence</td>
<td>-.04</td>
<td>0.73</td>
<td>&lt;.01</td>
<td></td>
</tr>
<tr>
<td>SES</td>
<td>-.02</td>
<td>-0.46</td>
<td>&lt;.01</td>
<td></td>
</tr>
</tbody>
</table>

Note. *p < .05, **p < .01, ***p < .001. aHigher score indicates lower endorsement.
and higher SES ($\beta = .11$, $t = 2.36$, $p = .019$) predicted greater coping flexibility. Greater social support ($\beta = .14$, $t = 2.88$, $p = .004$) and higher SES ($\beta = .14$, $t = 2.89$, $p = .004$) predicted greater reported use of religious coping. Finally, higher SES predicted less use of compensatory coping ($\beta = .14$, $t = 2.89$, $p = .004$).

Cultural context factors were not significant predictors of coping resilience, avoidant coping, or problem-focused coping.

Research Question 3: What is the association between values and coping?

Multiple regression analysis was used to examine the association between values and specific coping behaviors. To test the relationship between religious/spiritual values and religious coping, a multiple regression analysis was conducted with religiosity, spirituality, belief in God, and fundamentalism entered together as predictors of religious coping. Results are shown in Table 6. Religious values accounted for 12.9% of the variance in religious coping, $F(4,432) = 17.14$, $p < .001$, with religiosity and fundamentalism significantly predicting religious coping. Belief in God and spirituality were not significant predictors.

Next, a multiple regression analysis was conducted to examine how well each component of familismo and traditional gender roles predicted the use of
compensatory coping. As shown in Table 5, none of the three components of *familismo* were significant predictors in the model. However, the model accounted for 4.8% of the variance in compensatory coping, $F(6,430) = 4.67, p < .001$ and all three traditional gender role items were significant predictors. Interestingly, two gender role items were negatively associated with compensatory coping (higher values of which indicate lower endorsement, as indicated in Table 7) while one gender role item was positively associated with compensatory coping. Greater endorsement of the belief that men should be the breadwinner and women should take care of the family ($\beta = -0.17, t = -3.58, p < .001$) and greater endorsement of the statement “I am conventional,” ($\beta = -0.11, t = -2.35, p = .019$) predicted higher use of risk-based compensatory coping. In
contrast, more traditional views about premarital cohabitation (less okay with living together without plans to get married) predicted lower use of compensatory coping ($\beta = .17, t = 3.62, p < .001$).

### Table 7: Familismo and Traditional Gender Values Predicting Compensatory Coping

<table>
<thead>
<tr>
<th></th>
<th>$\beta$</th>
<th>$t$</th>
<th>$sr^2$</th>
<th>$R^2_{adj}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Familismo: Closeness</td>
<td>.05</td>
<td>.97</td>
<td>&lt;.01</td>
<td></td>
</tr>
<tr>
<td>Familismo: Connected</td>
<td>-.01</td>
<td>-.19</td>
<td>&lt;.01</td>
<td></td>
</tr>
<tr>
<td>Familismo: Referent$^a$</td>
<td>.03</td>
<td>.59</td>
<td>&lt;.01</td>
<td>.048***</td>
</tr>
<tr>
<td>Breadwinner</td>
<td>-.17</td>
<td>-3.58***</td>
<td>.03</td>
<td></td>
</tr>
<tr>
<td>Premarital</td>
<td>.17</td>
<td>3.62***</td>
<td>.03</td>
<td></td>
</tr>
<tr>
<td>Conventionality</td>
<td>-.11</td>
<td>-2.35*</td>
<td>.01</td>
<td></td>
</tr>
</tbody>
</table>

*Note. * $p < .05$, ***$ p < .001$. $^a$Higher score indicates lower endorsement.*

A series of multiple regressions was then conducted to determine the extent to which familismo, Africentric values, religiosity/spirituality, and traditional gender roles predicted problem-focused coping, resilience, avoidant coping, and coping flexibility. As shown in Table 8, both resilience, $F(10, 426) = 2.93, p = .001$, and coping flexibility, $F(10, 426) = 2.79, p = .002$, were significantly
Table 8: Cultural Values Predicting Resilience and Coping Flexibility

<table>
<thead>
<tr>
<th></th>
<th>Resilience</th>
<th></th>
<th>Flexibility</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\beta$</td>
<td>$t$</td>
<td>$sr^2$</td>
<td>$\beta$</td>
</tr>
<tr>
<td>Closeness</td>
<td>.12</td>
<td>2.55*</td>
<td>.01</td>
<td>.06</td>
</tr>
<tr>
<td>Connectedness</td>
<td>-.10</td>
<td>-2.05*</td>
<td>.01</td>
<td>.01</td>
</tr>
<tr>
<td>Referent</td>
<td>-.08</td>
<td>-1.73</td>
<td>.01</td>
<td>.03</td>
</tr>
<tr>
<td>Breadwinner</td>
<td>.02</td>
<td>0.51</td>
<td>&lt;.01</td>
<td>-.16</td>
</tr>
<tr>
<td>Collectivism</td>
<td>.01</td>
<td>0.24</td>
<td>&lt;.01</td>
<td>-.02</td>
</tr>
<tr>
<td>Community Orient.</td>
<td>-.03</td>
<td>-0.71</td>
<td>&lt;.01</td>
<td>-.03</td>
</tr>
<tr>
<td>Religiosity</td>
<td>.25</td>
<td>3.93**</td>
<td>.03</td>
<td>-.01</td>
</tr>
<tr>
<td>Belief in God</td>
<td>.00</td>
<td>-0.01</td>
<td>&lt;.01</td>
<td>.00</td>
</tr>
<tr>
<td>Fundamentalism</td>
<td>-.16</td>
<td>-2.92**</td>
<td>.02</td>
<td>-.04</td>
</tr>
<tr>
<td>Spirituality</td>
<td>-.05</td>
<td>-0.89</td>
<td>&lt;.01</td>
<td>.19</td>
</tr>
</tbody>
</table>

$R^2_{adj} = .042^{**}$  $R^2_{adj} = .039^{**}$

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. $^a$Higher score indicates lower endorsement.

predicted by cultural values, with 4.2% of the variance in each coping construct accounted for by the values variables in the overall model. Familismo closeness, ($\beta = .12$, $t = 2.55$, $p = .011$), familismo connectedness, ($\beta = -.10$, $t = -2.05$, $p = .041$), religiosity, ($\beta = .25$, $t = 3.93$, $p < .001$), and fundamentalism, ($\beta = -.16$, $t = -2.02$, $p = .004$) were all individually significant predictors of resilience, accounting for 1%, 1%, 3%, and 2% of the variance in resilience, respectively. The traditional gender
role value of men as breadwinners, \((\beta = -.16, t = -3.23, p = .001)\), and spirituality, 
\((\beta = .19, t = 3.35, p = .001)\), were individually significant predictors of coping 
flexibility and would account for 2% of the variance in flexibility each if 
controlling for all other variables in the model. The analyses predicting problem-
focused coping, \(F(10, 426) = 1.48, p = .146\), and avoidant coping, \(F(10, 426) = 1.22, 
p = .279\), from cultural values were not statistically significant.

Finally, two hierarchical regression analyses were conducted to examine 
the degree to which \textit{familismo}, Africentric values, religiosity/spirituality, and 
traditional gender roles predict coping self-efficacy. Because one component of 
traditional gender roles emphasizes female deference to males and reduced 
agency for girls and women, it was hypothesized that these values would reduce 
coping self-efficacy for female participants. Gender was therefore entered as the 
first step of the regression in both models. In the first model, this was followed 
by a second step that included all three \textit{familismo} values, both Africentric values, 
traditional gender role values (man as breadwinner), religiosity, spirituality, 
belief in God, and fundamentalism, as well as perceived support. Finally, in a 
third step, an interaction term between gender and the traditional gender role 
value (man as breadwinner) as well as interaction terms between perceived
social support and each *familismo* and Africentric value were added. In the second model, support was replaced with exposure to violence in step 2, and in step 3 interaction terms between exposure to violence and each *familismo* and Africentric value were included in place of the support interaction terms. As for previous analyses, support, exposure to violence, *familismo* values, Africentric values, and traditional gender role values were mean-centered prior to creating the interaction terms in order to minimize issues from collinearity among predictors. Gender was a modest but statistically significant predictor ($\beta = -.11, t = -2.20, p = .029$), accounting for 1% of the variance in coping self-efficacy. However, contrary to expectations, being male predicted lower coping self-efficacy. Aside from a simple main effect for gender, neither omnibus effects nor interaction effects were found to be statistically significant for values predicting coping self-efficacy, as summarized in Table 9 for the first model (values * support) and Table 10 for the second model (values * exposure to violence).

**Research Question 4: How does coping influence HIV risk?**

Multiple regression analysis was conducted to examine the degree to which each component of coping predicted HIV risk behaviors, including the
Table 9: Cultural Values Predicting Coping Self-Efficacy with Support and Gender Interaction Terms

<table>
<thead>
<tr>
<th></th>
<th>Step 1</th>
<th></th>
<th>Step 2</th>
<th></th>
<th>Step 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>t</td>
<td>sr²</td>
<td>β</td>
<td>t</td>
<td>sr²</td>
</tr>
<tr>
<td>Gender</td>
<td>-.11</td>
<td>-2.20*</td>
<td>.01</td>
<td>-.13</td>
<td>-2.64**</td>
<td>.02</td>
</tr>
<tr>
<td>Closeness</td>
<td>-.05</td>
<td>-0.87</td>
<td>&lt;.01</td>
<td>-.13</td>
<td>-1.66</td>
<td>.01</td>
</tr>
<tr>
<td>Connectedness</td>
<td>.05</td>
<td>0.96</td>
<td>&lt;.01</td>
<td>.04</td>
<td>0.82</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Referent</td>
<td>.04</td>
<td>0.90</td>
<td>&lt;.01</td>
<td>.05</td>
<td>0.98</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Breadwinner</td>
<td>-.08</td>
<td>-1.52</td>
<td>.01</td>
<td>-.15</td>
<td>-1.78</td>
<td>.01</td>
</tr>
<tr>
<td>Spirituality</td>
<td>.09</td>
<td>1.67</td>
<td>.01</td>
<td>.10</td>
<td>1.78</td>
<td>.01</td>
</tr>
<tr>
<td>Collectivism</td>
<td>-.03</td>
<td>-0.70</td>
<td>&lt;.01</td>
<td>-.04</td>
<td>-0.73</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Community</td>
<td>-.00</td>
<td>-0.02</td>
<td>&lt;.01</td>
<td>.00</td>
<td>0.04</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Belief in God</td>
<td>-.03</td>
<td>-0.67</td>
<td>&lt;.01</td>
<td>-.03</td>
<td>-0.66</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Religiosity</td>
<td>.01</td>
<td>0.10</td>
<td>&lt;.01</td>
<td>-.00</td>
<td>0.10</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Fundamentalism</td>
<td>.01</td>
<td>0.16</td>
<td>&lt;.01</td>
<td>.01</td>
<td>0.20</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Support</td>
<td>.16</td>
<td>2.90**</td>
<td>.02</td>
<td>.19</td>
<td>2.82**</td>
<td>.02</td>
</tr>
<tr>
<td>Referent*Support</td>
<td>.02</td>
<td>0.45</td>
<td>&lt;.01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connect*Support</td>
<td>.06</td>
<td>0.99</td>
<td>&lt;.01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Closeness*Support</td>
<td>-.12</td>
<td>-1.69</td>
<td>.01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collectivism*Support</td>
<td>-.01</td>
<td>-0.17</td>
<td>&lt;.01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community*Support</td>
<td>-.00</td>
<td>-0.09</td>
<td>&lt;.01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breadwinner*Gender</td>
<td>.09</td>
<td>1.12</td>
<td>&lt;.01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.009*</td>
<td></td>
<td>.027</td>
<td></td>
<td>.025</td>
<td></td>
</tr>
<tr>
<td>ΔR²</td>
<td>.043</td>
<td></td>
<td>.012</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. * p < .05, ** p < .01. *aHigher score indicates lower endorsement.
Table 10: Cultural Values Predicting Coping Self-Efficacy with Exposure to Violence and Gender Interaction Terms

<table>
<thead>
<tr>
<th></th>
<th>Step 1</th>
<th></th>
<th></th>
<th>Step 2</th>
<th></th>
<th></th>
<th>Step 3</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>t</td>
<td>sr²</td>
<td>β</td>
<td>t</td>
<td>sr²</td>
<td>β</td>
<td>t</td>
<td>sr²</td>
</tr>
<tr>
<td>Gender</td>
<td>-.11</td>
<td>-2.20*</td>
<td>.01</td>
<td>-.11</td>
<td>-2.19*</td>
<td>.01</td>
<td>-.11</td>
<td>-2.17*</td>
<td>.01</td>
</tr>
<tr>
<td>Closeness</td>
<td>.04</td>
<td>0.81</td>
<td>&lt;.01</td>
<td>.05</td>
<td>0.98</td>
<td>&lt;.01</td>
<td>.04</td>
<td>0.70</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Connectedness</td>
<td>.05</td>
<td>0.88</td>
<td>&lt;.01</td>
<td>.05</td>
<td>0.88</td>
<td>&lt;.01</td>
<td>.05</td>
<td>0.88</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Referent</td>
<td>.03</td>
<td>0.68</td>
<td>&lt;.01</td>
<td>.02</td>
<td>0.48</td>
<td>&lt;.01</td>
<td>.02</td>
<td>0.48</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Breadwinner</td>
<td>-.07</td>
<td>-1.48</td>
<td>.01</td>
<td>-.15</td>
<td>-1.71</td>
<td>.01</td>
<td>-.15</td>
<td>-1.71</td>
<td>.01</td>
</tr>
<tr>
<td>Spirituality</td>
<td>.09</td>
<td>1.65</td>
<td>.01</td>
<td>.10</td>
<td>1.69</td>
<td>.01</td>
<td>.10</td>
<td>1.69</td>
<td>.01</td>
</tr>
<tr>
<td>Collectivism</td>
<td>-.04</td>
<td>-0.76</td>
<td>&lt;.01</td>
<td>-.04</td>
<td>-0.82</td>
<td>&lt;.01</td>
<td>-.04</td>
<td>-0.82</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Community</td>
<td>.00</td>
<td>0.02</td>
<td>&lt;.01</td>
<td>.00</td>
<td>0.02</td>
<td>&lt;.01</td>
<td>.00</td>
<td>0.02</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Belief in God</td>
<td>-.04</td>
<td>-0.72</td>
<td>&lt;.01</td>
<td>-.04</td>
<td>-0.73</td>
<td>&lt;.01</td>
<td>-.04</td>
<td>-0.73</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Religiosity</td>
<td>.02</td>
<td>0.27</td>
<td>&lt;.01</td>
<td>.00</td>
<td>0.11</td>
<td>&lt;.01</td>
<td>.00</td>
<td>0.11</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Fundamentalism</td>
<td>-.00</td>
<td>-0.02</td>
<td>&lt;.01</td>
<td>.01</td>
<td>0.17</td>
<td>&lt;.01</td>
<td>.01</td>
<td>0.17</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Support</td>
<td>.03</td>
<td>0.59</td>
<td>&lt;.01</td>
<td>.05</td>
<td>0.92</td>
<td>&lt;.01</td>
<td>.05</td>
<td>0.92</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Referent*Support</td>
<td></td>
<td></td>
<td></td>
<td>-.07</td>
<td>-1.34</td>
<td>&lt;.01</td>
<td>-.07</td>
<td>-1.34</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Connect*Support</td>
<td></td>
<td></td>
<td></td>
<td>-.02</td>
<td>-0.31</td>
<td>&lt;.01</td>
<td>-.02</td>
<td>-0.31</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Closeness*Support</td>
<td></td>
<td></td>
<td></td>
<td>.06</td>
<td>1.07</td>
<td>&lt;.01</td>
<td>.06</td>
<td>1.07</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Collectivism*Support</td>
<td>-.01</td>
<td>0.15</td>
<td>&lt;.01</td>
<td>-.01</td>
<td>0.15</td>
<td>&lt;.01</td>
<td>-.01</td>
<td>0.15</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Community*Support</td>
<td>-.02</td>
<td>-0.31</td>
<td>&lt;.01</td>
<td>-.02</td>
<td>-0.31</td>
<td>&lt;.01</td>
<td>-.02</td>
<td>-0.31</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Breadwinner*Gender</td>
<td>.09</td>
<td>1.10</td>
<td>&lt;.01</td>
<td>.09</td>
<td>1.10</td>
<td>&lt;.01</td>
<td>.09</td>
<td>1.10</td>
<td>&lt;.01</td>
</tr>
</tbody>
</table>

Adjusted $R^2$ | .009* | .008 | .003 |
$\Delta R^2$ | .025 | .008 |

Note. * $p < .05$, ** $p < .01$. aHigher score indicates lower endorsement.
sexual risk index and substance use risk index. In the first model, the seven coping variables (coping self-efficacy, compensatory coping, avoidant coping, problem-focused coping, resilience, coping flexibility, and religious coping) were entered together as predictors with the sexual risk index as the outcome variable. As shown in Table 11, although two coping variables (coping flexibility, $\beta = -.05, t = -1.78, p = .076$, and religious coping, $\beta = -.05, t = -1.89, p = .060$) trended towards significance, coping did not significantly predict sexual risk behaviors, $R^2_{adj} = .013, F(7, 429) = 1.85, p = .077$.

In the second model, the seven coping variables (coping self-efficacy, compensatory coping, avoidant coping, problem-focused coping, resilience, coping flexibility, and religious coping) were entered together as predictors with the substance use risk index as the outcome variable. The model accounted for 3.4% of the variance in substance use risk ($R^2_{adj} = .034, F(7, 429) = 3.22, p = .002$). Greater resilience, ($\beta = -.15, t = -2.97, p = .003$), and greater use of religious coping, ($\beta = -.11, t = -2.34, p = .020$), were associated with lower substance use risk scores. Contrary to expectations, greater use of avoidance coping was also associated with lower substance use risk scores ($\beta = .14, t = 2.86, p = .004$). Although the standardized regression coefficient for this predictor is positive, the avoidant coping item is coded such that higher scores indicate lower endorsement of
avoidance coping. If controlling for all other items in the model, resilience, religious coping, and avoidant coping would account for 2%, 1%, and 2% of the variance in substance use risk, respectively (see Table 11).

<table>
<thead>
<tr>
<th></th>
<th>Sexual Risk</th>
<th></th>
<th></th>
<th>Substitution Risk</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\beta$</td>
<td>$t$</td>
<td>$sr^2$</td>
<td>$\beta$</td>
<td>$t$</td>
<td>$sr^2$</td>
</tr>
<tr>
<td><strong>Self-Efficacy</strong></td>
<td>.01</td>
<td>0.12</td>
<td>&lt;.01</td>
<td>.03</td>
<td>0.64</td>
<td>&lt;.01</td>
</tr>
<tr>
<td><strong>Compensatory</strong></td>
<td>.05</td>
<td>0.97</td>
<td>&lt;.01</td>
<td>-.03</td>
<td>-0.71</td>
<td>&lt;.01</td>
</tr>
<tr>
<td><strong>Avoidant</strong></td>
<td>.05</td>
<td>0.98</td>
<td>&lt;.01</td>
<td>.14</td>
<td>2.86**</td>
<td>.02</td>
</tr>
<tr>
<td><strong>Resilience</strong></td>
<td>-.07</td>
<td>-1.43</td>
<td>&lt;.01</td>
<td>-.15</td>
<td>-2.97**</td>
<td>.02</td>
</tr>
<tr>
<td><strong>Problem-Focused</strong></td>
<td>.06</td>
<td>1.18</td>
<td>&lt;.01</td>
<td>.04</td>
<td>0.80</td>
<td>&lt;.01</td>
</tr>
<tr>
<td><strong>Flexibility</strong></td>
<td>-.09</td>
<td>-1.78</td>
<td>.01</td>
<td>-.04</td>
<td>-0.84</td>
<td>&lt;.01</td>
</tr>
<tr>
<td><strong>Religious</strong></td>
<td>.09</td>
<td>-1.89</td>
<td>.01</td>
<td>-.11</td>
<td>-2.34*</td>
<td>.01</td>
</tr>
<tr>
<td><strong>Adjusted $R^2$</strong></td>
<td>.013</td>
<td></td>
<td></td>
<td>.034**</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* *p* < .05, **p** < .01. *aHigher score indicates lower endorsement.

**Research Question 5: What is the association between values and HIV risk?**

Values were hypothesized to predict HIV risk both directly and with coping behavior serving as a partial mediator. To examine main effects, multiple regression analysis was conducted to examine how well values, including *familismo*, Africentric values, religious values, and traditional gender roles,
predicted the sexual and substance use risk indexes for HIV risk behaviors. In the first model, *familismo* (closeness, connectedness, and referent), Africentric values (collectivism and community orientation), traditional gender role values (man as breadwinner, premarital cohabitation, and conventionality), and religious values (religiosity, spirituality, fundamentalism, and belief in God) were entered together as predictors with the sexual risk index as the outcome variable.

Together, the predictors accounted for 6% of variance in sexual risk scores ($R^2_{adj} = .060, F(12, 424) = 3.34, p < .001$). Higher levels of *familismo* closeness ($\beta = -.14, t = -2.92, p = .004$) and *familismo* referent ($\beta = .18, t = 3.76, p < .001$; lower score indicates higher endorsement of value), were associated with lower levels of sexual risk behavior. Religious fundamentalism was associated with higher levels of sexual risk behavior. These items, if controlling for all other predictors in the model, would account for 2%, 3%, and 1% of the variance in sexual risk behavior, respectively (see Table 1).

In the second model examining main effects, *familismo* (closeness, connectedness, and referent), Africentric values (collectivism and community orientation), traditional gender role values (man as breadwinner, premarital cohabitation, and conventionality), and religious values (religiosity, spirituality, fundamentalism, and belief in God) were again entered together as predictors
Table 12: Values Predicting HIV Risk Behavior

<table>
<thead>
<tr>
<th></th>
<th>Sexual Risk</th>
<th></th>
<th></th>
<th>Substance Use Risk</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\beta$</td>
<td>$t$</td>
<td>$sr^2$</td>
<td>$\beta$</td>
<td>$t$</td>
<td>$sr^2$</td>
</tr>
<tr>
<td>Closeness</td>
<td>-.14</td>
<td>-2.87**</td>
<td>.02</td>
<td>-.22</td>
<td>-4.71***</td>
<td>.05</td>
</tr>
<tr>
<td>Connectedness$^a$</td>
<td>-.00</td>
<td>-0.06</td>
<td>&lt;.01</td>
<td>.11</td>
<td>2.19*</td>
<td>.01</td>
</tr>
<tr>
<td>Referent</td>
<td>.18</td>
<td>3.83***</td>
<td>.03</td>
<td>.15</td>
<td>3.26**</td>
<td>.02</td>
</tr>
<tr>
<td>Collectivism$^a$</td>
<td>.03</td>
<td>0.67</td>
<td>&lt;.01</td>
<td>.04</td>
<td>0.88</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Community Orient</td>
<td>.01</td>
<td>0.18</td>
<td>&lt;.01</td>
<td>.07</td>
<td>1.48</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Breadwinner</td>
<td>.08</td>
<td>1.61</td>
<td>.01</td>
<td>.03</td>
<td>0.70</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Cohabitation</td>
<td>-.05</td>
<td>-0.90</td>
<td>&lt;.01</td>
<td>-.05</td>
<td>-1.05</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Conventional</td>
<td>.03</td>
<td>0.62</td>
<td>&lt;.01</td>
<td>.00</td>
<td>0.03</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Religiosity</td>
<td>-.10</td>
<td>-1.54</td>
<td>.01</td>
<td>-.14</td>
<td>-2.29*</td>
<td>.01</td>
</tr>
<tr>
<td>Spirituality</td>
<td>-.08</td>
<td>-1.38</td>
<td>&lt;.01</td>
<td>-.08</td>
<td>-1.55</td>
<td>.01</td>
</tr>
<tr>
<td>Fundamentalism</td>
<td>.13</td>
<td>2.49*</td>
<td>.01</td>
<td>.07</td>
<td>1.30</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Belief in God</td>
<td>-.02</td>
<td>-0.32</td>
<td>&lt;.01</td>
<td>.08</td>
<td>1.57</td>
<td>.01</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>.060***</td>
<td></td>
<td></td>
<td>.094***</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. * $p < .05$, ** $p < .01$, *** $p < .001$. -Higher score indicates lower endorsement.

with the substance use risk index as the outcome variable. Together the
predictors accounted for 9% of variance in substance use risk scores ($R^2_{adj} = .094$,
$F(12, 424) = 4.78, p < .001$). Higher levels of *familismo* closeness ($\beta = -.22, t = -4.73, p
< .001$), *familismo* referent ($\beta = .15, t = 3.18, p = .002$; lower score indicates higher
endorsement of value), and religiosity ($\beta = -.14, t = -2.43, p = .015$), were
associated with lower levels of substance use. Contrary to expectations, higher
levels of *familismo* connectedness were associated with higher levels of substance
use ($\beta = .11, t = 2.34, p = .020$). As shown by the squared semi-partial correlations reported in Table 12, if controlling for all other predictors in the model these items would account for 5% (closeness), 1% (connectedness), 2% (referent), and 1% (religiosity) of the variance in sexual risk behavior.

In order to test for mediation in the association between values and HIV risk by coping behaviors, the steps identified by Baron and Kenny (1986) for establishing mediation using multiple linear regression were examined. Because the coping variables were demonstrated to be non-significant predictors of sexual risk behavior in this study (see Research Question IV, above) mediation was only considered for the relationship between values, coping, and substance use risk behaviors.

Step 1 (show that the causal variable is correlated with the outcome) was established in the regressions testing for main effects above. To test step 2 (show that the causal variable is correlated with the mediator), a series of multiple regressions were conducted with individual values as predictor variables and individual coping constructs as outcome variables. Only values and coping constructs that were previously shown to be significant predictors of substance use risk were considered. Therefore, nine regression analyses were conducted
with *familismo* closeness, *familismo* referent, and religiosity each predicting resilience, religious coping, and avoidance coping.

*Familismo* closeness significantly predicted coping resilience, $R^2_{adj} = .009$, $F(1, 435) = 4.58$, $p = .033$, with greater *familismo* closeness associated with greater resilience ($\beta = .102, t = 2.14, p = .033$). Closeness did not significantly predict religious coping, $R^2_{adj} = .001$, $F(1, 435) = 1.31$, $p = .252$, or avoidant coping, $R^2_{adj} = -.001$, $F(1, 435) = 0.76$, $p = .383$. *Familismo* referent did not significantly predict resilience, $R^2_{adj} = .005$, $F(1, 435) = 2.99$, $p = .05$, religious coping, $R^2_{adj} = -.001$, $F(1, 435) = 0.37$, $p = .542$, or avoidant coping $R^2_{adj} = -.002$, $F(1, 435) = 0.14$, $p = .711$.

Religiosity significantly predicted resilience, $R^2_{adj} = .019$, $F(1, 435) = 9.28$, $p = .002$, with greater religiosity associated with greater resilience ($\beta = .145, t = 3.05, p = .002$). Religiosity also significantly predicted religious coping, $R^2_{adj} = .113$, $F(1, 435) = 56.64$, $p < .001$, with greater religiosity associated with greater use of religious coping ($\beta = .339, t = 7.53, p < .001$). Religiosity did not significantly predict avoidant coping, $R^2_{adj} = -.002$, $F(1, 435) = 0.23$ $p = .629$.

As the criteria for step 3 (show that the mediator affects the outcome variable) were previously used to select the specific coping variables appropriate to include in testing for mediation, the assumptions were already assessed when examining research question IV above. Therefore, the following variable pairs
were deemed to meet assumptions for possible mediation: religious coping as a possible mediator between religiosity and substance use risk; resilience as a possible mediator between *familismo* closeness and substance use risk; and resilience as a possible mediator between religiosity and substance use risk. The Aroian version of the Sobel test was conducted with these value / coping pairs to test for mediation in predicting substance use risk.

Religious coping was shown to be a significant mediator in the relationship between religiosity and substance use risk, Aroian $t = -2.92, p = .003$. The size of the indirect effect of religiosity on substance use risk through religious coping was calculated by multiplying the unstandardized regression coefficient for religiosity predicting religious coping (path a; $b = .113$) by the unstandardized regression coefficient for religious coping predicting substance use risk (path b; $b = -.032$). The indirect effect was modest ($ab = -.004$) but statistically significant, as indicated by the statistical significance of the Aroian test. The proportion of the direct effect of religiosity on substance use risk that was mediated by religious coping was not calculated because of the instability of this point estimate when the magnitude of the direct effect is small (i.e., $\beta < .02$). Resilience did not significantly mediate the relationship between *familismo*
closeness and substance use risk, $t = -1.56$, $p = .118$, or the relationship between religiosity and substance use risk, $t = -1.87$, $p = .061$.

**Discussion**

The primary aims of the current study were threefold: (1) clarify the degree to which African-American and Hispanic adolescents endorse values that have previously been identified as culturally normative, including *familismo*, Africentric values, traditional gender role values, and religious values; (2) determine the extent to which these values predict both coping behavior and HIV risk behaviors, taking into account the influence of cultural context including perceived social support, SES, and exposure to violence and prejudice; and (3) examine coping behavior as a mediator for the relationship between values and HIV risk. Though previous research has demonstrated associations between values and coping (Aldridge & Roesch, 2008a; Scott, 2003b) and associations between coping and HIV risk behaviors (Koniak-Griffin & Stein, 2006; Nyamathi, 1992; Nyamathi, Stein, & Brecht, 1995b), the current study provides a unique contribution to the field of coping and HIV prevention by examining all three constructs in tandem within a nationally representative sample.
The goal of this research is to provide greater clarity regarding the mechanisms of behavior change that influence sexual and substance use risk behaviors among Hispanic and African-American adolescents, with the ultimate intention of informing tailored intervention development for HIV prevention. Findings concerning the aforementioned aims are reviewed below, organized by the study’s five primary research hypotheses. The paper concludes with a discussion of the limitations of the present study as well as directions for future research.

**Values Endorsement**

**Interethnic Variation in Values Endorsement**

Given the emphasis on community, family, and religion within both African-American and Hispanic cultural norms (Chatters et al., 2008; Constantine, Alleyne, Wallace, & Franklin-Jackson, 2006; Parsai et al., 2009), both African-American and Hispanic adolescents were expected to endorse the values of *familismo* (closeness, connectedness, and referent), Africentrism (collectivism and community orientation), traditional gender roles, and religious/spiritual values. However, adolescents were expected to endorse normative cultural values from their primary ethnicity at higher levels than other values. Specifically, Hispanic adolescents were expected to endorse higher levels of
familismo and traditional gender role values, while African-American adolescents were predicted to endorse higher levels of Africentric values. No difference was expected between groups for endorsement of religious values.

This hypothesis was only partially supported. Across groups, adolescents endorsed high levels of familismo closeness, collectivism (Africentrism), religiosity, belief in God, and religious fundamentalism. They endorsed moderate levels of familismo connectedness, community orientation (Africentrism), spirituality, and traditional gender role values, including the belief that it is not okay to live together without the intention of getting married, the belief that men should be the breadwinner while women take care of the family, and the endorsement of being conventional. Participants endorsed moderately low levels of familismo referent, which may be a reflection of higher levels of acculturation among Hispanic participants and therefore lower endorsement of the familismo value of subjugation to the family in decision making (Guilamo-Ramos et al., 2009).

As predicted, African-American participants endorsed higher levels of the Africentric values of collectivism and community orientation than did Hispanic participants. However, no interethnic variation was found in endorsement of the familismo closeness or referent values, and African-Americans were actually
shown to endorse slightly higher levels of familismo connectedness than were Hispanics. Though this effect size was small (1.7% of the variance in familismo connectedness was explained by participants’ race/ethnicity) the finding was surprising. As familismo has not been a focus of research among African-American adolescents, it is possible that values prioritizing family closeness, connectedness, and respect/deference to parental decision making are generally endorsed at similar levels to those found in Hispanic adolescents. Alternatively, the way in which familismo values were operationalized in this study may not have resulted in a clean assessment of values, but instead represented a mix of values and behavior. For example, connectedness was calculated based on the number of activities in which participants reported participating with their parents over the past month. While this level of family engagement is likely a reflection of familismo connectedness, which has been used in previous research on familismo (Bacio et al., 2013; Stevens-Watkins & Rostosky, 2010), a direct assessment of beliefs, and degree of identification with those beliefs, would provide a clearer picture of the degree to which participants endorse each target value. An approach such as that used in the Mexican American Cultural Values Scale (Knight et al., 2010) would be helpful to clarify the surprising findings in this sample. For example, given the many environmental factors that may
influence the time an adolescent spends with family, including financial constraints, school constraints, and family composition, explicitly querying participants’ endorsement of values such as, “It is always important to be united as a family” (Knight et al., 2010) would enable researchers to pinpoint participants’ level of identification with familismo values themselves and not simply the behavioral evidence of a presumed value guiding that behavior.

Findings related to endorsement of traditional gender roles were likewise mixed. African-Americans more strongly objected to premarital cohabitation, while Hispanics more strongly endorsed the value that men should be the breadwinner while women take care of the family. There was no difference between ethnic groups in their reported level of conventionality. One explanation for the conflicting patterns among different gender roles may be related to religious values, which often include explicit guidelines discouraging sex and living together before marriage but do not necessarily provide teachings on the gender division of labor in the household. Contrary to expectations, Hispanic and African-American adolescents did vary in their endorsement of religious values, with African-American participants endorsing higher levels of religiosity and spirituality than did Hispanic adolescents. The effect sizes for these group differences were moderate (10.8% of the variance in religiosity and
6.3% of the variance in spirituality was explained by race/ethnicity). Because religion has been shown to play a major role in values for both African-Americans (Gallup & Newport, 2006) and Hispanics (Perl et al., 2006), no difference was anticipated in religious values. Previous research suggests that, among Hispanic/Latinos, religious values commonly encompass both overall religiosity and the concept of fatalism, or the belief that God’s will reduces personal agency and decision making (Pepitone & Triandis, 1987). Because there was no measure of fatalism available within the Add Health dataset, fatalism was not directly assessed in this study. However, Hispanic adolescents may be slightly lower in their endorsement of overall religiosity and spirituality than African-Americans but higher in the more specific value of fatalism. If so, this explanation would help clarify research suggesting that religiosity (and religious coping) is less unidimensional and less consistently protective for Hispanic adolescents than for African-American adolescents (Aldridge & Roesch, 2008a).

Overall, values endorsement was consistent with the direction and level expected based on previous research on familismo, Africentrism, religiosity, and gender role norms within African-American and Hispanic cultures, but group differences in level of values endorsement were only partially consistent with hypotheses. A strength of this study was its focus on values endorsement among
racial and ethnic minority adolescents without comparison to White adolescents as the normative group. However, the overlap in traditional values among African-American and Hispanic populations does decrease the likelihood of major intergroup differences emerging in the other study hypotheses. The analyses of intraethnic variation in values endorsement therefore provided further clarification of factors contributing to values endorsement in the sample.

**Intraethnic Variation in Values Endorsement**

Because culture is multifaceted, researchers have called for an increased focus on more complex conceptualizations of culture when considering factors impacting minority individuals’ functioning and well-being (Wyatt et al., ). Intraethnic variability is an important key to understanding how contextual factors contribute to the development of specific cultural norms, values, and behaviors, and cultural context was therefore expected to influence level of values endorsement among both African-American and Hispanic adolescents. Participants were expected to endorse more normative values if they were not born in United States, spoke Spanish at home, reported more exposure to violence and prejudice at school, had lower SES, or reported higher levels of social support. Interactions were also expected between three of the cultural
context variables (support, exposure to violence and exposure to prejudice) and ethnicity.

Although omnibus effects were statistically significant for eight of the twelve values variables predicted by cultural context and ethnicity, very few direct individual predictors were significant beyond the variance explained by ethnicity alone (discussed above in the section on interethnic variability in values). Additionally, for those predictors that were statistically significant, the effect sizes were generally low, with 1-5% of variance in the outcome variables explained by the predictor variables (with the exception of perceived support predicting familismo closeness). This remained the case across most analyses in the present study. Therefore, although the results were statistically significant, either the theoretical models or the operationalization of variables in the present study may be missing other primary factors that would help account for the remaining variance in outcome variables. This issue will be addressed in more detail during the discussion of study limitations, but the modest effect sizes should be noted throughout the discussion.

Across racial/ethnic groups, higher levels of perceived support predicted higher levels of familismo closeness and connectedness values. Perceived support accounted for 25.7% of the variance in familismo closeness and emerged as one of
the few robust predictor variables for values endorsement in the current sample. The interaction between perceived support and ethnicity was also a statistically significant predictor, and accounted for 3% of variance in *familismo* closeness when controlling for all other predictors. Probing of this interaction revealed that the association between support and *familismo* closeness existed for both racial/ethnic groups but was stronger among African-American adolescents. This finding is surprising given research suggesting that breakdown of the family unit may serve as a differentially disruptive risk factor for Hispanic adolescents’ well-being (Mechanic & Hansell, 1989) which might suggest that family and support are particularly instrumental in shaping Hispanic youth’s values and beliefs. However, it may simply reflect a less conditional acceptance of *familismo* values among Hispanic adolescents. Just as Hispanic adolescents have been shown to rely more heavily on family support-based coping regardless of the stressor (Gonzalez & Padilla, 1997), these findings suggest that Hispanic adolescents’ *familismo* closeness values are unlikely to shift in response to the external social support.

No difference was found between groups for endorsement of *familismo* referent and no other individual predictors were significant in the models predicting *familismo* values. This was contrary to expectations. Given the
relationship between acculturation and traditional values that has been suggested in prior research (Afable-Munsuz & Brindis, 2006) an association was expected between country of birth and language spoken at home and both gender role and familismo values. Specifically, being born outside the US and speaking Spanish at home were expected to predict higher levels of familismo endorsement and greater endorsement of traditional gender role values. Neither of these predictions was supported.

Two gender role values were, however, predicted by other cultural context factors. Higher SES predicted more traditional beliefs about premarital cohabitation, with adolescents with lower SES more strongly endorsing the value that it is okay to for couples to live together without the intention to get married. This likely reflects the reality of financial constraints within lower SES communities, where cohabitation may present a practical solution for cost sharing for young couples. Over time, this practical benefit may have counteracted traditional gender role or religious values discouraging premarital cohabitation that may still be normative for adolescents in higher SES communities.

The traditional gender role value that men should be the breadwinner and women should take care of the home and family was associated with exposure to
violence, with higher levels of violence exposure predicting more traditional
gender role values. There is evidence that exposure to violence in childhood,
either through being a victim of violence or witnessing domestic violence, is
associated with attitudes accepting or justifying violence in intimate partner
relationships (Foo & Margolin, 1995). Such attitudes have been shown to
accompany traditional beliefs about male-female gender roles (Truman, Tokar, &
Fischer, 1996) and, among males, may be related to beliefs of entitlement, both
generally and sexually, to women (Hill & Fischer, 2001). The exposure to
violence variable in the present study included components of witnessing (1
item), experiencing (5 items), and perpetrating (2 items) violence. It is possible
that higher levels of exposure to violence reinforce and justify traditional gender
role values for those adolescents exposed to violence in the home. The specific
details of violence exposure were not available through the Add Health dataset,
so distinctions between community and domestic violence could not be explored,
but further study is needed to clarify the nature and direction of the relationship
between traditional gender roles and exposure to violence in African-American
and Hispanic adolescents, particularly if traditional gender role values are linked
with higher levels of intimate partner violence, which has implications for
general mental health and coping as well as HIV prevention concerns such as
condom negotiation (Campbell, 2002; Kalichman, Williams, Cherry, Belcher, & Nachimson, 1998; Wingood & DiClemente, 1997)

Finally, lower levels of exposure to prejudice at school and being born in the US both predicted higher levels of community orientation. The effect sizes for both predictors were quite small, each accounting for only 1% of variance in community orientation if controlling for all other predictors. For country of birth, the association may actually be an artifact of ethnic differences in community orientation, as nearly all participants in this sample born outside the US were Hispanic. However, as with familismo values, Africentric values were measured in the current study using behavior as a reflection of values (engagement and orientation to interacting with neighbors). It makes sense if an adolescent is reporting higher levels of prejudice at school (presumably frequented by peers in the community) that they may be less likely to seek out engagements with their community outside of school. Likewise, for individuals born outside the US acculturation factors such as language barriers or being new to the community may reduce their likelihood of engaging in behavior consistent with Africentric community orientation values in that specific situation even if they would identify with that value in general. Further research utilizing values measures that do not rely on behavioral approximations of values and beliefs is needed to
clarify these relationships and overall level of endorsement of normative values in African-American and Hispanic adolescents.

**Cultural Context and Coping Behavior**

Because risk factors stemming from cultural context, such as low SES, have been shown to decrease coping effectiveness among minority youth (Scott, 2004), higher levels of exposure to cultural context risks including exposure to prejudice, exposure to violence, low perceived social support, and low SES were expected to predict less effective coping behavior. Cultural context variables were statistically significant predictors for four of the seven coping constructs, but effect sizes were modest with 2 to 5% of variance in coping self-efficacy, coping flexibility, religious coping, and compensatory coping explained by context variables. Cultural context variables did not predict avoidant coping, problem-focused coping, or coping resilience.

SES was the most consistently significant cultural context predictor across coping behaviors, although it accounted for only 1 to 2% of variance in outcome variables when controlling for all other predictors. Higher SES predicted greater coping flexibility, higher endorsement of religious coping, and lower levels of reported compensatory coping. Social support also emerged as a statistically significant predictor for two coping variables, accounting for 2% of variance in
each when controlling for all other predictors. Specifically, higher levels of perceived social support also predicted greater coping self-efficacy and more use of religious coping. Finally, lower levels of exposure to prejudice at school predicted higher coping self-efficacy, accounting for 1% of the variance when controlling for all other predictors, and lower levels of exposure to violence predicted greater coping flexibility, accounting for 2% of the variance when controlling for all other predictors. These findings were consistent with the expected direction of association between cultural context and coping behavior.

Although the effect sizes were consistently low, each of the cultural context variables served as a statistically significantly predictor of at least one coping construct, suggesting that, as hypothesized, context is relevant in shaping coping behavior. Access to financial resources was shown to impact specific coping strategies as well as overall coping flexibility. The federal poverty level for a family of four in 1995 at Wave I was approximately $15,500 (Department of Health and Human Services, 1996). A third of the sample reported a total annual income for their family of under $25,000 (with 19.2% reporting annual incomes under $15,000), indicating that a significant proportion of the adolescents in this study were living at or near the poverty threshold. Therefore, although the overall sample reported relatively low levels of exposure to violence and
moderate levels of exposure to prejudice at school, financial strain represented a significant contextual risk factor for a large subset of participants.

It is important to note that Add Health did not include any Wave I data about being the victim of sexual assault for boys. In the sexual health section, girls were asked if they had ever been forced to have sex, while boys were asked if they had ever forced someone to have sex. Therefore, the question was excluded for both genders and exposure to violence did not include any information on sexual violence. Data about general exposure to stressors, such as family conflict, social problems with peers, being involved in a serious accident, etc., also were not available, suggesting that participants’ overall cultural context risk levels may have been higher than what was presented in this study.

Likewise, the item used to measure exposure to prejudice was a single item that queried the degree to which participants’ believed students at their schools were prejudiced. For students attending more homogeneous schools, prejudice from their peers may not represent the primary source of racial or ethnicity-related stressors they typically face, and level of exposure to discrimination may also be higher than is presented in the present study. It is interesting to note that Hispanic students reported higher levels of perceived prejudice than did African-Americans ($\eta^2 = .031$), which may be a reflection of the challenges faced
by immigrants or less acculturated Hispanic adolescents, including barriers related to language and legal documentation status. A multifaceted measure of risk including a more comprehensive report exposure to violence, including sexual violence, and general stressors as well as more detailed inquiry into race- and ethnicity-linked stressors across contexts would be helpful to clarify the relationship between context and coping behavior.

**Values and Coping**

**Coping Strategies**

Religious values accounted for 12.9% of the variance in religious coping, with religiosity predicting more frequent use of religious coping, consistent with expectations. In contrast, religious fundamentalism predicted lower use of religious coping, while belief in God and spirituality were not statistically significant predictors. This pattern of findings, while seemingly contradictory, is consistent with research suggesting that religion can both be protective and serve as a risk factor for adolescent coping effectiveness, particularly among Hispanic adolescents (Aldridge & Roesch, 2008a). The distinction between positive and negative religious coping (Pargament et al., 1998), as well as the construct of religious fatalism (Pepitone & Triandis, 1987) could help clarify the conditions in which religious values predict more effective use of religious coping behaviors.
Unfortunately, the Add Health dataset did not include measures of fatalism, which has been associated with less active coping and poorer health outcomes in Hispanic adolescents (Saldaña, 1990; Wheaton, 1982) and the religious coping question did not clarify the nature of religious coping (e.g., asking God to aid in choosing the right path vs. putting things entirely in God’s hands or interpreting stressors as a punishment from God). It is possible that participants who endorsed fundamentalist religious values were also more likely to endorse fatalistic religious values, which might discourage adolescents from actively seeking out flexible approaches to managing stressors effectively. Therefore, further exploration of the relationship of religious values and coping that measures the value of fatalism and distinguishes between positive and negative religious coping is needed.

Fundamentalism also predicted lower levels of coping resilience, suggesting that fundamentalist religious beliefs may reduce some aspects of coping effectiveness. Indeed, a study of religious coping and mental health suggested that fundamentalism is associated with higher levels of depression (Nooney & Woodrum, 2002). This may be related to increased cognitive and behavioral rigidity stemming from socialization to absolute axioms within the religious teachings of right and wrong. Additionally, research suggests that
individuals who subscribe to fundamentalist religious beliefs are less likely to seek formal psychological care and are instead more likely to seek advice from clergy (Wamser, VandenBerg, & Hibberd, 2011), which may put individuals in crisis at risk for poorer mental health outcomes. It should be noted that 78% of the sample endorsed fundamentalist religious beliefs for their respective religions, so there was very little variability in level of fundamentalist values among participants. Although fundamentalism was not associated with coping flexibility in the present study, further study of the relationship between rigid belief sets and coping flexibility is warranted to help clarify how strict adherence to religious teachings influences the ability to flexibly employ effective coping strategies in diverse situations.

In addition to fundamentalism, higher levels of familismo connectedness predicted lower coping resilience, which was contrary to expectations. In contrast, higher levels of familismo closeness and religiosity predicted greater coping resilience. Together, 4.2% of the variance in coping resilience was explained by the model. The negative association between connectedness and resilience may, again, be related to the manner in which the constructs were operationalized. Connectedness was measured as a composite variable from the mean number of activities participants had done with one or both parents over
the past month, which could also potentially reflect lower levels of independence. *Familismo* places a high value on interdependence, but high levels of engagement with parents could also be a sign of dependent behavior due to lower levels of self-efficacy which could, in turn, reflect lower ability to manage difficult problems independently resulting in lower levels of coping resilience.

*Familismo* and traditional gender role variables accounted for 4.8% of the variance in compensatory coping, but none of the *familismo* variables were statistically significant as individual predictors. However, all three gender role values were statistically significant predictors. Greater endorsement of the value that men should be the breadwinner and women should take care of the home and family, and greater endorsement of conventionality, both predicted greater use of compensatory coping. In contrast, more traditional gender role values about premarital cohabitation (lower endorsement that it is okay to live together without getting married) predicted less use of compensatory coping.

The non-significant findings for *familismo* values were surprising given the research on acculturation among Hispanic adolescents, which suggests that more acculturated values are associated with more permissive beliefs about premarital sex and higher levels of sexual risk taking (Lee & Hahm, 2010). However, the present findings suggest that these changes may be more closely linked to
changes in gender role values such as marianismo. The relationship is also complicated by the opposing influences of changes to gender role values. Specifically, as gender roles become less traditional and more permissive about premarital cohabitation, adolescents may be more likely to also have more sexual partners or earlier sexual debut (Lee & Hahm, 2010) although that was not supported in the present study (see Values and Sexual Risk Behavior, below). At the same time, the possibility for increased risk is balanced by potential benefits associated with reductions in marianismo and traditional gender roles, such as increased willingness to talk about sex for the purposes of condom negotiation (Deardorff et al., 2008) and a reduction in gender-related power imbalances.

Values did not predict problem-focused and avoidant coping, which was contrary to expectations. Africentric values, in particular, have been shown to influence use of both general and values-consistent coping among African-American adolescents. Previous research shows that Africentric values have been linked to more use of problem solving coping and less externalizing coping (Scott, 2003b) as well as better mental health outcomes such as higher self-esteem and lower levels of depression if use Africentric coping strategies are used (Constantine et al., 2002; Gaylord-Harden & Cunningham, 2009).
One factor limiting the predictive ability of values variables on coping may be the specific coping strategies that were measured in the present study. In addition to religious coping, research suggests that social support-based coping (such as family-based or communalistic coping) is among the most common strategies endorsed for coping among minority adolescents (Copeland & Hess, 1995; Hawley et al., 2007; Utsey et al., 2007), both for the purposes of emotional support and also to involve the family in problem solving strategies (Hawley et al., 2007; Munsch & Wampler, 1993). Although social support was included as a cultural context factor in the current study, communalistic or family-based coping strategies were not measured, and these specific strategies may be important to understand the association between normative cultural values and coping behavior.

**Coping Flexibility**

Overall, 3.9% of the variance in coping flexibility was explained by values, with lower endorsement that men should be the breadwinner and higher levels of spirituality predicting greater flexibility. This finding is consistent with interpretation that more traditional gender roles are associated with more rigid perspectives and less overall flexibility. No other individual predictors were statistically significant.
It is important to note that coping flexibility was measured as a single item assessing endorsement of perceived adaptability on a 7-point scale. The measure does not address frequency of using diverse strategies and it does not build upon the transactional model of stress and coping (Lazarus & Folkman, 1984) to assess adolescents’ ability to flexibly appraise which coping strategy is most likely to adaptively fit the context and degree of changeability of the stressor. Nor does it consider the concept of goodness of fit between culturally-relevant stressors, such as racism or acculturation challenges, and culturally-based coping strategies, such as seeking out community or family support. Although an adolescent may consider him or herself adaptable, the item does not provide insight into participants’ actual coping behavior and the effectiveness of the person by situation interaction discussed in the transactional model of stress and coping. Considering these factors, the item is perhaps more accurately conceptualized as perceived flexibility as opposed to coping flexibility. For example, an adolescent may be adapting to (and tolerating) stressors by consistently using the same coping behavior (e.g., distraction or family support) instead of flexibly employing a variety of coping strategies tailored to the situation. Research indicates that blended (flexible) coping profiles predict better mental health outcomes in Hispanic adolescents (Saldaña, 1990) and Mexican
adolescents with flexible coping were shown to have more positive affect than those with more limited coping strategies (Aldridge & Roesch, 2008b), so further clarification of the role of flexibility in overall coping effectiveness, and the degree to which flexibility, when measured differently, may be related to values and HIV risk behaviors, is needed.

**Coping Self-Efficacy**

From the three-step hierarchical model predicting coping self-efficacy from gender, values, and the interaction between values and cultural context, only the main effect for gender, which accounted for 1% of the variance in self-efficacy, was statistically significant. Surprisingly, boys had lower coping self-efficacy than girls. Based on the emphasis within traditional gender roles of deference to males, this finding was unexpected. However, although adolescent boys have been shown to report higher academic and social self-efficacy (Diseth, Meland, & Breidablik, 2014; McKay, Dempster, & Byrne, 2014), there is also evidence that they report lower levels of emotional self-efficacy than adolescent girls. Perhaps the greater emphasis within traditional gender roles of socializing girls to caregiving and emotional openness, while discouraging boys from expressing emotions, actually provides adolescent girls with an adaptive edge at
processing and reacting to distressing emotions, which increases their overall coping self-efficacy.

Although research suggests that self-efficacy is an important factor in overall coping effectiveness and influencing HIV risk behavior (Bandura, 1997), it is possible that it is not a direct result of values. Unlike individual coping strategies, which may reflect relevant values and norms that shape the selection of specific behaviors in reaction to stress, coping self-efficacy represents the overall belief in one’s ability to handle life stressors. Therefore, though coping self-efficacy may serve as an important factor in the effective application of individual coping strategies, self-efficacy may simply stem from the product of personal (e.g., temperament) and environmental factors (e.g., social support) that are not shaped by cultural values.

**Coping and HIV Risk Behavior**

**Coping and Sexual Risk**

Coping did not significantly predict sexual risk behavior in this sample, contrary to expectations. This finding may stem from the specific coping variables that were examined. For example, past research suggests that emotion-focused coping is associated with increased HIV risk behaviors (lower levels of condom use) and poorer health outcomes in African-American and Hispanic
adolescent mothers (Koniak-Griffin & Stein, 2006) but emotion-focused coping was not assessed in the current study. Perhaps most surprising was the lack of association between compensatory (sex-based) coping and sexual risk behaviors. This finding is contrary to the research suggesting that sexual risk behaviors represent a form of compensatory coping when more adaptive coping skills and coping self-efficacy are lacking (Bandura, 1997; Briere, 2004). Because the overall level of reported sexual risk behavior for the current sample was low, and certain cultural risk factors known to increase sexual risk (such as exposure to violence) were also low, it may be useful in future research to examine the association between coping and sexual risk in high-risk adolescents only, such as among individuals with a history of trauma exposure or those with low coping self-efficacy.

Although, across age groups, only about half the sample had ever had sexual intercourse, among those who were sexually active condom use was very low, with only 9.5% reporting ever having used condoms and a median age of 14 for sexual debut. Although the reported condom use is somewhat lower than expected (for example, Teitelman et al. (2008) found that 50% of urban African-American and Hispanic adolescents reported inconsistent condom use) research suggests that Hispanic adolescents tend to report lower condom use than do
African-American and White youth, and both Hispanics and African-Americans report earlier sexual debut than Whites (Rangel, Gavin, Reed, Fowler, & Lee, 2006), which increases the likelihood of having more, and older, sexual partners, both of which reduce effective condom negotiation and increase HIV sexual risk (Begley et al., 2003; Dillon et al., 2010; Kotchick et al., 2001). Therefore, examining the impact of coping variables only among adolescents with higher levels of sexual risk behavior, or higher levels of exposure to environmental stressors, may help clarify the unexpected lack of association between coping and sexual risk.

Coping and Substance Use Risk

Coping behaviors accounted for 3.4% of the variance in the substance use risk index, with greater resilience, religious coping, and avoidant coping predicting lower substance use behaviors. While the first two predictors were consistent with hypotheses, the direction of the association between avoidant coping and risk behaviors was contrary to expectations. However, the findings are consistent with research suggesting that avoidant coping can be adaptive for minority adolescents in specific contexts. Specifically, research in higher risk environments demonstrates that avoidant coping has been linked with better mental health outcomes and lower substance use among minority adolescents.
(Dashora et al., 2011). These findings reinforce the importance of taking context and coping “goodness of fit” into account when considering the adaptiveness of a given coping strategy, specifically in relation to choosing strategies that fit the changeability of the stressor as discussed in the transactional model of stress and coping (Lazarus & Folkman, 1984). These findings also suggest the overall sample may have been experiencing higher levels of environmental risk or chronic stress than was captured by the exposure to violence and exposure to prejudice variables, as research suggests that avoidant coping can be protective for minority adolescents within high stress environments but not within lower risk environments (Dashora et al., 2011; Gonzales, Tein, Sandler, & Friedman, 2001a; Gonzalez & Padilla, 1997). Additional measures of stress, such as general life stressors and acute stressors such as exposure to traumatic stressors or homelessness, would be helpful to supplement the cultural context factors examined in the present study.

Values and HIV Risk Behavior

Values and Sexual Risk Behavior

Values accounted for 6% of the variance in sexual risk behaviors, with 
familismo closeness and familismo referent predictive of lower sexual risk scores. These findings are consistent with previous research indicating that less
acculturated Hispanic adolescents exhibit lower levels of sexual risk (Lee & Hahm, 2010), which may be related to familismo values. In particular, subjugation to the family, which is similar to the construct of familismo referent examined in the present study, has been linked to lower sexual risk behaviors in Hispanic adolescents (Guilamo-Ramos et al., 2009). However, the association between subjugation to the family and lower levels of sexual risk was only found in Hispanic girls, and familismo values did not predict sex risk in boys. Gender differences were not explored in relation to familismo in the current study, and this represents a potential area for further clarification.

Contrary to expectations, gender role values were not related to sex risk behavior, nor were Africentric values. Because values such as marianismo promote the ideal the girls should not talk openly about sex, more traditional gender role values have been shown to predict poorer condom negotiation in previous research (Deardorff et al., 2008), and Hispanic girls whose mothers endorsed more egalitarian gender roles were more likely to report using condoms (Teitelman et al., 2008). This null finding also contradicted the trend revealed in research question 3, in which traditional gender roles predicted higher use of compensatory coping.
Overall, religious values were expected to be protective and predict lower sexual risk behaviors due to previous research suggesting religious values are associated with more condom self-efficacy, later sexual debut, and more frequent condom use in minority adolescent girls (McCree et al., 2003). However, this hypothesis was not supported and three of the four religious values were not statistically significant predictors. Only religious fundamentalism was associated with sexual risk, and again it was shown to serve as a risk factor. Endorsing fundamentalist values predicted slightly higher sexual risk behaviors, although, consistent with the majority of findings in the present study, the effect size was quite modest (1% of the variance in sexual risk behavior was explained by fundamentalist values if controlling for all other predictors in the model).

**Values and Substance Use Risk Behavior**

As predicted, values directly predicted substance use, with the overall model accounting for 9% of variance in the substance use risk index. Although this effect size is modest, the association between values and substance use represented one of the more robust findings in the current study. Higher levels of *familismo* closeness, *familismo* referent, and religiosity predicted lower substance use risk, which is consistent with expectations and the trends revealed in prior results of this study regarding the protective influence of those values. However,
similar to the results of the analysis predicting coping resilience from values, higher levels of familismo connectedness predicted higher substance use risk. The effect size for this finding was quite modest (again, only 1% of the variance in substance use risk was explained by familismo connectedness if controlling for all other predictors in the model), but the results suggest connectedness may provide distinct risk and protective features than those related to familismo closeness and referent values. Overall, familismo connectedness was endorsed at moderate to low levels by both African-American and Hispanic participants. Interestingly, connectedness was the one familismo value endorsed at slightly higher levels by African-Americans than by Hispanics within this sample, which may suggest that it is not accurately measuring the intended value, which was expected to be endorsed at higher levels by Hispanic participants.

When the relationship between values and substance use was examined with coping as a mediator, most of the hypothesized mediational pathways were not supported. A modest but statistically significant indirect effect was revealed only for one coping variable, in which religious coping partially mediated the relationship between religiosity and substance use risk. It should be noted that, due to the sheer number of variables included in the present study, which included multifaceted values and coping variables, the outcome variables of
sexual and substance use risk were examined as indices only and not explored as individual components such as condom use or frequency of drinking (with the exception of the preliminary analyses). While this contributes to parsimony in the model and provides a clearer “big picture” estimate of risk, it may also obscure real associations between how individual risk behaviors may be influenced by values and coping.

**Summary**

The current study provides a unique contribution to the literature on coping and HIV prevention by examining the associations between cultural values, coping behavior, and HIV risk behaviors in tandem within a single, nationally representative sample of Hispanic and African-American adolescents. Additionally, the models predicting coping and HIV risk examined multiple facets of culture, including environmental risk and protective factors and intraethnic variability in values endorsement. Also, as opposed to comparing minority adolescents to White adolescents as the “normative” comparison group, comparisons were made between African-American and Hispanic adolescents, who have shown to endorse many overlapping values, such as religious and collectivist values, and associated coping strategies, as well as some risk factors such as higher exposure to violence and exposure to race/ethnicity-related
stressors such as discrimination and acculturation stressors. The consideration of intraethnic variation allowed for a focus on intragroup factors that shed light on how cultural context may influence values within an ethnic group or community. This also enables clearer identification of individuals who may be more likely to benefit from the inclusion of specific target values within coping-based interventions.

Few studies have directly assessed how values influence specific coping strategies within African-American and Hispanic adolescents. Research with this population has primarily focused on either the application of values as a resource for culturally-tailored HIV prevention (e.g., Villarruel et al., 2005) or the integration of coping skills training as a component of comprehensive HIV interventions (e.g., Rotheram-Borus et al., 2001). Limited research has been done with minority adolescents linking cultural values to coping behaviors to examine specific mechanisms that can be targets for tailoring coping-based HIV prevention for higher risk youth. The present study provides important insights into those mechanisms as well as areas that require further clarification to inform HIV interventions.

Overall, the present study confirmed that associations do exist among all three target constructs (values, coping behavior, and HIV risk behaviors), but the
exact associations remain unclear. Both interethnic and intrathnic differences were found in values endorsement, with higher levels of Africentric and religious values among African-Americans but no difference in levels of *familismo* or traditional gender role values. Higher levels of perceived support were associated with greater endorsement of *familismo* values whereas higher levels of exposure to cultural context risk factors were associated with more traditional gender role values and lower community orientation. Lower levels of environmental risk factors also predicted more adaptive coping profiles, including higher coping self-efficacy, more coping flexibility, more use of religious coping, and less use of compensatory coping.

Africentric values were not predictive of either coping or HIV risk, and *familismo* values, gender role values, and religious values presented inconsistent results across analyses, although generally *familismo* values and religiosity appear protective (associated with more adaptive coping and risk behaviors) whereas traditional gender role values and religious fundamentalism appear less adaptive. Contrary to expectations, coping behavior did not predict sexual risk behaviors, although coping did predict substance use risk behaviors. *Familismo* and religious values predicted both sexual risk and substance use risk behaviors. Because coping variables in the current study did not predict sexual risk
behaviors, mediation of the relationship between values and sexual risk could not be assessed. Coping variables were not statistically significant mediators of the relationships between values and substance use, with the exception of religious coping, which partially mediated the relationship between religiosity and substance use risk.

Effect sizes were lower than expected across all analyses. The low proportion of variance in outcome variables explained by the models in the present study suggests that other factors may be important in understanding the relationships between values, coping, and risk behavior. Measurement limitations, including single-item variables and behavioral-based approximations of values, may also have reduced the robustness of the present findings. These considerations warrant further study, and they are discussed in more detail below along with limitations and areas for future research.

**Study Limitations and Future Directions**

Although the present study provided important insights into the values and coping behavior of minority adolescents, and how these factors contribute to or are protective against HIV risk behaviors within a nationally representative sample, some limitations must be noted. A significant contribution of this study was combining two fields of related research – the association between values and...
and coping, and the association between coping and HIV risk behaviors – to examine the pattern of associations between all three factors and potential mechanisms of change that could be used to inform culturally-tailored coping-based HIV prevention. However, as these constructs have not been examined simultaneously, locating a dataset that provided optimal measurement of all three constructs was challenging. Add Health offered numerous methodological strengths, including the large, nationally representative sample and longitudinal design. However, for the purposes of this study the data could only be examined cross-sectionally because many key values questions were asked only at Wave III or Wave IV, so could not be tracked longitudinally across time. Because the analyses were conducted on cross-sectional data combined across time points, direction of effect, or whether the values being studied may have changed in some systematic way with the passage of time, cannot be determined.

Additionally, although Add Health is a large data set, when the sample was narrowed to include only Hispanic/Latino and African-American/Black youth who had participated in Waves I, III, and IV of data collection, the number of participants was significantly reduced. For the sake of studying sexual and substance use risk as outcome variables, focusing exclusively on older adolescents, such as 16-18 year olds, would have been ideal. Unfortunately, such
age restrictions would have resulted in a smaller sample size that would have limited exploration into factors such as intraethnic variation. As a result, the inclusion of younger age groups may have contributed to both skewness and the low variability in risk behaviors observed in the sample.

A significant limitation of the present study was the use of single-item measures of many of the coping constructs, in addition to the use of composite variables with only moderate internal consistency. Because the study utilized variables from a pre-existing data set to measure a complex set of variables, multi-item, validated scales were not available for every construct of interest. In future research on this topic, effort should be made to include multiple-item scales with good internal consistency to allow for a shift towards latent modeling of variables to be explored together in one predictive model including values, cultural context, coping, and HIV risk behaviors.

Additionally, the operationalization of certain constructs did not provide a clear understanding of whether a value or a behavior was being measured. Use of a scale specifically designed to measure the target values would be preferable, such as the Mexican-American Cultural Values Scale for *familismo* (e.g., “When it comes to important decisions, the family should ask advice from close relatives”) (Knight et al., 2010); the Africentric scale for Africentric values (e.g., “The
problems of other Black people are their problems, not mine”) (Grills & Longshore, 1996); and the Religious Health Fatalism Questionnaire for fatalism (e.g., “When I have difficulties in my life I give my burdens to God and let Him handle them”) (Franklin, Schlundt, & Wallston, 2008). This would allow for coping strategies most likely to be impacted by normative values (such as family-based or community-based support coping or positive and negative religious coping) to be selected and could help clarify the strength of association between values and closely-related specific coping strategies. The findings related to religiosity and religious coping, which was the only coping behavior that significantly mediated the relationship between a cultural value and HIV risk behavior in the current study, provide support for the possibility that model fit might be improved if target values questions and coping behaviors were measured in such a way that more directly mapped onto the behavioral aspects of the other construct.

Because the coping literature lacks consensus on the best way to operationalize and measure adaptive coping, it was difficult to compare the results of the current study to previous research to determine whether the effect sizes and associations between coping and values or coping and risk behavior found in this sample were representative. Throughout the field, approaches to
measuring coping behavior are quite disparate. The field would benefit from continuing to refine what is defined as adaptive coping, by moving towards coping profiles with a focus on coping effectiveness, flexibility, and goodness of fit between specific stressors and coping strategies.

Finally, as stated in previously, effect sizes for results that were statistically significant ranged from low to moderate, but most models accounted for less than 10% of the variance in outcomes. Clearly, a large proportion of variance in the outcome variables remains unexplained. The methodological changes discussed above may improve the strength of associations between values, coping, and HIV risk behaviors, but it is also possible that important predictors and mediators not included in the current study would help account for variance in the model predicting HIV risk.

Because so many of the constructs were measured as single items or composite variables from a few items, constructs such as *familismo* could not be analyzed using a single scale score. Therefore, given the sheer number of variables comprising values and coping behavior alone, there were numerous factors that, for the sake of parsimony, were not considered. For example, with the exception of intraethnic variability in values explored in Research Question 1, separate analyses for African-American and Hispanic participants were not run.
to assess whether the associations between variables differed by ethnicity.

Additionally, level of acculturation (time since coming to the US, parents’ place of birth if the adolescent was born here, preferred language) was not closely examined outside values endorsement. With a few exceptions, the analyses were also not broken down by age, gender, and cultural context factors, and the final models were not examined separately for race/ethnicity. Sexual orientation, which has been identified as an important risk factor among young Hispanic and African-American males (CDC, 2014), was also not considered. Additionally, the present study explored the impact of cultural context on values and coping, but again did not directly include context in the model predicting HIV behaviors for the sake of parsimony. Because previous research shows that cultural context variables contribute to HIV risk behaviors (Rotheram-Borus et al., 1995) it would be important to include these as moderators in the full model, perhaps with the inclusion of mental health. Measuring cultural context risk, values, coping effectiveness (primarily based on effectiveness and goodness of fit) and overall HIV risk with indices resulting in a single score for each construct, as opposed to numerous variables for each construct, would allow for the inclusion of potentially important interaction terms and mediators or moderators in the model without resulting in models that are overly complex.
As discussed, the current study provides a unique contribution to the literature on coping and HIV prevention by exploring the relationships between cultural values, coping, and HIV risk among minority adolescents while considering multiple facets of cultural influence. Further research is needed to clarify the associations between all three constructs and to target mechanisms of behavior change so that they can be used to inform intervention development to reduce health disparities for US adolescents most at risk for contracting HIV. However, this research is an important first step in understanding how values can be incorporated in coping-based interventions to reduce HIV risk behaviors in Hispanic and African-American adolescents.
## Appendix

### Table 13: Intraethnic Variability in *Familismo* Connectedness

<table>
<thead>
<tr>
<th></th>
<th>Step 1</th>
<th></th>
<th></th>
<th>Step 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>t</td>
<td>sr²</td>
<td>β</td>
<td>t</td>
<td>sr²</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>-.08</td>
<td>-1.36</td>
<td>&lt;.01</td>
<td>-.09</td>
<td>-1.47</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Country of Birth</td>
<td>-.02</td>
<td>-0.35</td>
<td>&lt;.01</td>
<td>-.03</td>
<td>-0.48</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Language in Home</td>
<td>-.10</td>
<td>-1.61</td>
<td>.01</td>
<td>-.09</td>
<td>-1.45</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Perceived Support</td>
<td>.12</td>
<td>2.43*</td>
<td>.01</td>
<td>.18</td>
<td>2.51**</td>
<td>.01</td>
</tr>
<tr>
<td>SES</td>
<td>.04</td>
<td>0.82</td>
<td>&lt;.01</td>
<td>.03</td>
<td>0.46</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Violence Exposure</td>
<td>-.02</td>
<td>-0.47</td>
<td>&lt;.01</td>
<td>-.07</td>
<td>-1.06</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Violence*Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td>.08</td>
<td>1.13</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Support*Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td>-.08</td>
<td>-1.16</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>SES*Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td>.03</td>
<td>0.53</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>.028**</td>
<td></td>
<td></td>
<td>.029</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\Delta R^2$</td>
<td>.007</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* *p* < .05, **p** < .01, ***p** < .001.

### Table 14: Intraethnic Variability in Gender Role Values: Premarital Cohabitation

<table>
<thead>
<tr>
<th></th>
<th>Step 1</th>
<th></th>
<th></th>
<th>Step 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>t</td>
<td>sr²</td>
<td>β</td>
<td>t</td>
<td>sr²</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>-.21</td>
<td>-3.59***</td>
<td>.03</td>
<td>-.21</td>
<td>-3.58***</td>
<td>.03</td>
</tr>
<tr>
<td>Country of Birth</td>
<td>-.04</td>
<td>-0.74</td>
<td>&lt;.01</td>
<td>-.04</td>
<td>-0.72</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Language in Home</td>
<td>.10</td>
<td>1.57</td>
<td>.01</td>
<td>.10</td>
<td>1.57</td>
<td>.01</td>
</tr>
<tr>
<td>Perceived Support</td>
<td>.00</td>
<td>0.07</td>
<td>&lt;.01</td>
<td>-.03</td>
<td>-0.44</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>SES</td>
<td>.11</td>
<td>2.37*</td>
<td>.01</td>
<td>.11</td>
<td>1.77</td>
<td>.01</td>
</tr>
<tr>
<td>Violence Exposure</td>
<td>-.08</td>
<td>-1.64</td>
<td>.01</td>
<td>-.08</td>
<td>-1.27</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Violence*Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td>.01</td>
<td>0.08</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Support*Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td>.05</td>
<td>0.65</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>SES*Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td>.01</td>
<td>0.21</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>.041***</td>
<td></td>
<td></td>
<td>.036</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\Delta R^2$</td>
<td>.001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* *p* < .05, **p** < .01, ***p** < .001.
### Table 15: Intraethnic Variability in Gender Role Values: Breadwinner

<table>
<thead>
<tr>
<th></th>
<th>Step 1</th>
<th></th>
<th></th>
<th></th>
<th>Step 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( \beta )</td>
<td>( t )</td>
<td>( s^2 )</td>
<td></td>
<td>( \beta )</td>
<td>( t )</td>
<td>( s^2 )</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>.12</td>
<td>2.08*</td>
<td>&lt;.01</td>
<td></td>
<td>.11</td>
<td>2.03*</td>
<td>.01</td>
</tr>
<tr>
<td>Country of Birth</td>
<td>.07</td>
<td>-1.34</td>
<td>.01</td>
<td></td>
<td>-.07</td>
<td>-1.41</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Language in Home</td>
<td>.02</td>
<td>0.33</td>
<td>&lt;.01</td>
<td></td>
<td>.02</td>
<td>0.36</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Perceived Support</td>
<td>.07</td>
<td>1.52</td>
<td>&lt;.01</td>
<td></td>
<td>.15</td>
<td>2.17*</td>
<td>.01</td>
</tr>
<tr>
<td>SES</td>
<td>-.08</td>
<td>-1.77</td>
<td>.01</td>
<td></td>
<td>-.07</td>
<td>-1.25</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Violence Exposure</td>
<td>.23</td>
<td>4.78***</td>
<td>.05</td>
<td></td>
<td>-.21</td>
<td>3.24</td>
<td>.02</td>
</tr>
<tr>
<td>Violence*Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.03</td>
<td>0.50</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Support*Ethnicity</td>
<td>-.11</td>
<td>-1.52</td>
<td>&lt;.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SES*Ethnicity</td>
<td>-.01</td>
<td>-0.17</td>
<td>&lt;.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted ( R^2 )</td>
<td>.083***</td>
<td></td>
<td></td>
<td></td>
<td>.084</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \Delta R^2 )</td>
<td>.007</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. * \( p < .05 \), ** \( p < .01 \), *** \( p < .001 \).*

### Table 16: Intraethnic Variability in Africentric Values: Collectivism

<table>
<thead>
<tr>
<th></th>
<th>Step 1</th>
<th></th>
<th></th>
<th></th>
<th>Step 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( \beta )</td>
<td>( t )</td>
<td>( s^2 )</td>
<td></td>
<td>( \beta )</td>
<td>( t )</td>
<td>( s^2 )</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>.12</td>
<td>2.08*</td>
<td>.01</td>
<td></td>
<td>.12</td>
<td>2.03*</td>
<td>.01</td>
</tr>
<tr>
<td>Country of Birth</td>
<td>.02</td>
<td>0.45</td>
<td>&lt;.01</td>
<td></td>
<td>.02</td>
<td>0.45</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Language in Home</td>
<td>.09</td>
<td>1.38</td>
<td>&lt;.01</td>
<td></td>
<td>.09</td>
<td>1.42</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Perceived Support</td>
<td>-.06</td>
<td>-1.26</td>
<td>&lt;.01</td>
<td></td>
<td>-.11</td>
<td>-1.71</td>
<td>.01</td>
</tr>
<tr>
<td>SES</td>
<td>.01</td>
<td>0.11</td>
<td>&lt;.01</td>
<td></td>
<td>-.02</td>
<td>-0.28</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Violence Exposure</td>
<td>-.03</td>
<td>-0.68</td>
<td>&lt;.01</td>
<td></td>
<td>-.04</td>
<td>-0.63</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Violence*Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.01</td>
<td>0.21</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Support*Ethnicity</td>
<td>.08</td>
<td>1.12</td>
<td>&lt;.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SES*Ethnicity</td>
<td>.04</td>
<td>0.57</td>
<td>&lt;.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted ( R^2 )</td>
<td>.020*</td>
<td></td>
<td></td>
<td></td>
<td>.017</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \Delta R^2 )</td>
<td>.004</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. * \( p < .05 \), ** \( p < .01 \), *** \( p < .001 \).*
### Table 17: Intraethnic Variability in Africentric Values: Community Orientation

<table>
<thead>
<tr>
<th></th>
<th>Step 1</th>
<th></th>
<th>Step 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>t</td>
<td>sr²</td>
<td>β</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>-.12</td>
<td>-2.02*</td>
<td>.01</td>
<td>-.12</td>
</tr>
<tr>
<td>Country of Birth</td>
<td>.10</td>
<td>2.00*</td>
<td>.01</td>
<td>.10</td>
</tr>
<tr>
<td>Language in Home</td>
<td>.02</td>
<td>0.28</td>
<td>&lt;.01</td>
<td>.02</td>
</tr>
<tr>
<td>Perceived Support</td>
<td>.08</td>
<td>1.57</td>
<td>.01</td>
<td>.11</td>
</tr>
<tr>
<td>SES</td>
<td>-.01</td>
<td>-0.20</td>
<td>&lt;.01</td>
<td>-.02</td>
</tr>
<tr>
<td>Violence Exposure</td>
<td>.08</td>
<td>1.53</td>
<td>&lt;.01</td>
<td>.10</td>
</tr>
<tr>
<td>Violence*Ethnicity</td>
<td>-.04</td>
<td>-0.53</td>
<td>&lt;.01</td>
<td>-</td>
</tr>
<tr>
<td>Support*Ethnicity</td>
<td>-.05</td>
<td>-0.63</td>
<td>&lt;.01</td>
<td>-</td>
</tr>
<tr>
<td>SES*Ethnicity</td>
<td>.02</td>
<td>0.34</td>
<td>&lt;.01</td>
<td>-</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.019*</td>
<td></td>
<td>.013</td>
<td></td>
</tr>
<tr>
<td>ΔR²</td>
<td>.002</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. * p < .05, ** p < .01, *** p < .001.

### Table 18: Intraethnic Variability in Religious Values: Religiosity

<table>
<thead>
<tr>
<th></th>
<th>Step 1</th>
<th></th>
<th>Step 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>t</td>
<td>sr²</td>
<td>β</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>-.38</td>
<td>-6.95***</td>
<td>.10</td>
<td>-.39</td>
</tr>
<tr>
<td>Country of Birth</td>
<td>-.04</td>
<td>-0.81</td>
<td>&lt;.01</td>
<td>-.05</td>
</tr>
<tr>
<td>Language in Home</td>
<td>.09</td>
<td>1.45</td>
<td>&lt;.01</td>
<td>.09</td>
</tr>
<tr>
<td>Perceived Support</td>
<td>.0</td>
<td>1.78</td>
<td>.01</td>
<td>.11</td>
</tr>
<tr>
<td>SES</td>
<td>.04</td>
<td>0.83</td>
<td>&lt;.01</td>
<td>.00</td>
</tr>
<tr>
<td>Violence Exposure</td>
<td>-.04</td>
<td>-0.90</td>
<td>&lt;.01</td>
<td>-.04</td>
</tr>
<tr>
<td>Violence*Ethnicity</td>
<td>.01</td>
<td>0.18</td>
<td>&lt;.01</td>
<td>-</td>
</tr>
<tr>
<td>Support*Ethnicity</td>
<td>-.04</td>
<td>-0.62</td>
<td>&lt;.01</td>
<td>-</td>
</tr>
<tr>
<td>SES*Ethnicity</td>
<td>.07</td>
<td>1.15</td>
<td>&lt;.01</td>
<td>-</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>.117***</td>
<td></td>
<td>.115</td>
<td></td>
</tr>
<tr>
<td>ΔR²</td>
<td>.003</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. * p < .05, ** p < .01, *** p < .001.
<table>
<thead>
<tr>
<th></th>
<th>Step 1</th>
<th></th>
<th></th>
<th>Step 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( \beta )</td>
<td>( t )</td>
<td>( sr^2 )</td>
<td>( \beta )</td>
<td>( t )</td>
<td>( sr^2 )</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>-.32</td>
<td>-5.66***</td>
<td>.07</td>
<td>-.32</td>
<td>-5.69***</td>
<td>.07</td>
</tr>
<tr>
<td>Country of Birth</td>
<td>-.06</td>
<td>-1.22</td>
<td>&lt;.01</td>
<td>-.06</td>
<td>-1.20</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Language in Home</td>
<td>.09</td>
<td>1.42</td>
<td>&lt;.01</td>
<td>.09</td>
<td>1.49</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Perceived Support</td>
<td>.09</td>
<td>1.92</td>
<td>.01</td>
<td>.05</td>
<td>0.68</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>SES</td>
<td>.03</td>
<td>0.59</td>
<td>&lt;.01</td>
<td>.02</td>
<td>0.29</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Violence Exposure</td>
<td>.05</td>
<td>1.07</td>
<td>&lt;.01</td>
<td>.01</td>
<td>0.09</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Violence*Ethnicity</td>
<td>.07</td>
<td>1.07</td>
<td>&lt;.01</td>
<td>.06</td>
<td>0.87</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Support*Ethnicity</td>
<td>.06</td>
<td>0.87</td>
<td>&lt;.01</td>
<td>.02</td>
<td>0.35</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>SES*Ethnicity</td>
<td>.02</td>
<td>0.35</td>
<td>&lt;.01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted ( R^2 )</td>
<td>.072***</td>
<td></td>
<td></td>
<td>.069</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \Delta R^2 )</td>
<td>.004</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* *p < .05, ** p < .01, *** p < .001.
References


161


Center for Disease Control and Prevention. (2014). Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United
States and 6 dependent areas—2012. *HIV Surveillance Supplemental Report, 19*(3)


de Guzman, R., Leonard, N. R., Gwadz, M. V., Young, R., Ritchie, A. S., Arredondo, G., & Riedel, M. (2006). "I thought there was no hope for me": A
behavioral intervention for urban mothers with problem drinking. *Qualitative Health Research, 16*(9), 1252-1266. doi:10.1177/1049732306294080


of the International Academy for Suicide Research, 12(1), 39-49. 
doi:10.1080/1381110701800715

doi:10.1093/jpepsy/jsj067


173


Lewis, R., & Frydenberg, E. (2004). Thriving, surviving or going under: Which coping strategies relate to which outcomes? In F. Frydenberg (Ed.), *Thriving, surviving or going under: Coping with everyday lives. series, research on stress and coping in education. (pp. 3-24). Greenwich, CT: Information Age.


Biography

Amy Sanchez was born on May 14, 1980 in Boston, Massachusetts. She received her B.A. in psychology and Italian studies from Wesleyan University in 2002 and her M.A. in clinical psychology from Duke University in 2011. She was the recipient of a Fullbright Fellowship to study prejudice and identity development in Italy from 2004-2005. She also received the Duke Endowment Fellowship from 2007-2011, a Fieldwork Grant for International Study from the Duke Global Health Institute in 2008, a Graduate Research Fellowship Honorable Mention from the National Science Foundation in 2008 and 2009, the Sulzberger/Levitan Social Policy Graduate Research Fellowship from Duke University in 2010, and a Graduate Summer Research Fellowship from Duke University in 2012. She completed her predoctoral internship in clinical psychology in the Trauma Recovery Track at the VAMHCS/UMB Psychology Internship Consortium in Baltimore, MD from 2013-14, where she was the intern representative to the VAMHCS Mental Health Diversity Committee. She is currently a trauma and DBT specialist at Bethesda-Chevy Chase Counseling and Assessment Associates.

Her peer-reviewed publications include the following:
