MULTIPLE-CONTEXT ASSESSMENT OF SUICIDAL IDEATION, DEPRESSION,
AND
SUBSTANCE USE AMONG AFRICAN AMERICAN ADOLESCENTS

A Thesis in
Biobehavioral Health

by
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Submitted in Partial Fulfillment
of the Requirements
for the Degree of

Doctor of Philosophy

August 2007
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Abstract

Studies have shown that depression, substance use, and suicidality are highly correlated, and suicidal ideation has been found to be predictive of later suicide attempts and completions. Addressing mental health and behavioral outcomes (e.g., substance use and depression) has been identified as crucial for healthy adolescent development. The present study adopts a pan-contextual assessment of the risk and protective factors that influence adolescent health behaviors and mental health employing the Social Development Model (SDM).

The purpose of the present study was to examine the relationship between adolescent perceptions of interactions with adults within school and community settings, commitment and attachment to those settings, and suicidal ideation, substance use, and depressive symptoms. A purposive cluster sampling design was used to select 611 ninth grade students from each of three selected zoned high schools in a mid-size city. A cross-sectional survey was used to obtain data from predominately African American ninth graders regarding tobacco, alcohol, marijuana use, suicidal ideation, depressive symptoms, and perceptions of individual-peer, family, school, and community norms and bonding. The statistical analyses consisted of prevalence, multiple regressions, and the assessment of a mediation model.

There were several major findings from this study. First, the point prevalence of significant depressive symptoms as measured by the study was almost twice the national prevalence as reported by Centers for Disease Control and Prevention. Secondly, the results indicated that the multidimensional measure of suicidal ideation had higher predictive validity than the single-item measure and that a higher proportion of ideators were identified by the multiple-item measure than the single-item measure. Also, depressive symptoms were
predicted by gender, community rewards for prosocial involvement, and attachment to neighborhood.

This work contributes to the body of information regarding African American adolescent mental health in particular. More practically, it provided previously unavailable information about the prevalence of substance use, depression, and suicidal ideation to the mid-sized city school system in which the data were collected.
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Acknowledgements

“When anxiety was great within me, your consolation brought joy to my soul.”
_Psalm 94:19 NIV_

I first have to thank God for bringing me such a long way and placing people in my life who were willing to be agents of His love. I am grateful to my loving parents Joseph and Tami Gilreath and my brother Maliik for all of the emotional, financial, and spiritual support that they have provided me over the years. To my extended family, this includes my dear friends Mrs. Michelle Winston, Ms. TaKeisha Lee, and Mr. Anthony Shepherd, thank you for all of your love and encouragement.

Thank you, Dr. Gary King, for your mentorship and kindness. Words cannot express how much I appreciate the time and effort you spent in cultivating my graduate experience. To the members of my dissertation committee, Drs. Collins O. Airhihenbuwa, John W. Graham, and Aleksandra Slavkovic, thank you for your guidance and patience throughout the dissertation process.

I must also thank all of the faculty, staff, and students in the Biobehavioral Health department who served as friends and mentors. In addition, I am grateful to those persons whom I had the pleasure of working for and collaborating with domestically and abroad. Specifically, I need to thank Ms. Joyce-Hopson King, Dr. Titilayo Okoror, Mr. Guy-Lucien Whembolua, Dr. Kimya I. Jackson, Mrs. Lisa Grove, Dr. Alan J. Flisher, Dr. Sue Barsom, Mrs. Pamela Kaduri, Dr. Gad Kilonzo, Ms. Joy-Nicole Powell, Mr. Sirius Fuller, Mrs. Ellen Albert, Dr. Linda Wray, Dr. Herb Eber, Ms. Patricia McDonald, Ms. Sheila Morrow, Dr.
Allison Olchowski, Ms. Elizabeth Beverly, and Dr. Samantha Dockray. I know that I have not named all of the people who have been kind to me during my time in Happy Valley but please know that “no act of kindness goes unnoticed.”

Finally, I gratefully acknowledge funding from The Pennsylvania State University Africana Research Center, Drs. Albert and Loraine Kligman for their endowment to the College of Health and Human Development, the Department of Biobehavioral Health, and data collection assistance from Psychological Resources, Inc.
Dedication

This dissertation is dedicated to the students, faculty, and staff of the three high
schools from which the data presented here was collected. Without you this work would not
have been possible.
Chapter 1

Introduction

Suicide is a devastating personal and public health problem that has long-term effects on families and communities. According to Poussaint and Alexander (2000), “suicide leaves an emotional weight on surviving family members and friends that can be devastating, and the stigma attached to suicide is especially great for African-Americans (p. 21).”

Suicidality involves several behaviors including suicidal thoughts, attempted suicide, and completed suicides. Suicidal thoughts or ideation involve thinking about or thoughts associated with ending one’s own life while suicide attempts are defined as any physical effort to end one’s life (Goldston 2004).


Suicidal behaviors among African American youth have historically been lower than that of their white counterparts (CDC 1995). Recent epidemiological data (1993-2003) indicate that suicidal behavior among African American males (high school students) exceeds that of white males (NCHS 2005). Furthermore, among African American youth and young adults, suicide is still a leading cause of death. Suicide was the 7th leading cause of death among 10 to 14 year-olds and the 3rd cause of death among 15 to 19 and 20 to 24 year olds in 2002 (NCHS 2005).

These data suggest a need for more research to identify the psycho-social correlates of increased
vulnerability to suicide among African American youth and to develop effective interventions
(Dillihay 1989; Gibbs 1997; Chance, Kaslow et al. 1998; Lester 1998; Willis, Coombs et al.
2003; Crosby and Molock 2006; Joe 2006).

Theories on Suicidality and Co-morbid Adolescent Risk

Studies have shown that depression, substance use, and suicidality are highly correlated
(Kelder, Murray et al. 2001; Halfors, Waller et al. 2004; Wu, Hoven et al. 2004), and suicidal
ideation has been found to be predictive of later suicide attempts and completions (Poussaint and
Alexander 2000; Reinherz, Tanner et al. 2006). Based on this body of research, the present study
will adopt a pan-contextual assessment of the risk and protective factors that influence
adolescent health behaviors. The theoretical paradigm for this project is the Social Development
Model (SDM) (Catalano and Hawkins 1996).

The SDM examines adolescents’ perceptions of individual-peer, family, school, and
community norms and bonding. The SDM describes the processes by which socio-
environmental domains affect the development of youth antisocial or prosocial behaviors and
substance use (see Figure 1.1).
Bonding:
Attachment and Commitment

Healthy Beliefs and Clear Standards

Healthy Behaviors

Recognition

Skills

Opportunities

Individual Characteristics

The Social Development Strategy

Figure 1.1 (adapted from http://depts.washington.edu/sdrg/page2.html)
The major domains are peer-individual, family, school, and community each of which are posited to influence youth behavior through opportunities for involvement with socializing units, the perceived norms and values of those units, and bonding. From the standpoint of youth social development, opportunities for involvement are necessary to facilitate bonding of the adolescent to a particular social institution. Bonding involves commitment (e.g., allegiance or adherence) and attachment (i.e., connection or regard) Commitment and attachment serve to influence individual behaviors in conjunction with clear standards, norms, and values espoused by the social unit as adolescents consider the costs and benefits of engaging in specific behaviors.

Though the SDM was initially developed to assess delinquency and substance use, subsequent research with SDM has also found that it is useful in identifying risk and protective factors related to adolescent depression (Bond, Toumbourou et al. 2005). A number of studies have identified many of the concepts (e.g., perceived school or community norms and values) involved in the SDM to be significant predictors of adolescent depression, substance use, and academic outcomes (Stiffman, Hadley-Ives et al. 1999; Cook, Herman et al. 2002; Eamon 2002; Bryant, Schulenberg et al. 2003; Bryant and Zimmerman 2003; Wickrama and Bryant 2003; Lambert, Brown et al. 2004; Fitzpatrick, Piko et al. 2005; Xue, Leventhal et al. 2005).

Further, the concepts or variables measured by the SDM are also related to factors found to be important for the healthy development of African American youth specifically. The SDM measures social connectedness and this has been shown to be related to academic achievement, substance use, and depressive symptoms among African American adolescents (Fitzpatrick, Piko et al. 2005).
Study Site

The study site is a mid-sized American city. City A’s demographic profile is in sharp contrast to that of the rest of the state. Approximately 57% of its residents are African American while 38.3% are White (state-wide, Whites comprise 72.3% of the population). Twenty-one percent of the population lives below the poverty level compared to a state-wide rate of 9.6%. The median household income in City A is approximately $20,000 less than the median household income for the state (USCB 2006).

In spite of the 60/40 ratio of African Americans to Whites, approximately 90% of the students enrolled in the city school system are African American (VDOE 2007). As of 2003, 72.1% of students qualified for free or reduced lunch (DMHMRSAS 2006).

Despite being a mid-sized city, City A has had annual murder rates proportionate to larger cities, such as, Baltimore, Maryland and Washington DC (VSP 2006). Thus, City A’s youth are potentially exposed to or reside in communities where high levels of violence are not uncommon.

The rate of suicide among youth ages 10 to 19 years old in the study site has increased over 32% since 1975 (VDH 2000). Suicide rates in City A are currently low, however, exposure to violence is a major risk factor for suicidal behavior, depressive symptoms, and substance use (Cleary 2000; Poussaint and Alexander 2000; Lubell and Vetter 2006; VSP 2006) and therefore warrants attention in this understudied population. The state does not participate in the nationwide Youth Risk Behavior Surveillance Survey (YRBSS), and consequently, there are no standardized school-based data available on substance use, depressive symptoms, and other risky behaviors among this populace. This study may help to fill this knowledge gap.
Significance

Adolescent mental health is a major public health concern (U.S. Department of Health and Human Services (USDHHS 2000; USPHS 2000)). Therefore, assessment and prevention/intervention of negative mental health symptoms among minority adolescents is an important public health goal (USDHHS 2000; USDHHS 2001). Accordingly, behavior outcomes associated with mental health are critical targets for research.

The United States adolescent population has been increasing in numbers since 1990 (Sells and Blum 1996; Irwin, Burg et al. 2002). This trend is primarily a result of increases in the number of minority adolescents (e.g., African Americans, Hispanics). Currently, white adolescents comprise the majority of the adolescent population, but it is estimated that by 2040 this will no longer be the case (Irwin, Burg et al. 2002). Minority populations tend to reside in urban areas with fewer mental health providers or institutions and when services are available they are less likely to access these resources (USDHHS 2001). This shift in population demographics makes the reduction of disparate access to mental health services among minority populations an important research agenda for the coming decades (USDHHS 2001).

The current study collected survey data from ninth grade students in City A using the Communities that Care (CTC) Youth Survey instrument, which employs the SDM as its theoretical framework. The present survey collected data on family, community, and school bonding, perceptions of adult role models within these contexts, adolescent drug use (ever and current), depression, suicidal ideation, and sociodemographics (e.g., gender, age).

This study will serve to extend the knowledge generated from previous work by assessing conjointly the relationships between substance use, depression, and suicidal ideation across multiple social contexts in a predominantly African American population of adolescents. Few
studies (Reynolds and Mazza 1999) have utilized more than single item measures of suicidal ideation among African American adolescent populations. Further, these data can be used to augment existing school-based mentorships and community programs by providing current information regarding adolescent perceptions of their communities and schools. Addressing the mental health and behavioral outcomes discussed (e.g., substance use and depression) have been identified as crucial for the healthy development of adolescents into adults (Grunbaum, Kann et al. 2004). YRBSS results (Grunbaum, Kann et al. 2004) also indicate that the prevalence of negative health behaviors is lowest among ninth grade students, but increases throughout high school. The findings of this project will be used to make prevention/intervention recommendations targeting substance use, depressive symptoms, and suicidality within City A schools and communities.

**Research Questions**

The primary objective of this research project is to identify domains and/or scales within the SDM/CTC youth survey that are associated with substance use, depressive symptoms, and/or suicidal ideation among adolescents in City A schools. A secondary objective is to determine if the standard single item measure of suicidal ideation is an appropriate way to estimate suicidal ideation among this sample. This study will address the following research questions:

1) What is the prevalence of suicidal ideation and depressive symptoms among 9th grade students in City A? Are these proportions similar or dissimilar to national proportions among 9th grade African Americans?

Despite the current low rates of suicide among youth in City A, it is anticipated that students will report levels of suicidal ideation and depressive symptoms greater than or equal to current national levels. These results are anticipated for two reasons. The national measure
(YRBSS) of both suicidal ideation and depressive symptoms among American high school students utilize one or two items to identify “at-risk” respondents. This study uses two multidimensional scales that have been found to be valid in diverse adolescent populations. With these more robust measures, the prevalence of depressive symptoms and suicidal ideation are expected to be equal to or higher than those reported nationally. Secondly, there are clear positive associations between depressive symptoms, suicidal ideation, exposure to violence, poverty, and family structure. In both cases (i.e., suicidal ideation and depressive symptoms), it is probable that most of these youth are exposed to many of the psychosocial risk factors (e.g., community violence, lack of positive adult role models, poverty, etc.) already determined to be predictive of poor mental health outcomes and therefore more likely to report suicidal ideation and depressive symptoms than a nationally representative sample.

2) Does the single item question regarding past year suicidal ideation capture a similar prevalence of ideators within this sample compared to the scaled responses? Does the multi-dimensional measure provide an additional unique contribution to explanatory models above the uni-dimensional measure?

This study hypothesizes that the single item measure will not capture all suicidal thoughts due to the fact that African American adolescents may be less likely to specifically think of ending their own lives. Previous research has indicated that African Americans are less likely to disclose suicidal ideation when asked directly than their white counterparts but were found to be ideators when given a suicidal risk assessment (Morrison and Downey 2000). It is surmised that it is more likely that suicidal ideation will be reported as thinking about death, wishing they had not been born, and other suicidal thoughts as identified by the SIQ-JR. It is also anticipated that
the multi-dimensional measure will be a significant predictor of depressive symptoms and lifetime tobacco use after controlling for the uni-dimensional measure.

3) What is the prevalence of alcohol, tobacco, and marijuana use among 9th grade students in RPS? Are these proportions similar or dissimilar to national proportions among 9th grade African Americans?

It is hypothesized that the prevalence of alcohol, tobacco, and marijuana use within this sample will also be similar to or higher than those reported nationally. As noted above, these adolescents face increased probable exposure to psychosocial risk factors that place these youth at-risk for substance use and other risky health behaviors.

4) Do smoking, depressive symptoms, and suicidal ideation share similar profiles of risk and protection as measured by the SDM in this population?

It is expected that suicidal ideation, depressive symptoms, and smoking will share similar profiles of risk and protection. The Communities that Care Youth survey was developed to be an assessment of relationships between social context characteristics, substance use, and delinquency (Arthur, Hawkins et al. 2002; Glaser, Van Horn et al. 2005). Substance use and depressive symptoms have already been found to be similarly related to the constructs within the Communities that Care Youth survey (Bond, Toumbourou et al. 2005). Further, research has consistently shown that substance use and suicidal behavior are correlated (Goldston 2004), and there is evidence that smokers are at increased odds of experiencing depressive symptoms (Chang, Sherritt et al. 2005).
The conceptual model for Research Question 4 is an adaptation of the Social Development Strategy (see Figure 1.2). This excerpt hypothesizes that individual characteristics are associated with perceived opportunities for and recognition of prosocial involvement within school and community contexts. Opportunities for and recognition of prosocial involvement are then hypothesized to be positively associated with commitment and attachment which in turn influences mental health and lifetime smoking. The specific conceptual model to be tested in
this study is illustrated in Figure 1.3. Specific components of the SDM hypothesized to be related to suicidal ideation, lifetime tobacco use, and depressive symptoms are presented as well as two individual characteristics (gender and socioeconomic status). Plus and minus signs indicate the expected direction of the associations between the variables.

Figure 1.3 Conceptual Model for Analysis
Chapter 2

Literature Review

Adolescent Health in the U.S.

According to the World Health Organization, youth are considered to be adolescents from ages 10 to 19 years old (Goodburn and Ross 1995). Adolescence is the developmental period when multiple risk behaviors emerge (e.g., substance use, suicidal ideation, depression) and influence health outcomes in adulthood (Irwin, Burg et al. 2002; Grunbaum, Kann et al. 2004).

Historically, leading causes of morbidity and mortality among adolescents were attributed to infectious diseases (Sells and Blum 1996). Recent epidemiologic trends show that over the past two decades the major causes of adolescent death have shifted towards preventable injuries. Since the 1980’s significant declines in overall mortality have occurred for youth ages 10 to 24. Unintentional injury deaths (e.g., car accidents) remain the leading cause of death among adolescents. Homicide and suicide follow as the second and third leading causes respectively (NCHS 2005). However, these declines were not distributed equally across all youth by race/ethnicity or socioeconomic status (NCHS 2005).

Depressive Symptoms

Many studies that report rates of depression only measure depressive symptoms. A diagnosis of a depressive disorder normally requires an examination by a mental health provider. Depression affects mood, emotions, thoughts, and the body (NIMH 2002). Depressive symptoms include feeling sad, hopeless, helpless, fatigued, irritable, and suicidal (APA 1994).
There are few national studies or surveys of depressive symptoms. According to the 2005 Youth Risk Behavior Surveillance Survey, 28.5% of U.S. high school students felt sad or hopeless for more than two weeks in a row. From 1999 to 2005, the prevalence of this depressive symptom did not significantly change (from 28.3% in 1999 to 28.5% in 2005) (CDC 2007). Saluja et al. (2004) found that 18% of 6th, 8th, and 10th graders in a national sample reported depressive symptoms. They also found that students who reported substance use were 2.5 to 3 times more likely than those who did not to report depressive symptoms (Saluja, Iachan et al. 2004).

*Suicidal Behaviors*

Suicidal behaviors involve suicide attempts and suicidal ideation. It is estimated that approximately 90% of persons who commit suicide exhibited depressive symptoms or substance abuse (Moscicki 2001). National measures of suicidal ideation normally consist of a single item, which asks respondents if they had seriously considered committing suicide in the past year. These one-item measures may not be the best way to ascertain suicidality in adolescent populations.

Suicidal ideation is multidimensional. Thoughts associated with suicidal ideation can include thinking about how people would feel if one was no longer alive, increased thoughts of death in general, and wishing one was dead (Reynolds 1988). These represent a few examples of different ways that suicidal ideation can manifest itself. Suicide rates of all American youth have been increasing since the 80’s (Sells and Blum 1996). Suicide is highest among adolescent males, and suicidal ideation and attempts are highest among adolescent females (CDC 1995; NCHS 2005). According to the National Center for Health Statistics (NCHS 2005), suicidal
ideation has been decreasing since 1991 among high school students (29.0%-16.9%). However suicide attempts in the same population increased from 7.7% in 1997 to 8.5% in 2003.

**Substance Use**

Substance use among adolescents has been a public health concern in the U.S since the early 80’s. From 1991 to 2003 several trends have been observed. Overall, lifetime alcohol use decreased from 1991-2003, while marijuana use increased from 1991 to 2003 (from 31.3% to 40.2) (Grunbaum, Kann et al. 2004). Similarly, current marijuana use increased during the same timeframe (14.7%-22.4%). Lifetime and current cigarette smoking decreased from 1991 to 2003 (70.1%-58.4 and 27.5%-21.9%, respectively) (Grunbaum, Kann et al. 2004).

The trend data regarding adolescent substance use, depression, and suicidal behavior depict the need for additional research on the physical and mental well being of children and adolescents. Advances have been made in the prevention of accidental deaths, however, given the most recent mortality statistics, substance use, depressive symptoms, and suicidal behaviors should be monitored closely among this vulnerable population.

**African American Adolescent Health**

From 1980 until the mid 1990’s significant declines in overall mortality have occurred for youth ages 10 to 24 (Sells and Blum 1996; Blum 1998). However, African American adolescent male mortality increased by 11% during the same time period (Blum 1998). Currently among African American youth, ages 10 to 14 suicide is the fourth leading cause of death, but it is second among African Americans ages 15 to 24 (NCHS 2005). Homicide is the leading cause of death at 15 and remains so until age 34 among African Americans (NCHS 2005). Despite the national declines in adolescent mortality, suicide and homicide remain significant threats to the lives of African American youth in the United States. These two mortality events have been
found to be associated with depressive symptoms, substance use, and unsafe community and school contexts (Kelder, Murray et al. 2001; Halfors, Waller et al. 2004; Wu, Hoven et al. 2004; Bond, Toumbourou et al. 2005).

**Depressive Symptoms and African American Youth**

There are few studies that have identified the prevalence of depressive symptoms among African American adolescents (Grunbaum, Kann et al. 2004). The 2003 YRBSS measured whether students indicated that they felt sad or hopeless for two weeks or more prior to survey administration. The results indicate that 30.8% of African American females reported depressive symptoms compared to 21.7% of African American males. Overall, 26.3% of African American youth reported depressive symptoms. Saluja et al., (2004) assessed depressive symptoms with two items among 6th, 8th, and 10th graders. The prevalence of depressive symptoms among African American youth was 14.6%. African American females had a higher prevalence (19.5%) of depressive symptoms than did males (8.7%).

Point prevalence estimates of feeling sad and hopeless among African American youth who participated in the YRBSS between 1999 and 2003 indicate that depressive symptoms decreased overall (28.9% to 26.3%) due to a significant decline among African American females (37.7% to 30.8%). However, the rate of depressive symptoms increased slightly among African American males (19.6% to 21.7%) (CDC 2006). These findings indicate that a substantial proportion of African American youth appear to experience depressive symptoms from 6th through 12th grade. The importance of this finding is that African American youth who experience depressive symptoms may be unable or unwilling to obtain treatment and become adults with mental health problems and may contribute to group specific mental health disparities (Poussaint and Alexander 2000; USDHHS 2001).
Suicidal Behavior and African American Youth

The recent statistics regarding African American adolescent suicidality highlight a need for research to identify the psychosocial correlates of increased vulnerability to suicide among this population (Dillihay 1989; Gibbs 1997; Chance, Kaslow et al. 1998; Lester 1998; Willis, Coombs et al. 2003). Previously, suicide was not a major concern among African Americans and especially African American youth and was primarily dismissed as a ‘white’ thing (Poussaint and Alexander 2000; Crosby and Molock 2006; Joe 2006). For African American youth the increase in suicide that was seen from the 1980’s to the mid 90’s has been associated longitudinally with a reduction in church attendance, increased inequities in access to education, and lack of positive role models as middle class African Americans move to the suburbs (Willis, Coombs et al. 2002; Joe 2006).

Suicidal ideation is one component of suicidal behavior that is related to suicide attempts and completions. Few studies of suicidal ideation utilize more than a single item or two item measures to assess suicidal tendencies (Mazza and Reynolds 1999; Reynolds and Mazza 1999; Mazza 2000). The lack of the use of composite or multiple-item measures in previous research cited below is a limitation of the results reported here regarding prevalence of suicidal behaviors. According to the YRBSS (which assesses youth in 9th through 12th grade), in 2003, 14.7% of African American female adolescents reported seriously considering suicide versus only 10.3% of African American males (Grunbaum, Kann et al. 2004). Further, 12.4% of African American females reported having made a suicide plan within the previous 12 months compared to 8.4% of African American males. However, 5.2% of African American males reported a suicide attempt that required medical attention in the preceding 12 months compared to 2.2% of African American females. (Grunbaum, Kann et al. 2004).
Substance use and African American Youth

Substance use and abuse have been found to be correlated with depression and suicidality (Goldston 2004; Halfors, Waller et al. 2004). The direction of causality between substance use and negative mental health (depression and suicidality) has yet to be determined. It has been hypothesized that suicidal and depressed youth might use and abuse psychoactive substances as a means of self-medication (e.g., mood enhancing qualities of nicotine in cigarettes) (Goldston 2004). It is also plausible that adolescents who use illicit substances might subsequently feel guilty about their use and experience lowered self-esteem and depressive symptoms.

From 1991 to 2003, the overall annual prevalence of lifetime use of alcohol and marijuana increased among African American youth. Current marijuana use has increased from 13.5% to 23.9%, while current alcohol use has declined over time. Lifetime cigarette use decreased from 67.2% to 58.4% over the same time period. However, the prevalence of current smoking increased slightly overall, but has been declining since 1997 from a high of 22.7% to 15.1% in 2003 among African American youth (CDC 2006).

In 2005, more African American males (14.0%) reported smoking cigarettes on one or more days in the past 30 days than African American females (11.9%). Males reported more current alcohol use than females (29.6% and 32.5%, respectively). Current marijuana use was higher among males (22.1%) than females (18.8%) in 2003 (CDC 2006).

As of 2005 (the last date for which data was available), African American youth still report significantly lower overall rates of recent substance use than their white counterparts (Grunbaum, Kann et al. 2004; CDC 2007). For example, 12.9% of African American youth report smoking cigarettes in the past 30 days compared to 25.9%. The prevalence of recent alcohol use was 31.2% among African Americans and 46.4% among whites. However, African
Americans report a prevalence of recent marijuana use (20.4%) similar to their white counterparts (20.3%). Despite these lower rates of substance use, there is a need for concern due to the disparate health outcomes that African Americans experience when seeking and obtaining treatment for substance use and abuse.

**Violence, Suicidality, Substance Use, and Depression**

Exposure to violence is associated with increases in suicidal behavior, depression, and substance use (CDC 2004; Saluja, Iachan et al. 2004; O'Donnell, Stueve et al. 2005). African American adolescents are more likely than other youth to die as a result of homicide, and are disproportionately represented in the criminal justice and juvenile justice systems (DuRant, Cadenhead et al. 1994; Willis, Coombs et al. 2003).

Research among diverse populations has shown that violence (whether as a perpetrator or victim) can be associated with a myriad of health behavior and psychological issues for the youth involved (CDC 2004; Lubell and Vetter 2006). For example, the CDC (2004) conducted a study of a nationally representative population of high school students and found that students who reported a suicide attempt in the past 12 months were 4 times more likely than other students to have been in a physical fight during the same timeframe. O’Donnell et al. (2005) in an analysis of aggressive behaviors (e.g., carrying a weapon, fighting, stabbing someone) found an association between aggressive behaviors in the 8th grade and suicidality in the 11th grade among urban females. Similarly, Saluja et al. (2004) found that youth involved in bullying (either as victims or perpetrators) were twice as likely as other students to indicate that they experienced depressive symptoms. Further, Cleary (2000) in an analysis of whether being victimized was related to suicidal and violent behaviors among high school students found that
students who were victimized were more likely than non-victimized students to report suicidal behaviors, violent behaviors, or both.

According to the United States Surgeon General (USDHHS 2001), exposure to violence is associated with poor adult mental health outcomes among all youth. This is particularly applicable to African American youth who are more likely to live in densely populated urban areas plagued with violence. Results from one study of urban African American youth indicated that exposure to violence was associated with posttraumatic stress disorder (PTSD) even after controlling for depression and suicidal ideation (Mazza 2000).

The association of violence exposure with poor mental health and behavioral outcomes (Lubell and Vetter 2006) is troublesome for African American youth, particularly males (Gibbs 1997; Willis, Coombs et al. 2003). African American males are disproportionately involved in violent criminal acts (Poussaint and Alexander 2000). It has been postulated that violent behavior is an expression of the fatalistic or hopeless outlook that urban African American youth may exhibit. This loss of hope may be associated with the perceived limitations of their lives due to institutional and internalized barriers associated with racism (Poussaint and Alexander 2000; Brown 2003). Durant et al. (1994) assessed data collected from urban African American adolescents on violence exposure and its correlates. The results indicate that violence perpetration was significantly related to being victimized or exposed to violence, depressive symptoms, and appraisal of ones chances of being alive at 25 years old. These results are an example of how a fatalistic outlook (i.e., not feeling that one would be alive at 25) is affiliated with violence and depressive symptoms.

To my knowledge, no previous study has identified if aggression or depression is a stronger correlate of suicidal behavior among African American youth. However, since African
American males are more likely to be involved in violent acts than African American females, it could be surmised that aggression is a more salient factor for males than females. Females, in general, report higher rates of depression and are less likely to be perpetrators of physical violence than their male counterparts.

It has been hypothesized (but yet to be critically explored) that there should be multi-dimensional assessments of suicidal behaviors and depressive symptoms (Joe 2006), which take into account the sense of hopelessness, and lack of purpose that urban African American youth, might experience (Poussaint and Alexander 2000). The operational definitions in most of the literature are based on single-item assessments that only ask about thoughts of ending one’s life. African American youth may experience suicidal ideation, but may not view or perceive these thoughts as related to suicide. For example, an adolescent may think about what life would be like for others if they were dead, but may not consider that to be thoughts of ending one’s life. Therefore, suicidal ideation may not be fully assessed by a single item measure in this population.

Associations between substance use and mental health

Substance use and depression have been found to be predicted by similar contextual factors. Bond et al. (2005) for example, found that perceived negative neighborhood characteristics were predictive of substance use and depression. Similarly, Wu et al. (2004) found a significant association between frequent smoking, alcohol abuse, and suicidality even after controlling for depression.

Empirical studies have already identified several individual and ecological risk and protective factors for adolescent mental health and behavioral outcomes (Stiffman, Hadley-Ives et al. 1999; Earls and Buka 2000; Catalano, Haggerty et al. 2004). Specifically, increased deviance and fewer opportunities for involvement in neighborhoods and schools have been
associated with increased levels of adolescent substance use, depression, and suicidality (Catalano, Haggerty et al. 2004; Lambert, Brown et al. 2004; Bond, Toumbourou et al. 2005).

Studies have identified social support, positive role models, and community structure as significant contributors towards the healthy development of African American youth (Willis, Coombs et al. 2002; Bryant and Zimmerman 2003; Fitzpatrick, Piko et al. 2005). Specifically, Fitzpatrick et al. (2005) found that African American youth exposed to threatening environments (school, community, and home), and decreased social capital (bonding to social networks and association with people in their community) reported higher levels of depressive symptoms.

**Cultural Context**

Depression, suicidal behavior, and substance use have been shown to be related to a variety of ecological and psychosocial factors. However, sociocultural factors are an important component as well. Culture can be defined as the customs, beliefs, values, and institutions of a social group (Bell, Ragin et al. 1999; Corneille, Ashcraft et al. 2005). Historically, African American culture was defined by strong ties to family, community organizations and churches (Poussaint and Alexander 2000; Brown 2003). Positive relationships and interdependence, prosocial behavior, and spirituality were recognized as integral parts of African American society. Many of these facets of African American culture have served as protective factors for young and old alike (Poussaint and Alexander 2000). Today, however, it is hypothesized that some of these value systems have been eroded by acculturation (Willis, Coombs et al. 2003), technological advances (Kitwana 2003; Willis, Coombs et al. 2003), and social and economical changes (Willis, Coombs et al. 2003) in the United States.

Recent studies of adolescent and young adult African Americans have provided evidence for the import of Africentrism (belief in the importance of maintaining cultural aspects of being
African American) and ethnic identity as statistically significant protective mechanisms against substance use, deviant behaviors, and mental health outcomes (Brook and Pahl 2005; Corneille, Ashcraft et al. 2005). Specifically, Brook and Pahl (2005) found that attachment to family and family church attendance were protective of advanced levels of drug use (identified as no drug use, some legal use, legal use and marijuana, other illegal drug use) in a sample of urban African American young adults.

As shown in previous sections, suicidal behaviors, depressive symptoms, and substance use are related and research has shown that they are also correlated with similar risk and protective factors (Kelder, Murray et al. 2001; Halfors, Waller et al. 2004; Wu, Hoven et al. 2004; Bond, Toumbourou et al. 2005).

Depressive symptoms have been found to be predictive of future suicide attempts among African Americans (Ialongo, Koenig-McNaught et al. 2004). However, African Americans generally do not have equal access to quality mental health services (USDHHS 2001). Further, among African Americans (particularly males) there is stigma attached to discussing depression or anxiety (Poussaint and Alexander 2000; USDHHS 2001). The combination of the stigma affiliated with seeking mental health services and the environmental barriers to those services leave African American males at higher risk for negative mental health outcomes than females (Poussaint and Alexander 2000).

**Durkheimian Perspectives and Post-Modernity of African American Youth Suicide**

Emile Durkheim in his work *Le Suicide* (1951), societal and structural factors represent pressures that the individual must endure, adapt to, or succumb. Durkheim theorizes that there are several different kinds of suicide in which society and structural factors play differing roles in leading to an individual’s self-demise. They include egoistic, fatalistic, anomic, and altruistic.
He also postulates that the different forms of suicide might be symptoms of problems or changes within a given society.

Egoistic suicide is defined by social disintegration. Durkheim posits that egoistic suicide is a sign of a problem in the society overall. It suggests that the societal thread, which ties individuals together, has been disturbed or is being disintegrated by social changes that focus on individualism. The victim of egoistic suicide is unable to adapt to these changes quick enough and feels as though he has no place of belonging and thus life seems pointless.

Fatalistic suicide occurs when the individual is being deprived of the opportunity to work to their maximum potential in life (e.g., the ability to reach economic, educational, or political aspirations) due to excessive limitations (e.g., racial discrimination), which prevent possibilities for advancement. Anomic suicide is operationalized by the opposite force of the fatalistic whereby the individual experiences no social control and ends up becoming disconnected from life from lack of restraint.

Durkheim also postulates that suicide and homicide may be related to each other in certain situations. Particularly, as it pertains to anomic suicides, the lack of social control that causes one to become bored with life can be externalized when the perpetrator does not value the lives of others. Similarly, researchers have proposed that fatalistic outlooks can be externalized if one feels there is no hope for life and believes that others lives are equally hopeless (or valueless) (Poussaint and Alexander 2000; Willis, Coombs et al. 2002; Brown 2003). The feelings associated with fatalism and anomie can also cause one to engage in risky behaviors (e.g., substance use and violence) (Poussaint and Alexander 2000; Brown 2003).
Willis et al. (2003) provide a similar discussion of the increase in suicidal behavior among African American males being related to the transition to post-modern society. Post-modern society is represented as a new era in which over-arching goal-setting organizations become obsolete and “individual reflexiveness” becomes prominent. Though this discussion focuses on only one risk behavior and males specifically it is still applicable to the increased risk behaviors of all African American adolescents.

African American culture is a distinct part of mainstream American culture. Post-modernization of this culture and the increases in African American suicide coincide with the post-civil rights era. African Americans have made significant advances with increases in economic and educational mobility. As more African Americans attained middle class status they relocated to the suburbs (Poussaint and Alexander 2000; Willis, Coombs et al. 2002). Previously, due to segregation African Americans of all socioeconomic levels and education lived in common areas and attended church and other community functions together. As the middle class distanced itself from the urban poor they removed their economic and social contributions, and had a two-fold effect on those left behind. First, urban youth no longer had a range of positive role models in their community nor was the middle class contributing their influence to the urban school systems. Secondly, the children of these middle class adults did not benefit from the collectivism of a large African American community (Poussaint and Alexander 2000).

As a social group, African Americans have relied on their collectivist nature to provide group support regarding the social barriers of racism (Poussaint and Alexander 2000; Joe 2006). One could argue that belonging to a collective community is no longer a tenet of African
American tradition in a post-modern society whose focus is on individualism. Consequently there exists a social breach or disconnect between youth and their elders. This social disconnect may result in anomie (committing murders due to a lack of social control), or egoistic suicides (e.g., engaging in risky behaviors due to a feeling of not belonging to any social group).

Most contemporary African American youth have transitioned into the post-modern social rubric with few social connections, but then continue to face structural barriers and have to deal with the legacy of a racist society (Joe 2006). Those youth who have successfully adapted to fewer social connections embrace individualism, but at the same time continue to face racism, poverty, inequity in education, and limited economic opportunities and may become fatalists. These societal and structural barriers may combine to make the individual feel that their continued efforts to reach a better social or life position are futile in light of their limited options. These circumstances combined with the transition to post modernistic American society may have left the current generation of youth without clear direction.

For suburban middle class youth, there is no social support for dealing with the effects of racism and living in areas where there are few others like them can lead to an egoistic outlook. Urban youth can experience egoistic, fatalistic, or anomie outlooks. Anomic outlooks might occur, for example, if the norms and values espoused by the black collective before and during the Civil Rights movement are no longer being shared.

The experience of living in a dangerous neighborhood or being the only African American youth in your neighborhood can serve as a stressor that can interact with the maladaptive coping strategy of substance use and influence self-appraisal, health outcomes, and personal identity (Spencer, Dupree et al. 1997). In other words substance use, depression, or suicidal behavior can become components of a cycle where no opportunities present themselves.
for the adolescent to use productive coping strategies. Utilizing negative health behaviors to evade the stress of their environment can cause them to lose their sense of their cultural identity (e.g., spirituality, collectivism) and their personal identity (e.g., self-efficacy, self-confidence). Or, feelings of anomie, fatalism, or social disconnect can lead adolescents to engage in negative health behaviors and have poor mental health. Either path causes them to become less and less able to navigate their eco-cultural environment and exhibit increasing levels of either of these comorbid conditions (e.g., from substance use to abuse, from suicidal ideation to attempts, and from depressive symptoms to major depressive episodes).

Finally, the stress of poverty and urban environments causes strains on youth and adult partnerships (Ginwright 2005). Focusing on individual survival causes strains on the interdependence that was once so highly valued within African American communities as each person considers themselves before the well-being of their community and extended families. Studies have shown that to foster resiliency in young African Americans one must foster ethnic identity and valuation of Africentrism to enable them to deal with the increasing pressures of post-modern society (Willis, Coombs et al. 2003; Corneille, Ashcraft et al. 2005).

Previous research has identified several key points relevant to the mental health and health behaviors of African American youth. The suicide rate among African American youth is increasing, and current research indicates that it is likely that many victim-precipitated homicides are also suicides. Suicidal ideation is associated with higher levels of interpersonal violence as well as self inflicted harm (Lubell and Vetter 2006). Suicidal ideation, depressive symptoms, and substance use share similar protective and predictive factors across and within social domains. Therefore, further, research is necessary to provide information to prevent or intervene prior to suicide attempts or violent behavior is manifested. Finally, identification of factors that
are associated with multiple areas of adolescent health and behavior can be utilized to maximize preventive opportunities by targeting multiple areas of adolescent health and behavior.

The literature and the current study

This literature review has highlighted several key themes important to the development of African American youth into healthy adults. Research has identified social capital and its related terms as important to the mental health of African American adolescents. Social capital includes several components (connectedness, commitment) and can encompass multiple social contexts (e.g., school, community). This literature review has provided empirical evidence that social support, positive role models, and community structure serve as significant contributors towards the healthy development of African American youth (Willis, Coombs et al. 2002; Bryant and Zimmerman 2003; Fitzpatrick, Piko et al. 2005).

The SDM and the CTC Youth survey serve as a comprehensive and valid way to measure several of the key constructs of social capital (e.g., bonding, commitment). Secondly, there is a consensus among researchers that suicidality among African Americans needs to be studied comprehensively and with particular focus on youth. Since multiple risk-taking behaviors are adapted in adolescence this study seeks to measure tobacco, alcohol, and marijuana use in addition to mental health status. The literature review indicates that violence, poverty, and urbanicity are associated with poor mental health status, deviance, and substance use in adolescence. These factors are prevalent at the current study sight as indicated by U.S. Census Bureau data, and as such, warranted a needs assessment and investigation of correlates for multiple risks.
Chapter 3

Methodology

Prior to data collection, approval of this study was obtained from the Human Subjects Institutional Review Board (IRB) of The Pennsylvania State University (IRB # 22586) as well as the Office for Research and Evaluation of the school system administration. Once permissions were in place, three schools were purposively selected and permission was obtained from the respective school principals.

Sample Size

The PASS (Power and Sampling Size; NCSS Statistical Software) software for multiple regression analysis was used to calculate the required sample size to achieve at least 85% power at alpha = .05. The software utilizes calculations based on Cohen (1988), which uses the expected value of $R^2$ (Cohen 1988). $R^2$ represents the percentage of the variance in the outcome (dependent) variable explained by specific components of the regression model and ranges from 0 to 1. Larger estimated values of $R^2$ require smaller sample sizes to detect the significance of a variable of interest. Calculations for an expected $R^2$ of .1 (i.e., 10% of the variance) using an F test for the significance of 150 variables indicate an N of 600 is required to achieve 87.8% power. The models of interest will not assess 150 variables, but this number was used to ensure that the significance of models of interest could be assessed. In other words with an $R^2$ of 0.1 it will be possible to reject correctly the null hypothesis with a type 2 error rate of 0.122 and an alpha (type 1 error) of 0.05 (Cohen 1988).
Study Sample

A purposive cluster sampling design (see Figure 3.1) was used to select approximately 600 ninth grade students from each of three selected zoned high schools. Purposive sampling is non-probability sampling targeting a specific group or population. In this instance the target population was inner city predominantly African American ninth graders. The respondents were clustered by school and then by classes within the schools. This was not considered a convenience sample as the investigator made a structured effort to survey all available ninth graders at selected schools.

School Selection Criteria

This study sought to access a sample of ninth graders from the targeted student population (inner city predominantly African American ninth grade students). There are five zoned high schools within the school district (Figure 2) and three non-zoned facilities. Zoned schools serve students within a defined geographic area. Attendance of schools outside of a student’s zoned area is dependent on whether the school the student wants to attend can accommodate additional students after admitting students from their district. Non-zoned schools serve special populations and have an application process associated with attendance.
The population of interest for this study was African American students who predominantly reside in inner city neighborhoods. As of the September 2006 school census, 91.3% of all ninth graders were African American. This meant that it was not necessary to focus on schools based on racial/ethnic composition. The lowest prevalence of African American ninth graders at any one of the nine schools was 78.3% at one of the non-zoned facilities (see Table 3.1). The schools selected were narrowed to the zoned schools since the three non-zoned facilities (Unzoned 1, Unzoned 2, and Unzoned 3) serve special populations.
Of the five zoned high schools each serves a well defined area. School 1 serves constituents on the Northside of the city. School 2 and School 3 are on the Southside, and School 4 is zoned for the East End. School 5 is in the West End of town. School 5 is located in a more suburban area and was not selected since the focus of the present study was those students who resided in inner city neighborhoods. Since School 2 and School 3 are both on the Southside, School 3 was selected since it had the larger incoming ninth grade class and had the potential to overlap with the area that School 5 serves. School 1 and School 4 were selected because they serve two different areas of the city that do not significantly overlap with any of the other schools.

Table 3.1: School Proportions in City A

<table>
<thead>
<tr>
<th>School</th>
<th>Number of Ninth Graders Enrolled as of 09/30/2006</th>
<th>Proportion of Ninth Grade Population</th>
<th>Proportion of Ninth Graders who are African American</th>
</tr>
</thead>
<tbody>
<tr>
<td>School 1*</td>
<td>323</td>
<td>15.1</td>
<td>94.4</td>
</tr>
<tr>
<td>School 2</td>
<td>389</td>
<td>18.2</td>
<td>92.3</td>
</tr>
<tr>
<td>School 3*</td>
<td>439</td>
<td>20.5</td>
<td>83.1</td>
</tr>
<tr>
<td>School 4*</td>
<td>494</td>
<td>23.1</td>
<td>99.0</td>
</tr>
<tr>
<td>School 5</td>
<td>250</td>
<td>11.7</td>
<td>84.4</td>
</tr>
<tr>
<td>Unzoned 1</td>
<td>46</td>
<td>2.2</td>
<td>78.3</td>
</tr>
<tr>
<td>Unzoned 2</td>
<td>64</td>
<td>2.9</td>
<td>89.1</td>
</tr>
<tr>
<td>Unzoned 3</td>
<td>71</td>
<td>3.3</td>
<td>98.6</td>
</tr>
</tbody>
</table>

*schools asked to participate in the study

Student Recruitment Process

All three school principals were approached and asked to give permission for their ninth grade students to participate in the study and all agreed. With the principals’ consents the investigator attended Parent Orientation Night for all three high schools and distributed IRB
approved fliers announcing the study and notifying parents that their child might bring home a consent form for them to review and sign.

Once the school year started the investigator met with the principals to outline a proposed plan of action that would minimize disruption of school operation by student participation in the study. It was determined that either ninth grade English or Freshman orientation/transition would be the best courses to target because all incoming freshman must take them. Therefore all student recruitment, consenting, and data collection occurred in these English/Freshman Transition courses. At School 1, there were only two ninth grade English teachers while at School 2 there were four. Data collection at School 3 involved 15 different Freshman transition instructors.

All teachers at these schools agreed to allow the investigator to come into their classrooms on prearranged dates to distribute IRB approved parental consent forms (see Appendix A). Several weeks prior to data collection, active/passive parental consent forms were sent home to parents with normal school announcements via the student. Active parental consent requires the signature of one parent/guardian in order for the student to participate in the study. Passive parental consent requires the parent or guardian’s signature to preclude formally the student from participating in the research. This dual consent process was used to maximize student participation.

Research has shown that the use of active parental consent in school based surveys leads to low participation rates and bias estimates of risk behaviors (Esbensen, Miller et al. 1999; Porkorny, Jason et al. 2001). Students who return active consent forms usually have lower rates of substance use, live in two parent families, and are less likely to be characterized as at-risk (Esbensen, Miller et al. 1999; Porkorny, Jason et al. 2001). A dual consent procedure involves
the normal active parental consent form; however, parents are notified that failure to return the form will result in their child being asked to participate in a reduced form of the survey (Unger, Gallaher et al. 2004). The initial consent process took place in mid-September to mid-October. The student response rate was very low during this time as only 50 forms were returned for all three schools.

After inquiring of teachers and administrators regarding best practices to encourage students to return consent forms, a reward incentive for obtaining more consent forms was implemented. At each high school, students were informed that the class that brought back the most consent forms (regardless of whether the parent declined the student’s participation) would receive a $100 gift card to be used by the teacher to enhance the educational experiences of the students (e.g., class books, snacks, etc.). A second place price of a $50 gift card was offered to the class that brought back the second highest number of forms. The school administration also incorporated daily reminders of the incentive via morning school announcements. With this incentive implemented and support from faculty and staff at the respective schools, the investigator was able to obtain a substantial number of additional signed parental consent forms from the schools. IRB approval was obtained prior to distribution of the gift cards and each teacher signed an acknowledgement form indicating that they had received the cards and intended to utilize them as a means to enhance their students educational experiences.

**Data Collection Procedures**

In brief, the protocol included reading a brief standardized introduction to the study, review of the implied informed consent forms, passing out the appropriate surveys to the correct students, followed by reading the instructions on the front of each survey booklet. The students were then given an opportunity to ask any questions that they might have regarding the survey.
Those students who did not wish to participate were told to set their booklets to the side and engage in other work quietly.

Those students whose parents declined to allow them to participate in the study were given a blank booklet similar to the other students with instructions on top but the pages were blank within. If the surveys were being given in the media center then teachers stayed in the media center in a designated location. When distributed in classrooms teachers were asked to sit outside their doors to promote confidentiality of results and the comfort of the students in completing their surveys. Table 3.2 shows the final tally of surveys collected.

**Table 3.2: Final Survey Tally**

<table>
<thead>
<tr>
<th>School</th>
<th>Consent Surveys</th>
<th>Proportion of Ninth Graders (%)</th>
<th>Passive Surveys</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>School 1</td>
<td>66</td>
<td>12.8</td>
<td>79</td>
<td>145</td>
</tr>
<tr>
<td>School 2</td>
<td>59</td>
<td>13.4</td>
<td>201</td>
<td>260</td>
</tr>
<tr>
<td>School 3</td>
<td>63</td>
<td>19.5</td>
<td>143</td>
<td>206</td>
</tr>
<tr>
<td>Totals</td>
<td>188</td>
<td><strong>14.9</strong></td>
<td><strong>423</strong></td>
<td><strong>611</strong></td>
</tr>
</tbody>
</table>

**Instrumentation**

The students’ responses were recorded using scannable survey booklets prepared by Psychological Resources, Inc. of Atlanta, GA using the instruments described below. Psychological Resources, Inc. scanned the completed survey booklets and delivered a clean dataset for analysis.

The items that follow are from the CTC youth survey (Arthur, Hawkins et al. 2002). The CTC youth survey was developed to assess the concepts of the SDM. Its measurement properties have been assessed in a sample of over 170,000 students in seven states (Glaser, Van Horn et al. 2005). Confirmatory factor analysis was utilized to verify the factor structure initially found by Arthur et al. (2002). Glaser et al. (2005) also assessed the fit of the factor structure
across domains among five racial/ethnic groups (White, African American, Native American, Hispanic, Asian) and found the covariance matrices to be invariant (RMSEAs = .026 to .039).

*Individual-peer factors:* Survey items from the CTC Youth Survey assessed perceived norms within peer circles and bonding to peers.

*Family factors:* Survey items assessed the perceived norms and bonding of the family domain.

*School factors:* Survey items assessed the perceived norms and bonding to the school domain.

*Community factors:* Survey items assessed the perceived norms and bonding to the community domain.

**Suicidal Ideation:** Suicidal ideation is having thoughts of ending one’s own life. The Suicidal Ideation Questionnaire (SIQ-JR) measured suicidal ideation. The SIQ-JR consists of 15 items designed to assess the level of suicidal ideation in young adolescent’s grades 7 to 9. It has been found to be a valid and reliable measure among various populations, including racial/ethnic minorities (Reynolds and Mazza 1999; Goldston 2000). The SIQ-JR was found to have a test-retest reliability of .89 among urban African American and Hispanic adolescents (Reynolds and Mazza 1999). The internal consistency score (Cronbach’s alpha) from that same study was .91. Increased scores on the SIQ-JR have been associated with higher levels of hopelessness, suicide attempts, and lower scores on the Reasons for Living scale (Goldston 2000). According to the author, adolescents with scores greater than or equal to 31 are identified as exhibiting significant suicidal ideation (Reynolds 1988). The coefficient alpha for this study was 0.93.

**Depressive symptoms:** Depressive symptoms can involve physical and psychological symptoms. The symptoms include any prolonged feelings of sadness, hopelessness, loss of appetite, and/or sleep. The Center for Epidemiological Studies-Depression Child (CES-DC) scale was used to measure depressive symptoms in the present study. The CES-DC assesses several depressive symptoms over the past week prior to survey completion, and the CES-DC has been used among adolescents and its reliability and validity has been established for
adolescents ages 12 to 17 (Faulstich, Carey et al. 1986; Fendrich, Weissman et al. 1991; Blatt, Hart et al. 1993).

The CES-DC is recognized as an appropriate assessment of the epidemiology of depressive symptoms in a non-clinical population. The recommended cut-off score of 16 (Weissman, Orvaschel et al. 1980) is used to be indicative of the presence of depressive symptomatology and not as an indicator of major depressive disorder. Previous studies have obtained Cronbach’s alpha of 0.84 to 0.88 (Faulstich, Carey et al. 1986; Brage, Meredith et al. 1993; Hudson, Elek et al. 2000). The coefficient alpha for this study was 0.85.

Substance use: Substance use was assessed as ever and current use of marijuana, alcohol, and cigarettes within this sample. Substance use was assessed by standard items from the 2006 Youth Risk Behavior Surveillance Survey.

Passive Survey

Those students who did not return their parental consent forms were asked to complete a passive consent survey approved by the PSU IRB as meeting the No Child Left Behind Act requirements not to ask sensitive questions of minors in school without parental permission. The survey contained questions from all domains of the CTC youth survey that met the above requirement. These surveys did not contain information regarding substance use, depressive symptoms, or suicidal ideation (see Appendix B). The passive survey took approximately 15 to 20 minutes to complete.
**Planned Missing Data Design**

Survey researchers have to find a balance between cost, quality, and efficiency to assess multiple variables. Even in cases of unlimited time and expense, respondents are less likely to answer all questions in a lengthy survey, and this leads to increased non-response towards the end of the survey (Graham, Hofer et al. 1996). In this particular study, many questions are required to identify factors specified by the SDM. The need for quality and quantity of data can be costly; however, with the established utility of missing data analyses (e.g., EM algorithm), planned missing patterns have become valuable options for researchers (Graham, Hofer et al. 1996; Schafer and Graham 2002; Graham, Taylor et al. 2006). Graham et al. (2006) have verified the efficiency and accuracy of the three form planned missing design. Specifically, the three form design was validated in an alcohol prevention program among 7th grade students. The basic pattern of the three form design is given below.

**Table 3.3: Three Form Design**

<table>
<thead>
<tr>
<th></th>
<th>X</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form 1</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Form 2</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Form 3</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

The items within each instrument are assigned to a section (X, A, B, and C). X represents the sub-group of questions that all of the adolescents will answer, while A, B, and C represent 3 smaller sub-groups of questions that 2/3 of the sample will answer. In this particular study, the questions regarding suicidal ideation (SIQ-JR), depression (CES-DC), substance use, and items associated with the community and school factors from the CTC youth survey will be in question set X. The family and peer-individual factors from the CTC youth survey will be distributed among subsets A, B, and C (see item distribution in Table 3.4).
### Table 3.4: Planned Missing Design

<table>
<thead>
<tr>
<th></th>
<th>X</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIQ-JR-15 items</td>
<td>Family</td>
<td>Family</td>
<td>Family</td>
<td></td>
</tr>
<tr>
<td>CES-DC-20 items</td>
<td>Peer-Individual</td>
<td>Peer-Individual</td>
<td>Peer-Individual</td>
<td></td>
</tr>
<tr>
<td>Sociodemographics-8 items</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Substance Use-6 items</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community-26 items</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School-17 items</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>92</strong></td>
<td><strong>26</strong></td>
<td><strong>27</strong></td>
<td><strong>26</strong></td>
</tr>
</tbody>
</table>

There are two possible options for dividing the family and peer-individual factors into the three remaining subgroups. Factors can be assigned to a subset as a “complete scale” or individual items can be assigned (“split scale”). Graham, Hofer, and MacKinnon, 1996 performed separate analyses to assess the efficiency of split scales versus complete scales and found that split scales provided more efficient standard errors than complete scales. This study utilized the split scale method to assign at least one item of each factor to sub-groups A, B, or C. The final surveys took approximately 45 minutes to complete.

**Data Analytic Strategies**

**Missing Data**

Missing data in research can occur for many reasons. It can be due to reading skills and/or fatigue from completing long surveys, or even disinterest on the part of participants which leads them to leave questions blank arbitrarily. In this study a planned missing data design and dual consent procedure contribute to the missing data. Three methods for handling missing data were utilized for various analyses in the present study.
Expectation-maximization or EM algorithms are utilized to identify values for missing data using related observed data. An EM algorithm involves two components: expectation and maximization. First, an estimate of the missing value is identified based upon observed values only. Subsequent estimates of the missing data are generated using the initial estimated value and observed values until the algorithm converges. Convergence or maximization occurs when the iterations converge at the maximum log likelihood (ML) (Schafer 1997).

The EM algorithm was utilized to obtain means, prevalence rates, and R-square for the present study. Prevalence was obtained by analyzing a dichotomous (0 = no, 1 = yes) version of the variable(s) in question. For example, the questions regarding marijuana and alcohol use were enumerated as 0 times, 1-2, 3-9, 10-19, etc. Those respondents who reported 0 times were coded as ‘No’ use and all other response options were recoded as ‘Yes’. These recoded variables were then included in an EM algorithm. The ML means from the EM algorithm were used to report the point prevalence for the sample.

Multiple imputation (MI) is a data based method of handling missing data. MI involves a two step process. First missing data points are filled or simulated using available parameters. In this case the first set of available parameters used to estimate an imputed dataset will be the maximum likelihood estimates provided by the convergence of the EM algorithm described above (Graham, Cumsille et al. 2003). Once the data are simulated new parameters are identified based upon the current data. Since the imputed data will be based on the parameters estimated from the previously imputed data one would expect these imputations to be highly correlated. This dependence can lead to decreased variability in the multiple imputations. Therefore it is necessary to make sure there are enough steps (or random draws of data and
estimates) between data imputations such that the imputed values and parameters become independent of the parameters from the previously imputed dataset. Further, auxiliary variables were used in the imputation model to reduce bias and increase estimation efficiency (Collins, Schafer et al. 2001).

Data imputation was completed following the instructions detailed in Graham, Cumsille, and Elek-Fisk (2003). SAS v. 9.1.3 proc MI (SAS 1999) was utilized to impute 100 data sets for this study. The maximum number of iterations for PROC MI in SAS was set to 325 and 32500 steps of data augmentation was performed with imputation at every 325th step. This was necessary to ensure that each imputed dataset was independent of the others. The EM algorithm converged after 186 iterations in SAS. The models of interest were analyzed across the 100 imputed data sets. The parameters of interest resulting from these data sets were then averaged to provide the statistics reported and on which conclusions and inferences are based (Schafer and Graham 2002; Graham, Cumsille et al. 2003).

FIML or full information maximum likelihood is a model based method of estimating parameters of interest such as covariance matrices, regressions, or structural equation models (Schafer and Graham 2002; Graham, Cumsille et al. 2003). FIML is based on the idea of selecting the values that maximize the likelihood function. This means that the focus is not on imputing missing data per se, but on averaging over the missingness to provide parameter estimates that maximize the relationships expressed by the available data. FIML will be utilized to estimate the conceptual model associated with the last research question.
**Research Question 1:**

1. What is the point prevalence of suicidal ideation and depressive symptoms among 9th grade students in RPS?
   
   1a. Are these rates substantially different from national rates?

   The point prevalence to the single-item question will be reported. Responses to the SIQ-JR were summed. Students with scores equal to or above the specified cut-off score of 31 for suicidal ideation were considered as ideators. The point prevalence of suicidal ideation using the SIQ-JR within the study sample will be reported.

   Responses to the CES-DC were summed. Respondents with scores equal to or above the specified cut-off score of 16 were considered to exhibit significant depressive symptoms while those scoring lower were not. The point prevalence of significant depressive symptoms within the study sample will be reported.

**Research Question 2:**

2. Does the single item question regarding past year suicidal ideation capture a similar prevalence of ideators within this sample compared to the scaled responses?

   2a. Does the multi-dimensional measure provide an additional unique contribution to explanatory models above the uni-dimensional measure?

   The single item question is related to serious contemplation of ending one’s life. Thinking about killing oneself is not the only ‘suicidal’ thought related to suicidal ideation. The SIQ-JR has been shown to measure three unobserved (latent) factors. These were 1) thoughts of one’s own death and the deaths of others, 2) plans and thoughts for committing suicide, and 3) thinking about death in general (Reynolds 1988). Factor analysis will be conducted to verify this
structure for this population and to provide evidence that other dimensions of suicidal ideation may be used to assess suicidality among adolescents.

Factor analysis is used to identify unobserved (latent) factors (variables) that account for the correlation between a set of measured variables. Principal component factor analysis with varimax rotation was used to verify whether the factor structure for this sample was the same as the structure obtained when this scale was standardized (Reynolds 1988). Second, a principal (common) factor analysis was conducted to assess the factor structure of the data collected. The common factor analysis (CFA) is used in lieu of the principal component analysis (PCA) due to the objective of the present analysis.

CFA is used to identify the common latent variable(s) which explain the correlations between the measured variables. During CFA analysis the unique error term associated with each measured variable is separated from the common variance or factor loadings of those variables. PCA analysis does not separate unique (error) variance and selects the component (factor) solution that explains the most variance with the fewest components (Graham 2005). Finally, the promax rotation method was used since it is expected that the resulting factors will be correlated (Johnson 1998).

In order to determine if the single item measure has similar predictive validity as the multi-dimensional scale two regression models were run for depressive symptoms and lifetime smoking. The first model for each outcome included the single item as the sole predictor. A subsequent model was run for each which included the single-item and the summed scale score. The purpose of these models is to show the added explanatory power of the multi-dimensional scale compared to the single item alone.
**Research Question 3:**

3. What is the prevalence of alcohol, tobacco, and marijuana use among 9th grade students in RPS?

    3a. Are these rates substantially different from national rates?

    The point prevalence of lifetime and any past 30 day smoking, alcohol use, and marijuana use will be reported for the total population.

**Research Question 4:**

4. Do smoking, depressive symptoms, and suicidal ideation share similar profiles of risk and protection as measured by the SDM in this population?

    The conceptual model presented in Figure 1.3 included four factors from the Communities that Care Youth Survey. To conserve power, coefficient alpha analyses were conducted on each of these factors and the variable that would reduce coefficient alpha the most if it was deleted from the factor was utilized as the manifest variable in the model. The items included in the model were: whether the student was eligible for free or reduced lunch; gender; whether the student felt that they had opportunities to talk to a teacher one on one; whether the student tried to do their best on their schoolwork; whether the student felt there were adults in their neighborhood who were proud of them when they did something well; and whether they would miss the neighborhood they lived in if they had to move. The outcome variables were suicidal ideation (SIQ-JR), lifetime tobacco use, and depressive symptoms.

    The full conceptual model was tested using Lisrel 8.5 (see Figure 3.2). Path analysis was utilized to test the model shown in Figure 3.2. Lisrel utilizes FIML to handle missing data and estimate parameters.
At all data collection sessions students were assured of the confidentiality of their participation in the study. They were also notified of mental health resources available (in print on implied consent form). On one occasion the investigator was approached by a student who wanted to have his/her survey reviewed as they felt concerned about their mental health. The investigator advised the student that they were welcome to stay back after his/her class left the media center (for confidentiality) to talk. The student informed the investigator that he/she had indeed thought of hurting him/herself and felt like no one listened to him/her or cared about how he/she felt. The investigator escorted the student to the school guidance department as state law requires. According to state law a minor cannot be released to leave school grounds once they admit to thinking about hurting themselves or others. A responsible adult came to pick up the student. The investigator did follow up with the guidance counselor regarding this student and was advised that the student is doing well and receiving counseling.
Chapter 4
Results

Descriptive Statistics

The sample was 52.6% (N=319) female. The mean age was 14.7 years based upon ML estimates. The average score from the ML estimates on the SIQ-JR was 12.7 and 20.0 for the CES-DC. The distribution of respondents was 42.7% from School 2, 23.7% from School 3, and 33.6% from School 1. A higher proportion of students at School 1 reported suicidal ideation (18.6%), depressive symptoms (69.4%), lifetime smoking (55.6%), and recent smoking (23.6%) than Schools 2 and 3 (see Table 4.1).

Free lunch status was utilized as a proxy for socioeconomic status in this study. Approximately 74% of those surveyed indicated they were eligible for free or reduced lunch prices. A majority of the sample (79.3%) reported that their grades for the previous school year were mostly B’s or mostly C’s. Most of the respondents reported they were African American (88.2%). The remaining respondents reported their racially classified social group (RCSG) as mixed (African American and another RCSG; 5.5%), while 6.3% of the sample reported a RCSG other than African American (see Table 4.1). Table 4.1 presents marginal proportions of the demographics reported above by the outcome variables of interest; lifetime tobacco use, suicidal ideation, and depressive symptoms.

Passive vs. Active Consent Respondents

This study utilized a dual consent procedure to maximize student participation. Table 4.2 presents crosstabulations by consent category for demographic questions answered by all participants. There were significant differences in proportions by school, gender, grades, trying
to do best in school, and feeling that there were adults in the neighborhood who were proud of them when they did something well.

There were more students at School 3 who participated as active consent respondents than at Schools 1 and 2 ($X^2=21.7$, df=2, $p<.0001$). Females were more likely to provide consent than males ($X^2=47.1$, df=1, $p<.0001$). Higher grades were also associated with higher proportions of active consent as was trying to do one’s best in school ($X^2=22$, df=4, $p=.0002$ and $X^2=28.4$, df=4, $p<.0001$). Conversely, feeling that there were no adults in the neighborhood who would be proud if they did something well was also associated with higher proportions of active consent ($X^2=9.1$, df=3, $p=.03$).
Table 4.1: Frequencies and Crosstabulations

<table>
<thead>
<tr>
<th></th>
<th>Total (N=raw data)</th>
<th>Suicidal Ideation (Yes) N=175</th>
<th>Depressive symptoms (Yes) N=157</th>
<th>Lifetime Smoking (Yes) N=183</th>
</tr>
</thead>
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<tr>
<td><strong>Suicidal Ideation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(single item)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>11.7 (N=24)</td>
<td>64.7 (N=11)</td>
<td>73.9 (N=17)</td>
<td>43.5 (N=10)</td>
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<tr>
<td><strong>Suicidal Ideation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(SIQ-JR)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>13.1 (N=18)</td>
<td></td>
<td>94.1 (N=16)</td>
<td>61.1 (N=11)</td>
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<tr>
<td><strong>Depressive Symptoms</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>61.9 (N=91)</td>
<td>31.4 (N=16)</td>
<td></td>
<td>49.1 (N=27)</td>
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<td><strong>Free Lunch</strong></td>
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</tr>
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<td>Yes</td>
<td>74.3 (N=118)</td>
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<td>60.6 (N=60)</td>
<td>46.6 (N=54)</td>
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<tr>
<td><strong>Lifetime Tobacco Use</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>49.8 (N=78)</td>
<td>15.1 (N=11)</td>
<td>40.9 (N=27)</td>
<td></td>
</tr>
<tr>
<td><strong>Recent Tobacco Use</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>8.6 (N=20)</td>
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<td>58.8 (N=10)</td>
<td>100.0 (N=20)</td>
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<tr>
<td><strong>Lifetime Alcohol Use</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>57.6 (N=105)</td>
<td>15.0 (N=15)</td>
<td>60.7 (N=54)</td>
<td>55.9 (N=57)</td>
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<td><strong>Recent Alcohol Use</strong></td>
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<td></td>
</tr>
<tr>
<td>Yes</td>
<td>23.3 (N=44)</td>
<td>16.7 (N=7)</td>
<td>71.4 (N=25)</td>
<td>72.7 (N=32)</td>
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<td><strong>Lifetime Marijuana Use</strong></td>
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<td>Yes</td>
<td>36.0 (N=55)</td>
<td>15.1 (N=8)</td>
<td>68.8 (N=33)</td>
<td>85.2 (N=46)</td>
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<td><strong>Recent Marijuana Use</strong></td>
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<td></td>
</tr>
<tr>
<td>Yes</td>
<td>18.4 (N=30)</td>
<td>20.7 (N=6)</td>
<td>70.4 (N=19)</td>
<td>90.0 (N=27)</td>
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<tr>
<td><strong>Gender</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>47.4 (N=287)</td>
<td>4.2 (N=2)</td>
<td>47.5 (N=19)</td>
<td>39.6 (N=19)</td>
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<td>Female</td>
<td>52.6 (N=319)</td>
<td>12.6 (N=16)</td>
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<td>43.7 (N=59)</td>
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<td><strong>School</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>School 1</td>
<td>23.7 (N=144)</td>
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<td>69.4 (N=34)</td>
<td>55.6 (N=35)</td>
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<tr>
<td>School 2</td>
<td>42.7 (N=259)</td>
<td>5.5 (N=3)</td>
<td>60.8 (N=31)</td>
<td>44.6 (N=25)</td>
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<tr>
<td>School 3</td>
<td>33.6 (N=204)</td>
<td>6.7 (N=4)</td>
<td>46.4 (N=26)</td>
<td>28.6 (N=18)</td>
</tr>
<tr>
<td><strong>Grades</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mostly A’s</td>
<td>7.3 (N=44)</td>
<td>16.7 (N=3)</td>
<td>62.5 (N=10)</td>
<td>47.1 (N=8)</td>
</tr>
<tr>
<td>Mostly B’s</td>
<td>37.0 (N=222)</td>
<td>6.0 (N=5)</td>
<td>50.7 (N=38)</td>
<td>40.9 (N=36)</td>
</tr>
<tr>
<td>Mostly C’s</td>
<td>42.3 (N=254)</td>
<td>11.7 (N=7)</td>
<td>66.7 (N=36)</td>
<td>40.3 (N=25)</td>
</tr>
<tr>
<td>Mostly D’s</td>
<td>9.7 (N=58)</td>
<td>12.5 (N=1)</td>
<td>50.0 (N=4)</td>
<td>66.7 (N=6)</td>
</tr>
<tr>
<td>Mostly F’s</td>
<td>3.7 (N=22)</td>
<td>50.0 (N=2)</td>
<td>75.0 (N=3)</td>
<td>60.0 (N=3)</td>
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<tr>
<td><strong>RCSG</strong></td>
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<tr>
<td>Black</td>
<td>88.2 (N=531)</td>
<td>9.7 (N=15)</td>
<td>57.3 (N=82)</td>
<td>41.7 (N=68)</td>
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<tr>
<td>Black/Other</td>
<td>5.5 (N=33)</td>
<td>9.1 (N=1)</td>
<td>66.7 (N=6)</td>
<td>61.5 (N=8)</td>
</tr>
<tr>
<td>Other</td>
<td>6.3 (N=38)</td>
<td>33.3 (N=2)</td>
<td>100.0 (N=3)</td>
<td>33.3 (N=2)</td>
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Table 4.2: Active vs. Passive Consent Crosstabulations

<table>
<thead>
<tr>
<th></th>
<th>Active Consent (N=188)</th>
<th>Passive Consent (N=423)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>School</strong>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>School 1</td>
<td>30.9</td>
<td>69.1</td>
</tr>
<tr>
<td>School 2</td>
<td>22.8</td>
<td>77.2</td>
</tr>
<tr>
<td>School 3</td>
<td>45.1</td>
<td>54.9</td>
</tr>
<tr>
<td><strong>Gender</strong>*</td>
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<td></td>
</tr>
<tr>
<td>Male</td>
<td>17.4</td>
<td>82.6</td>
</tr>
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<td>Female</td>
<td>43.3</td>
<td>56.7</td>
</tr>
<tr>
<td><strong>Grades</strong>*</td>
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<td></td>
</tr>
<tr>
<td>Mostly A’s</td>
<td>43.2</td>
<td>56.8</td>
</tr>
<tr>
<td>Mostly B’s</td>
<td>40.1</td>
<td>59.9</td>
</tr>
<tr>
<td>Mostly C’s</td>
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<td>75.2</td>
</tr>
<tr>
<td>Mostly D’s</td>
<td>17.2</td>
<td>82.8</td>
</tr>
<tr>
<td>Mostly F’s</td>
<td>22.7</td>
<td>77.3</td>
</tr>
<tr>
<td><strong>Chances to talk with teacher</strong></td>
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</tr>
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<td>NO</td>
<td>33.9</td>
<td>66.0</td>
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<tr>
<td>no</td>
<td>30.8</td>
<td>69.1</td>
</tr>
<tr>
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<td>68.9</td>
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<td>YES</td>
<td>31.7</td>
<td>68.3</td>
</tr>
<tr>
<td><strong>Try to do best in school</strong>*</td>
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<td></td>
</tr>
<tr>
<td>Almost Always</td>
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<td>58.8</td>
</tr>
<tr>
<td>Often</td>
<td>20.4</td>
<td>79.6</td>
</tr>
<tr>
<td>Sometimes</td>
<td>23.7</td>
<td>76.3</td>
</tr>
<tr>
<td>Seldom</td>
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<td>90.9</td>
</tr>
<tr>
<td>Never</td>
<td>33.3</td>
<td>66.7</td>
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<tr>
<td><strong>Proud Neighbors</strong>*</td>
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<tr>
<td>NO</td>
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<tr>
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<tr>
<td>yes</td>
<td>27.8</td>
<td>72.2</td>
</tr>
<tr>
<td>YES</td>
<td>20.7</td>
<td>79.4</td>
</tr>
<tr>
<td><strong>Would miss neighborhood</strong></td>
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<td>68.1</td>
</tr>
<tr>
<td>YES</td>
<td>28.5</td>
<td>71.5</td>
</tr>
</tbody>
</table>

*p<.05, ***p<.001
Research Question 1:

1. What is the point prevalence of suicidal ideation and depressive symptoms among 9th grade students in RPS?

1a. Are these rates substantially different from national rates?

The single-item measure of suicidal ideation point prevalence was 11.7%. The point prevalence of suicidal ideation as measured by the SIQ-JR was 13.1%. Suicidal ideation was assessed in the 2005 YRBSS by the same single item measure used in the current study which was “During the past year did you seriously consider attempting suicide?” The 2005 national prevalence among African American ninth graders was judged to be similar, albeit numerically higher (14.5%), to the prevalence of suicidal ideation found in the present study for the single item measure and the SIQ-JR.

The point prevalence of significant depressive symptoms as measured by the CES-DC was 61.9%. The YRBSS also measures depressive symptoms with a single item. Depressive symptoms are represented by asking if the student “felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities during the past 12 months.” The national rate among African American ninth graders was considerably lower than the rate obtained from the current study. In 2005, the prevalence of depressive symptoms among ninth graders nationwide who reported that they were African American or Black was 30.2%.

Research Question 2:

2. Does the single item question regarding past year suicidal ideation capture a similar prevalence of ideators within this sample compared to the scaled responses?

2a. Does the multi-dimensional measure provide an additional unique contribution to explanatory models above the uni-dimensional measure?
Prevalence and Factor Structure

The point prevalence of the single-item measure of suicidal ideation was 11.7%. The point prevalence using the cut-off score of the SIQ-JR was 13.1%. Reynolds (1988) used a principal component factor analysis with varimax rotation to identify the structure of the items measured. Three factors were identified with eigenvalues greater than one. The present analysis sought to verify that structure and show that suicidal ideation is a multi-dimensional variable within the current sample. First, principal component factor analysis was assessed in the current study as described by Reynolds. The results are presented below in Table 4.3. Reynolds (1988) used a cutoff loading of 0.40. All loadings at or above 0.40 are presented in the table. Though no formal test was conducted the factor solutions were judged to be highly similar between the present study and the previous assessment. A further analysis was conducted using common factor analysis and promax rotation. The promax rotation eliminated the double loading of some items by taking into account that the factors are expected to be correlated. The standardized regression coefficients from the rotated factor pattern are presented in Table 4.4. Based upon the pattern of loading the three resulting factors were named 1) hopelessness and fatalism, 2) contemplation and preparation, and 3) general thoughts of death.
Table 4.3: VARIMAX-Rotated Component Loadings

<table>
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<tr>
<th>Items</th>
<th>Reynolds (1988) Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Current Study Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
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<td>1.</td>
<td>.62</td>
<td></td>
<td></td>
<td>.68</td>
<td>.51</td>
<td></td>
</tr>
<tr>
<td>2. Thought of killing self</td>
<td>.70</td>
<td>.77</td>
<td>.51</td>
<td></td>
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<tr>
<td>3.</td>
<td>.74</td>
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<td>.81</td>
<td>.71</td>
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<td>.88</td>
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<td>5.</td>
<td>.72</td>
<td>.72</td>
<td>.72</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Thought of death</td>
<td>.72</td>
<td>.72</td>
<td>.72</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Writing suicide note</td>
<td>.45</td>
<td>.45</td>
<td>.45</td>
<td>.63</td>
<td>.63</td>
<td>.91</td>
</tr>
<tr>
<td>8.</td>
<td>.61</td>
<td>.61</td>
<td>.61</td>
<td>.76</td>
<td>.76</td>
<td>.51</td>
</tr>
<tr>
<td>9.</td>
<td>.44</td>
<td>.44</td>
<td>.44</td>
<td>.79</td>
<td>.79</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>.75</td>
<td>.75</td>
<td>.75</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>.76</td>
<td>.76</td>
<td>.76</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>.76</td>
<td>.76</td>
<td>.76</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>.75</td>
<td>.75</td>
<td>.75</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>.76</td>
<td>.76</td>
<td>.76</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. No one cared if alive</td>
<td>.78</td>
<td>.78</td>
<td>.78</td>
<td></td>
<td>.78</td>
<td>.84</td>
</tr>
</tbody>
</table>

Table 4.4: PROMAX-Rotated Factor Loadings

<table>
<thead>
<tr>
<th>Item</th>
<th>Hopelessness and Fatalism</th>
<th>Contemplation and Preparation</th>
<th>Death</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>0.57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>0.65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>0.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>0.84</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>0.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. No one cared if alive</td>
<td>0.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>0.81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>0.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>0.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>0.41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>0.78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>0.54</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Writing suicide note</td>
<td>0.94</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>0.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Thought of death</td>
<td>0.93</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Due to copyright restrictions only the description of the highest loading factor item is presented. See Reynolds (1988) for full scale disclosure.
The majority of the variance from this three factor solution was equally distributed between the first and second factor. Each explained approximately 40% of the variance.

**Predictive Validity**

The results from the factor analysis above served to support the validity of the scale as a measure of suicidal ideation in this sample. To assess the predictive validity of the multi-dimensional scale in comparison to the single item measures, regressions were assessed to determine if the multi-dimensional scale is predictive of tobacco use and depressive symptoms after controlling for the single-item assessment.

The first set of models to assess predictive validity used the summed CES-DC score as the dependent variable. Model 1 includes only the single-item measure while Model 2 incorporates both measures of suicidal ideation. In the first model suicidal ideation is negatively associated with depressive symptoms. Once the multi-dimensional measure of suicidal ideation is included, the single-item is no longer a significant predictor while the scale item is positively associated with depressive symptoms (see Table 4.5). With the addition of the scale measure R-square increased 18.4%.

**Table 4.5: Dependent Variable: Depressive Symptoms**

<table>
<thead>
<tr>
<th></th>
<th>Parameter Estimate</th>
<th>SE</th>
<th>t</th>
<th>p-value</th>
<th>DF</th>
<th>Fraction of Missing Information</th>
<th>R-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.126</td>
</tr>
<tr>
<td>Single Item</td>
<td>-10.9</td>
<td>2.4</td>
<td>-4.44</td>
<td>&lt;.0001</td>
<td>167.6</td>
<td></td>
<td>.77</td>
</tr>
<tr>
<td>Model 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.310</td>
</tr>
<tr>
<td>Single Item</td>
<td>0.42</td>
<td>3.1</td>
<td>0.14</td>
<td>.89</td>
<td>153.7</td>
<td></td>
<td>.81</td>
</tr>
<tr>
<td>Scale</td>
<td>.36</td>
<td>.06</td>
<td>5.65</td>
<td>&lt;.0001</td>
<td>151.44</td>
<td></td>
<td>.81</td>
</tr>
</tbody>
</table>
The second set of models to assess predictive validity used lifetime smoking as the dependent variable. Model 1 includes only the single-item measure while Model 2 incorporates both measures of suicidal ideation. In the first model suicidal ideation is not associated with lifetime smoking. Once the multi-dimensional measure of suicidal ideation is included, the single-item is a marginally significant predictor while the scale item is positively associated with lifetime smoking (see Table 4.6). Adding the scale item to the model increased the R-square from .03% to 4.4%.

**Table 4.6: Dependent Variable: Lifetime Smoking**

<table>
<thead>
<tr>
<th>Parameter Estimate</th>
<th>SE</th>
<th>t</th>
<th>p-value</th>
<th>DF</th>
<th>Fraction of Missing Information</th>
<th>R-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1 Single Item</td>
<td>.03</td>
<td>.12</td>
<td>.24</td>
<td>.81</td>
<td>169.8</td>
<td>.77</td>
</tr>
<tr>
<td>Model 2 Single Item</td>
<td>.29</td>
<td>.15</td>
<td>1.92</td>
<td>.06</td>
<td>172.13</td>
<td>.76</td>
</tr>
<tr>
<td>Scale</td>
<td>.008</td>
<td>.003</td>
<td>2.64</td>
<td>.009</td>
<td>167.45</td>
<td>.77</td>
</tr>
</tbody>
</table>

**Research Question 3:**

3. What is the prevalence of alcohol, tobacco, and marijuana use among 9th grade students in RPS?

3a. Are these rates substantially different from national rates?

**Table 4.7: National and Sample prevalence of ATOD**

<table>
<thead>
<tr>
<th></th>
<th>Sample Prevalence</th>
<th>National Prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lifetime Tobacco</strong></td>
<td>49.8</td>
<td>50.6</td>
</tr>
<tr>
<td><strong>Recent Tobacco</strong></td>
<td>8.6</td>
<td>12.2</td>
</tr>
<tr>
<td><strong>Lifetime Alcohol</strong></td>
<td>57.6</td>
<td>50.3</td>
</tr>
<tr>
<td><strong>Recent Alcohol</strong></td>
<td>23.3</td>
<td>24.2</td>
</tr>
<tr>
<td><strong>Lifetime Marijuana</strong></td>
<td>36.0</td>
<td>31.7</td>
</tr>
<tr>
<td><strong>Recent Marijuana</strong></td>
<td>18.4</td>
<td>16.9</td>
</tr>
</tbody>
</table>
Overview of Substance Use

Overall, the prevalence of past 30 day substance use was lower in this sample than the national prevalence for African American ninth graders. Lifetime use of alcohol and marijuana were higher in the present study than the national prevalence. Though no statistical test of significance was used, the combined prevalence of recent and lifetime substance use was judged to be similar to the national prevalence.

Tobacco Use

The prevalence of lifetime tobacco use was measured by a single question which asked “Have you ever tried cigarette smoking, even one or two puffs?” The point prevalence of lifetime smoking in this sample was 49.8%. The national prevalence is similar to that found in the current study at 50.6%. The point prevalence of smoking in the past 30 days was 8.6%. In 2005, 12.2% of African American ninth graders reported smoking on one or more days in the past month.

Alcohol Use

The prevalence of lifetime alcohol use in the sample was 57.6%. The prevalence observed is similar to the national prevalence. According to the 2005 YRBSS, 60.3% of African American ninth graders reported lifetime alcohol use. Approximately 23.3% of students reported having had at least one drink of alcohol in the past 30 days. The national prevalence of recent alcohol use among African American ninth graders was 24.2%.

Marijuana Use

Lifetime marijuana use was assessed by asking the students how many times they had used marijuana in their life. The point prevalence was 36.0%. The national prevalence of lifetime marijuana use among African American ninth graders was 31.7% in 2005.
The prevalence of marijuana use in the past month was measured by asking how many times the student had used marijuana in the past 30 days. The point prevalence was 18.4%. The national prevalence of 16.9% is similar to the observed prevalence.

**Multiple Drug Use**

The point prevalence of multiple drug use in the past 30 days was 3.6%.

**Research Question 4:**

4. *Do smoking, depressive symptoms, and suicidal ideation share similar profiles of risk and protection as measured by the SDM in this population?*

**Missing Data**

In total, 611 students provided data in the present study. However, because there were missing values, sample size is a somewhat complex concept and should be represented as a table of missing value patterns, rather than as single number (Graham, Cumsille et al. 2003). Table 4.8 displays the different patterns of missing and non-missing values for the nine variables used for this model. The largest single pattern (N = 374) involved complete data for all variables except the three dependent variables. The second largest pattern (N = 138) involved data for all of the variables. Other patterns with small numbers of participants are shown in Table 4.8.
Table 4.8: Missing Data Patterns

<table>
<thead>
<tr>
<th>Missing data pattern</th>
<th>Free Lunch</th>
<th>Gender</th>
<th>Talk to Teacher</th>
<th>Do Best in school</th>
<th>Neighbors Proud</th>
<th>Miss Neighborhood If Had to Move</th>
<th>Lifetime Tobacco Use</th>
<th>Suicidal Ideation</th>
<th>Depressive Symptoms</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>0.82</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td>0.98</td>
</tr>
<tr>
<td>3</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>1.2</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>1.3</td>
</tr>
<tr>
<td>5</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>1.3</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>10</td>
<td>1.6</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>21</td>
<td>3.4</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>138</td>
<td>22.6</td>
</tr>
<tr>
<td>9</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>374</td>
<td>61.2</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>577</td>
<td>94.4</td>
</tr>
</tbody>
</table>

All missing data were handled using the full information maximum likelihood (FIML) capabilities of LISREL 8.5 (Jöreskog and Sörbom 1996). This approach has been shown repeatedly to yield good parameter estimates and reasonable standard errors in the missing data case (Schafer and Graham 2002; Graham, Cumsille et al. 2003). The saturated final model results are shown in Figure 4.1. The bold numbers with asterisks represent significant regression coefficients.
Figure 4.1: Final Model

Model Results

Table 4.9 presents the regression results for the far left side of the model which includes gender and free lunch status as predictors. Reporting that they received free or reduced lunch was associated with increasing perceived opportunities to talk with teacher’s one on one and perceiving that there were adults in the neighborhood who were proud of them when they did something well. These associations were not significant.

Gender was negatively associated with perceiving that there were adults in the neighborhood who were proud of them when they did something well and tobacco use (not significant). These negative associations indicate that males were more likely to report more neighborhood recognition and more lifetime tobacco use. Females were associated with increasing levels of suicidal ideation, depressive symptoms, and perceived opportunities to talk...
with teachers one on one. The relationships between gender, suicidal ideation, depressive symptoms, and perceiving that there were adults in the neighborhood who were proud of them when they did something well were statistically significant (see Table 4.9).

Table 4.9: Model Results

<table>
<thead>
<tr>
<th>Predictor Variables</th>
<th>Dependent Variables</th>
<th>Free Lunch</th>
<th>Female*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Talk to Teacher</strong></td>
<td>Free Lunch</td>
<td>b = -.098</td>
<td>b = .10</td>
</tr>
<tr>
<td></td>
<td>se = .096</td>
<td>se = .079</td>
<td>se = .079</td>
</tr>
<tr>
<td></td>
<td>cr = -1.02</td>
<td>cr = 1.31</td>
<td>cr = 1.31</td>
</tr>
<tr>
<td></td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td><strong>Proud Neighbor</strong></td>
<td>Free Lunch</td>
<td>b = -.034</td>
<td>b = -.26</td>
</tr>
<tr>
<td></td>
<td>se = .11</td>
<td>se = .09</td>
<td>se = .09</td>
</tr>
<tr>
<td></td>
<td>cr = -.30</td>
<td>cr = -2.89</td>
<td>cr = -2.89</td>
</tr>
<tr>
<td></td>
<td>ns</td>
<td>p &lt; .01</td>
<td>p &lt; .01</td>
</tr>
<tr>
<td><strong>Do Best In School</strong></td>
<td>Free Lunch</td>
<td>b = .31</td>
<td></td>
</tr>
<tr>
<td></td>
<td>se = .07</td>
<td>se = .07</td>
<td></td>
</tr>
<tr>
<td></td>
<td>cr = 4.13</td>
<td>cr = 4.13</td>
<td></td>
</tr>
<tr>
<td></td>
<td>p &lt; .001</td>
<td>p &lt; .0001</td>
<td></td>
</tr>
<tr>
<td><strong>Lifetime Smoking</strong></td>
<td>Free Lunch</td>
<td>b = -.029</td>
<td></td>
</tr>
<tr>
<td></td>
<td>se = .075</td>
<td>se = .075</td>
<td></td>
</tr>
<tr>
<td></td>
<td>cr = -.38</td>
<td>cr = -.38</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ns</td>
<td>ns</td>
<td></td>
</tr>
<tr>
<td><strong>Suicidal Ideation</strong></td>
<td>Free Lunch</td>
<td>b = 5.89</td>
<td></td>
</tr>
<tr>
<td></td>
<td>se = 2.41</td>
<td>se = 2.41</td>
<td></td>
</tr>
<tr>
<td></td>
<td>cr = 2.44</td>
<td>cr = 2.44</td>
<td></td>
</tr>
<tr>
<td></td>
<td>p &lt; .05</td>
<td>p &lt; .05</td>
<td></td>
</tr>
<tr>
<td><strong>Depressive Symptoms</strong></td>
<td>Free Lunch</td>
<td>b = 4.71</td>
<td></td>
</tr>
<tr>
<td></td>
<td>se = 1.62</td>
<td>se = 1.62</td>
<td></td>
</tr>
<tr>
<td></td>
<td>cr = 2.91</td>
<td>cr = 2.91</td>
<td></td>
</tr>
<tr>
<td></td>
<td>p &lt; .01</td>
<td>p &lt; .01</td>
<td></td>
</tr>
</tbody>
</table>

*Female=1 and Male =0 in the LISREL model.
Table 4.10 presents the regression results with perceived opportunities to talk with teacher’s one to one and perceiving that there were adults in the neighborhood who were proud of them when they did something well as predictors. Perceiving more opportunities for talking with teachers one on one was associated with increasing attempts to do their best in their schoolwork. Perceptions of having adults in the neighborhood that were proud of them when they did something was associated with increased perceptions that they would miss the neighborhood they now live in if they had to move.

Table 4.10: Model Results

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Predictor Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Talk to Teacher</td>
</tr>
<tr>
<td>Miss Neighborhood</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Do Best in School</td>
<td>b = .10</td>
</tr>
<tr>
<td></td>
<td>se = .041</td>
</tr>
<tr>
<td></td>
<td>cr = 2.33</td>
</tr>
<tr>
<td></td>
<td>p &lt; .05</td>
</tr>
</tbody>
</table>

Table 4.11 presents the regression results with perceived perceptions that they would miss the neighborhood they now live in if they had to move and reporting whether or not they did their best in their schoolwork as predictors. Perceiving that they would miss the neighborhood they now live in was associated with increased lifetime smoking and decreasing suicidal ideation and depressive symptoms. Trying to do their best schoolwork was associated with increased lifetime smoking and suicidal ideation, but negatively associated with depressive symptoms. The relationship between perceptions of missing neighborhood and depressive symptoms was statistically significant.
### Table 4.11: Model Results

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Predictor Variables</th>
<th>Miss Neighborhood</th>
<th>Do Best in School</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lifetime Smoking</strong></td>
<td></td>
<td>b = .019</td>
<td>b = .049</td>
</tr>
<tr>
<td></td>
<td>se = .033</td>
<td>cr = .58</td>
<td>se = .041</td>
</tr>
<tr>
<td></td>
<td>cr = 1.19 ns</td>
<td></td>
<td>cr = 1.19</td>
</tr>
<tr>
<td><strong>Suicidal Ideation</strong></td>
<td></td>
<td>b = -1.24</td>
<td>b = .48</td>
</tr>
<tr>
<td></td>
<td>se = 1.06</td>
<td>cr = -1.17</td>
<td>se = 1.33</td>
</tr>
<tr>
<td></td>
<td>ns</td>
<td></td>
<td>cr = .36</td>
</tr>
<tr>
<td><strong>Depressive Symptoms</strong></td>
<td></td>
<td>b = -1.55</td>
<td>b = -.67</td>
</tr>
<tr>
<td></td>
<td>se = .71</td>
<td>cr = -2.20</td>
<td>se = .89</td>
</tr>
<tr>
<td></td>
<td>p &lt; .05</td>
<td></td>
<td>cr = -.75</td>
</tr>
<tr>
<td></td>
<td>ns</td>
<td></td>
<td>ns</td>
</tr>
</tbody>
</table>

**Mediation**

Significant indirect effects are presented in Table 4.12. Indirect effects identify mediated effects. Gender was a significant predictor of reporting that there were neighbors who were proud when they did something well, and proud neighbors was a significant predictor of missing the neighborhood they live in if they had to move. Thus, we can say that, there were significant indirect effects of gender on perceptions of missing the neighborhood they now live in which was mediated by perceiving that there were adults in their neighborhood who were proud of them when they did something well (MacKinnon, Lockwood et al. 2002). The mediated effect indicates that males reported higher levels of feeling that they would miss the neighborhood they now live in if they had to move.

Proud neighbors was a significant predictor of reporting that they would miss the neighborhood they now live in if they had to move and feeling that they would miss their neighborhood was a significant predictor of depressive symptoms. Thus, we can say that, there were significant indirect effects of feeling that their were adults in their neighborhood who were
proud of them when they did something well on depressive symptoms which was mediated by missing the neighborhood they now live in if they had to move (MacKinnon, Lockwood et al. 2002). The mediated effect indicates that increased belief that there were adults who would be proud of them was associated with decreasing depressive symptoms.

Table 4.12: Indirect Effects

<table>
<thead>
<tr>
<th>Predictor Variables</th>
<th>Dependent Variables</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Proud Neighbors</td>
<td></td>
</tr>
<tr>
<td>Miss Neighborhood</td>
<td>b = -.073</td>
<td></td>
</tr>
<tr>
<td>Depressive Symptoms</td>
<td>b = -.50</td>
<td></td>
</tr>
</tbody>
</table>
Chapter 5
Discussion

The purpose of the present study was to examine the associations between adolescent perceptions of interactions with adults within school and community settings, commitment and attachment to those settings, and suicidal ideation, substance use, and depressive symptoms. A cross-sectional survey was used to obtain data from predominately African American ninth graders in an urban setting regarding tobacco, alcohol, marijuana use, suicidal ideation, depressive symptoms, and perceptions of individual-peer, family, school, and community norms and bonding. This study focused on data regarding school, community, tobacco use, suicidal ideation, and depressive symptoms.

Summary of Findings

The first hypothesis of this study was that the prevalence of suicidal ideation and depressive symptoms would be higher than or equal to the national prevalence for African American ninth graders. The results supported this hypothesis regarding suicidal ideation as the point prevalence of suicidal ideation measured by the single item and scaled multidimensional measure was found to be similar to the national prevalence for similarly aged African American youth. However, the point prevalence of significant depressive symptoms as measured by the CES-DC was almost twice the national prevalence as reported by CDC. This appears to be an important finding of this study.

The second hypothesis was that the multidimensional measure of suicidal ideation would have higher point prevalence than the single item measure, and that the scaled measure would have significant predictive validity above the single item measure. The results supported the hypothesis that the SIQ-JR had higher predictive validity than the single-item measure and that a
higher proportion of ideators were identified by the multiple-item measure than the single item measure. This result provides evidence for using multidimensional measures when conducting suicidal research on black youth and may be transferable to other populations.

The third hypothesis was that the prevalence lifetime and past 30 day alcohol, tobacco, and marijuana use would be higher than or equal to the national prevalence for African American ninth graders. Overall the results support this hypothesis since the prevalence found in this study was found to be similar to or higher than the national rates. However, the prevalence of recent tobacco use was lower among the current sample than the national average (8.6% and 12.2%, respectively).

The fourth hypothesis was that suicidal ideation, depressive symptoms, and lifetime tobacco use would be significantly related to the conceptual model identified by the literature. The hypothesis was partially supported in that depressive symptoms were predicted by the neighborhood paths of rewards for prosocial involvement and attachment to their neighborhood. There were no other significant associations between the SDM constructs and suicidal ideation and lifetime tobacco use.

*Research Question 1: Findings and Discussion*

The first research question sought to identify the point prevalence of suicidal ideation and depressive symptoms in this sample. The rate of depressive symptoms was substantially higher among the students surveyed (61.9%) compared to the national prevalence (30.1%). As previously noted, City A has recently had annual murder rates proportionate to larger cities, such as, Baltimore, Maryland and Washington DC (VSP 2006). Durant et al. (1994) found that violence perpetration was significantly related to being victimized or exposed to violence, depressive symptoms, and appraisal of ones chances of being alive at 25 years old. Therefore, it
is possible that these youth are exposed to violence at rates higher than nationally representative populations and therefore exhibit increased depressive symptomatology.

It has been argued that a higher threshold score is needed for non-clinical populations (Myers and Winters 2002) when using the CES-DC as an indicator of clinical depression. However, this critique of the threshold score was based on research attempting to identify depressed respondents. The present study’s intent is to identify adolescents who report significant depressive symptoms rather than to diagnose depressive episodes or depression. According to Blatt et al. (1993), a threshold of 23 is considered indicative of significant clinical depression (Blatt, Hart et al. 1993). The authors did not cite any peer-reviewed research to support this recommendation. Using this recommended score threshold or criterion, the present study found that the prevalence of “clinical” depressive symptoms was 35.7% (N=56). This prevalence is similar to the national prevalence of 30.2%.

It is also important to note that the national measure asks only a single question regarding whether the respondent felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities during the past 12 months. The CES-DC asks questions regarding how the respondent has felt in the past week (e.g., feeling sad, tired, happy, loss of appetite). The combination of the recency and the variety of depressive symptoms assessed by the CES-DC may account for the higher prevalence obtained the present study.

Suicidal ideation was reported at similar rates within this sample as that of the national survey of African American ninth graders using the single-item and SIQ-JR measures. Though judged to be similar the prevalence obtained from the present study was less than the national prevalence. This finding is contrary to the findings for depressive symptoms which were shown to be reported at significantly higher proportion in this study compared to the national rate. One
could reasonably expect to find significantly higher rates of suicidal ideation in this sample due to the positive associations between suicidal ideation and depressive symptoms.

The operational definitions in most of the literature are based on single-item assessments that only ask about thoughts of ending one’s life. As such, this study sought to provide evidence for the utility of a multi-dimensional measure above a single item assessment since the face validity of a single item measure may not be applicable to all populations. For one, researchers have hypothesized that African Americans do not make specific plans to harm themselves due to the stigma associated with suicide in the African American community (Poussaint and Alexander 2000).

Further, suicidality can also be externalized in the form of interpersonal violence rather than internalized (Durkheim 1951). These explanations might account for the greater explanatory or predictive power of the multidimensional measure in this sample. African American youth may experience suicidal ideation, but may not view or perceive these thoughts as related to suicide. For example, an adolescent may think about what life would be like for others if they were dead, but may not consider that to be thoughts of ending one’s life (fatalism). Fatalistic outlooks can also manifest as harming others since one might not see the value in any human life due to their own self-devaluation.

Regarding cultural norms, as indicated previously suicidal behavior and mental health problems are stigmatized in the African American community (Poussaint and Alexander 2000). Research has also shown that African Americans are less likely to reveal that they experience suicidal thoughts than their white counterparts (Morrison and Downey 2000), and that African Americans reported higher moral objections to ending their own life (Morrison and Downey 2000).
2000). Therefore, suicidal ideation may not be properly assessed by a measure that focuses mainly on plans associated with ending one’s life in this population.

Research Question 2: Findings and Discussion

The second research question sought to address whether a single item measure of suicidal ideation captures a similar prevalence as the SIQ-JR for this sample. The point prevalence obtained from the single-item was slightly lower than that of the multi-item SIQ-JR (11.7% and 13.1%, respectively). The SIQ-JR uses a cut-off score that is a sum of 15 items whereas the single-item is a yes/no question, and has several items very similar to the question national survey question regarding whether the respondent seriously considered killing themselves (e.g., how I would kill myself, thoughts about killing myself).

Affirmative responses to these questions are not automatically coded as suicidal ideation. If an affirmative answer to either one of these questions alone were considered as being indicators of suicidal ideation the prevalence would be higher than that reported above. For example, an affirmative response to I thought about killing myself would have resulted in a point prevalence of 31% (N=57). Further, the single item question references thoughts in the past 12 months while the SIQ-JR asks the respondent to consider the past month. Therefore, affirmative responses to the SIQ-JR items also reflect recent suicidal thoughts.

Another consideration regarding the use of a single-item measure is that it cannot be used to assess other thoughts known to be associated with suicidality. The SIQ-JR was shown to measure three different dimensions of suicidal ideation when it was standardized. These dimensions were identified by Reynolds (1988) as: 1) thoughts of one’s own death and the deaths of others; 2) plans and thoughts for committing suicide; and 3) thinking about death in general (Reynolds 1988). The standardization sample consisted of 7th, 8th, and 9th graders at
public schools (Reynolds 1988). In the present study a common factor analysis also revealed three dimensions. These domains were called 1) contemplation and preparation (e.g., I thought about how I would kill myself), 2) hopelessness and fatalism (e.g., I wished I had never been born), and 3) general thoughts of death (e.g., I thought about death).

Approximately 44% (N=82) of respondents reported ever thinking “it would be better if they were not alive.” Similarly, respondents also reported having the other fatalistic thoughts at higher proportions than the single-item or summed SIQ-JR. This is an important finding because it lends credence to other theoretical postulations regarding suicidality and African Americans. Specifically, Poussaint and Alexander (2000) and Willis et al. (2002) hypothesize that hopelessness and fatalistic outlooks on life may be the cause of both internalized and externalized maladaptive behaviors and poor mental health among African Americans.

In order to assess whether the predictive ability of the SIQ-JR is superior to the single item measure, two regression models were run for both depressive symptoms and lifetime tobacco use. The results of those regressions supported the hypothesis that the predictive ability of the SIQ-JR is better than the single-item measure. The SIQ-JR has been used previously in diverse populations and has been shown to have good internal reliability and predictive ability (Mazza and Reynolds 1999; Reynolds and Mazza 1999) among predominantly minority samples.

Suicidal ideation has been associated with increases in substance use, social isolation, and violence (Gibbs, 1997; Willis et al., 2003). Suicidal ideation is also one of the symptoms of major depressive disorder (APA 1994) and has been shown to be correlated to depressive symptoms in previous research with adolescents and is one of the symptoms of major depressive disorder (Halfors, Waller et al. 2004).
As such, a finding of interest was that the single item measure was negatively associated with depressive symptoms when included in a model as the sole predictor. As indicated above depressive symptoms and suicidal ideation have consistently been shown to have positive associations. This finding in combination with the substantial increase in R-square can be interpreted as strong evidence of the questionable validity of a single item measure of suicidal ideation. At a minimum, the finding provides strong evidence of the superior predictive validity of the scale measure of suicidal ideation in this sample.

Regressions are normally utilized to determine if the independent or predictor variable explains a statistically significant amount of the variation in the dependent or outcome variable. Since suicidal ideation is associated with increases in several maladaptive behaviors and poor mental health it is important that it is adequately measured in research. For example, if this study had relied only on the single item measure of suicidal ideation, one would conclude that suicidal ideation has no significant relationship with lifetime tobacco use within this sample.

**Research Question 3: Findings and Discussion**

The third research question presented point prevalence for tobacco, alcohol, and marijuana use. Overall, the rates of these behaviors were judged to be similar to the national average for African American ninth graders. Historically, African American youth exhibit lower rates of drug use than their white counterparts (Grunbaum, Kann et al. 2004; CDC 2006), and is supported by national estimates. The initial hypothesis was that the prevalence of alcohol, tobacco, and marijuana use would be equal to or greater than the national prevalence. Some of the point prevalence were lower (albeit only slightly) than the corresponding national prevalence. This might be due to protective mechanisms in the communities, families, or schools of these adolescents (Wallace and Muroff 2002). Brook and Pahl (2005) found that attachment to family
and family church attendance was protective of increases in drug use among African American adolescents. Other research has also shown that racial and ethnic identity and Africentric beliefs are protective of substance use among African American youth and young adults (Corneille, Ashcraft et al. 2005). It is possible that these protective mechanisms account for the prevalence found in the current sample. Alternatively, these findings could be reflective of under-reporting by the respondents in this sample. The prevalence of lifetime alcohol and lifetime and recent marijuana use was higher than the national prevalence and might conversely be due to exposure to poor neighborhood context which has been shown to be related to African American adolescent substance use (Lambert, Brown et al. 2004)

Research Question 4: Findings and Discussion

The fourth hypothesis was that suicidal ideation, depressive symptoms, and lifetime tobacco use would be significantly related to commitment to school and attachment to neighborhood as identified by the literature. The findings of the empirical model indicated that the neighborhood paths are predictive of depressive symptoms. Another significant path was found between perceived opportunities for pro-social involvement at school (i.e., opportunities to talk to teachers) and commitment to school (i.e., trying to do best work in school). The neighborhood paths of the model support the SDM assertion that recognition for pro-social involvement is associated with increased attachment to that social context.

Attachment to social structures (e.g., neighborhood, school) is an important tenet of the SDM and other research has supported the importance of neighborhood quality in the development of healthy coping strategies in adolescence (Willis, Coombs et al. 2002; Bryant and Zimmerman 2003; Bond, Toumbourou et al. 2005; Fitzpatrick, Piko et al. 2005). Attachment to a social context (e.g., neighborhood) is an important component necessary to transfer norms and
values of the social unit to the adolescent. Lack of attachment can be positive or negative since
the norms espoused by social units can be protective or detrimental. In this instance
neighborhood attachment may have contributed to the sense of well-being and fostered positive
mental health (e.g., decreased depressive symptoms).

**Gender Differences**

There were several notable associations with gender in the conceptual model. Gender
was significantly predictive of suicidal ideation, depressive symptoms, and whether students felt
neighbors would be proud of them when they do something well. The results indicated that
being female was associated with higher suicidal ideation and depressive symptoms. There is a
plethora of literature to support the finding that females are more likely to experience depressive
symptoms than males in adolescent populations (Avison and McAlpine 1992; Hankin and
Abramson 1999; Hankin, Mermelstein et al. 2007). The findings of this model are consistent
with the findings of the general literature regarding gender differences in mental health.

Being male was predictive of higher perceptions of having adults in their community who
were proud of them when they did something well. This finding is not surprising considering the
intense discussions about the underachievement and social pitfalls of many African American
males. It is possible therefore that neighbors may encourage these African American males
when they see them doing something well in order to facilitate continued achievement.

Individual characteristics, opportunities/rewards for prosocial involvement, and
attachment contributed to lower depressive symptoms in the current study. That is, males
indicated higher levels of perceiving adults would be proud of them if they did something well.
Perceiving that adults were proud was associated with higher neighborhood attachment, and
increased neighborhood attachment was associated with lower depressive symptoms. Previous
research has shown the importance of non-familial adults in the lives of adolescents (Beam, Chen et al. 2002). These findings support the necessity for positive interactions with community adults during adolescence.

Lastly, Durkheim (1951) states that society and structural factors represent pressures that the individual must endure, adapt to, or collapse under. Social and structural factors can have multiple affects on an individual and Durkheim theorizes that there are several different kinds of suicide in which society and structural factors play differing roles in leading to the self-demise of an individual. He called these suicide types, egoistic, anomic, fatalistic, and altruistic. Durkheim’s findings are applicable to African American youth today in many ways. The fatalistic individual is excessively deprived of the opportunity to work to their potential station in life. It can be hypothesized that suicidal ideation and significant depressive symptoms among African American youth could be attributed to a fatalistic attitude which might occur among youth who live in impoverished inner city environments.

Further, Durkheim’s discussion of an egoistic attitude indicates that the societal thread which ties individuals together in a society has been disturbed or is being disintegrated by social changes which focus on individualism. The egoistic individual is unable to adapt to these changes quick enough and feels as though he has no place of belonging in the context of others. Opportunities for involvement, recognition for prosocial behavior, commitment, attachment to social contexts (e.g., neighborhood) are protective mechanisms which serve to prevent the development of fatalistic or egoistic outlooks among African American youth.
Passive vs. Active Consent

There were significant differences found between the active and passive consent students. There was a greater proportion of active consent students at School 3 compared to Schools 1 and 2. This may be due to the active role that the administration took in recruiting students for this particular site. For example, the ninth grade principal visited classes and reminded students to return their consent forms.

Active consent respondents were also more likely to have higher grades and to report trying to do their best in school. Research has shown that the use of active parental consent in school based surveys lead to low participation rates and bias estimates of risk behaviors (Esbensen, Miller et al. 1999; Porkorny, Jason et al. 2001). It is hypothesized that this may be due to the fact that students who return active consent forms usually have lower rates of substance use, live in two parent families, and are less likely to be characterized as at-risk (Esbensen, Miller et al. 1999; Porkorny, Jason et al. 2001). The findings of this study support this particular finding and supports the use of dual or passive consent procedures when collecting school-based data.

Recommendations and Future Directions

Future studies should endeavor to use multi-dimensional measures of mental health among African American adolescents. Prevention and intervention programs should focus on increasing commitment to school and attachment to neighborhoods. Studies also need to be conducted that assess exposure to violence within school settings in addition to mental health, substance use, and perceptions of school.

It will be important to delineate the associations between fatalism, depressive symptoms, and violence (perpetrator or victim). In an age, period, and cohort analysis of suicide, Joe (2006)
found that currently the rates of suicide are low among older African Americans. However, the current cohorts of youth and young adults are exhibiting higher levels of suicidal behavior and these behaviors will likely transfer with them as they move from young adult to middle age to older adults.

If the trends of increasing rates of suicide among young African Americans continue with younger cohorts not yet measured than suicidality among African Americans has the propensity to become a major health concern. This is an important finding and an exhortation for future research on suicidality among African Americans to be qualitative and quantitative in an effort to understand the etiology of suicide among African American youth and young adults.

**Study Limitations**

Due to the total length of the questionnaire it was possible that some of the students were not able to complete it and others chose to skip or not respond to certain questions. Either of these actions by respondents would have resulted in missing data. Missing data was handled using three recommended analysis methods. The utility of EM algorithm, FIML, and multiple imputation methods has been widely established in the literature, particularly in social science research (Schafer and Graham 2002; Graham, Cumsille et al. 2003).

However, the fraction of missing information was very high for the outcome variables of interest. This was due to the low consent rate (N=188) for the full survey obtained in the study. This high fraction of missing information in combination with small effect sizes could account for the limited significant findings.

At one of the schools, the investigator obtained a purposive sample of classes that had the highest numbers of consented students. It is unlikely however, that this sampling of classes influenced observed data since the classes used for data collection was not the same as those
used for the consent process. These results also may not be generalizable to all African American adolescents. Specifically, those African American adolescents whose social contexts (e.g., adolescents in rural areas) and sociodemographic characteristics vary widely from the school system sample would require additional studies. Finally, this study is based on adolescent self-report data, and as such answers may be biased towards social acceptability.

**Investigator Observations**

The fact that so few items were related to the outcomes of interest here is an interesting finding. The tenets of the SDM are that opportunities for involvement in social units would lead to bonding and commitment and if those social units espoused positive social norms this would translate into healthy behaviors and good mental health. Based upon observation at the schools some students may not feel that they experience enough opportunities for prosocial involvement to subscribe to the norms and values espoused by the school administrations. At several points students expressed that their teachers didn’t care about them. Research on hiring teachers for urban schools indicates that urban schools have high teacher turnover and difficulties filling teaching positions (Jacob 2007). Several of the teachers who seemed to have good relationships with their students expressed desires to transfer to suburban schools or obtain administrative positions. It is important that schools work to keep those teachers who provide opportunities for prosocial involvement and foster bonding and commitment in the urban schools where they are needed most.

**Summary**

The results of this study supported the hypothesis that a multi-dimensional approach to measuring suicidal ideation is a more valid representation among this sample of African American adolescents and may have wider generalizability. This was exemplified by the fact
that the factor analysis conducted indicated that the hopelessness and fatalism factor explained a similar portion of the variance as the suicidal plans and thoughts factor and by the increased predictive contribution of the scale measure while controlling for the single item measure. Finally, the conceptual model supported the importance of community interactions and attachment while controlling for school and individual variables.

The CTC survey was developed by the Social Development Group to serve as a needs assessment for communities who wished to apply the SDM framework to prevention and intervention planning. Prevention research has in the past focused on reducing risk factors and not on enhancing protective mechanisms (Pollard, Hawkins et al. 1999). It has since been shown that a focus on both will enhance the outcomes of prevention efforts (Pollard, Hawkins et al. 1999; Hawkins, Catalano et al. 2002). The data obtained from this study can be utilized to target facets of social units that are related to risk behaviors in this sample. For example, teacher training can be utilized to aid teachers in emphasizing why and how the student’s schoolwork will be useful in the future. This can help with bonding and commitment which in turn facilitates subscribing to the norms and values espoused by the school administrations.

Despite the lack of significant findings regarding the school context, various studies have found that school connectedness is an important correlate of myriad adolescent problem behaviors (Catalano, Haggerty et al. 2004). African Americans are historically communal and collectivist (Poussaint and Alexander 2000), and because school-aged adolescents spend most of their time at school it is an important goal to develop and facilitate support mechanisms and connectedness in that context.

Research domestically and abroad has supported the importance of community role models (Bryant and Zimmerman 2003) and affirmation (King, Flisher et al. 2003) among
adolescent populations in the prevention of substance use and poor mental health. Adolescent relationships with adult role models who are not their parents have also been shown to be associated with avoidance of health compromising behaviors and depressive symptoms (Greenberger, Chen et al. 1998). Given previous research and the current findings, positive community relationships should be fostered to strengthen the protective mechanisms already in place.

Despite the focus on suicidal ideation and depressive symptoms it is not the aim of this study to predict suicide. Causes of depressive symptoms (not major depression) and thoughts of suicide will be similar to but might also be quite different from causes of completed suicide. In the case of adolescents, the same way that one can propose that suicidal ideation is a fleeting phase for all adolescents one can also hypothesize that suicidal ideation is a pre-cursor to more serious psychological issues later in life. On its own ideation represents thoughts, but in the context of depressive symptoms, and substance use it presents a picture of comorbid mental health and health behaviors. This study sought to identify protective and predictive factors of maladaptive behaviors before they become chronic maladaptive behaviors. The same way that not all ideators commit suicide, not all of those with depressive symptoms will have a major depressive disorder, nor will all of the substance users become addicts or abusers. However, if one can identify protective factors for those who do exhibit these precursors then there is the potential for development of an intervention to prevent adolescents from progressing further on the continuum of dangerous health behavior.

This study corroborated many expected hypotheses. This work was important since the current study site had not previously collected data regarding prevalence of mental health and
drug use behaviors. Further, this study contributes to the body of information regarding African American adolescent mental health in particular.
References


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Appendix A

Consent Forms
1. **Purpose of the Study:** The purpose of this research study is to find out how friends, family, school, and people in your community can change how you feel about your life, and whether you use drugs.

2. **Procedures to be followed:** You will be asked to answer about 100 to 130 questions on a survey.

3. **Discomforts and Risks:** There are minimal risks for finishing the survey. Some of the questions are personal and may make you feel uncomfortable. If this happens, you are free not to answer any questions that you do not want to answer.

4. **Benefits:** You may learn more about yourself by participating in this study. This study can be used to identify people that are important to your ability to live healthier happier lives. It can also let your school and community know what to do to help students be healthier.

   The results might be used to develop programs to assist students who need help with how they feel about life and drug use.

5. **Duration:** It will take about 50 minutes to finish the survey.

6. **Statement of Confidentiality:** Your participation in this research is confidential. This means that no one will know your answers. The survey does not ask for your name or any information that would allow others such as teachers or parents to know of your answers to the questions. No one but researchers at PSU will have access to the data. The Office of Human Research Protections in the U.S. Department of Health and Human Services, the Office for Research Protections and the Social Science Institutional Review Board of Penn State University may review records related to this project. In the event that your answers are used in a written paper or
presentation, no one will know which answers are yours because your name is in no way linked to your responses.

7. **Right to Ask Questions:** If you have any questions about this research please contact Ms. Tamika Gilreath at (814) 865-8410 or Dr. Gary King at (814) 863-8184 with questions. You can also call this number if you have complaints or concerns about this research. If you have questions about your rights after completing the survey, or you have concerns or general questions about the research, contact Penn State University’s Office for Research Protections at (814) 865-1775. You may also call this number if you cannot reach the research team or wish to talk to someone else.

8. **Voluntary Participation:** This survey is voluntary. That means you do not have to take it. Whether or not you answer the questions will not affect your grade in this class. If you choose to take it, you may skip any question you don’t want to answer. Your teacher, counselor or principal will not see your answers. Only members of the research team will look at the responses and no one will be able to identify who you are.

If you choose to answer questions on the survey, you are agreeing to participate in this study.

Please keep this form for your records to share with parents or to look at later.

If you feel that you need help with substance use or depression you can call any of the following numbers for access to counseling services.

**Girls and Boys Town National Hotline at 1-800-448-3000**
**Virginia Department of Mental Health at 1-800-SUICIDE (784-2433)**
**National Drug 24 hour Helpline at 1-800-821-4357**
Informed Consent Form for Social Science Research
The Pennsylvania State University

Title of Project: Multiple-context assessment of suicidal ideation, depression, and substance use

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Dear Parent/Guardian:

Your school is taking part in a survey. The research survey will ask questions regarding mental health and health behaviors of 9th grade students. The survey will ask about your child’s interactions with their peers, family, school, and community. It will also ask questions regarding depression, thoughts about suicide, tobacco, alcohol, and marijuana use.

Students will be asked to fill out a questionnaire that will take about 50 minutes to complete.

Doing this paper and pencil survey will cause little or no risk to your child. The only potential risk is that some students might find certain questions to be sensitive. Information regarding crisis lines available for mental health and substance use counseling will be made available to students prior to survey administration. The survey has been designed to protect your child’s privacy. Students will not put their names on the survey. Also, no student will ever be mentioned by name in a report of the results. No teachers or any other school personnel will have access to your child's answers to this survey. No one but researchers at PSU will have access to the data. The Office of Human Research Protections in the U.S. Department of Health and Human Services, the Office for Research Protections and the Social Science Institutional Review Board of Penn State University may review records related to this project. Your child will get no benefit right away from taking part in the survey. However, the results of this study may help children in the future as preventive health programs are developed and possible funding may be acquired through data.

We would like all students to take part in the survey, but the survey is voluntary. No action will be taken against the school, you, or your child, if your child does not take part. Students can skip any question that they do not wish to answer. In addition, students may stop participating in the survey at any point without penalty.

If you have any questions about this research please contact Ms. Tamika Gilreath at (814) 865-8410 or Dr. Gary King at (814) 863-8184 with questions. You can also call this number if you have complaints or concerns about this research. If you have questions about your rights after completing the survey, or you have concerns or general questions about the research, contact Penn State University’s Office for Research Protections at (814) 865-1775. You may also call this number if you cannot reach the research team or wish to talk to someone else.
Please read the section below. Check the box that indicates whether or not you want your child to participate in this study and return the form to the school no later than ____________.

Thank you,

Tamika Gilreath, MS

If you do not return this form your child will be given a reduced form of the survey that does not include questions regarding depression, substance use, and suicidal ideation.

Child’s name: _________________________________________ Grade: _______

I have read this form and know what the survey is about.

[ ] My child may take part in this survey.

[ ] My child may not take part in this survey.

Parent’s signature: ___________________________ Date: ________________

Phone number: ________________________________
Appendix B

Questionnaires
This survey is voluntary. That means you do not have to take it. If you choose to take it, you may skip any question you don’t want to answer.

Thank you for agreeing to participate in this survey. The survey asks your opinion about a number of things in your life, including your friends, your family, your neighborhood and your community. Your answers to these questions will be confidential. That means no one will know your answers. To help us keep your answers secret, please do not write your name on this survey form.

1. This is not a test. There are no right or wrong answers.
2. If you don’t find an answer that fits exactly, use one that comes closest. If any question does not apply to you, or you are not sure what it means, just leave it blank.
3. Mark your answers clearly:
   • Completely fill in the circles.
   • If you change your mind about an answer that you have already marked, draw a line through or X over the incorrect answer and then either fill in the correct circle or write your new answer next to the fill-in box (depending on the format).
   • Make no other markings or comments on the answer pages.
4. Some of the questions have the following format:

   NO! no yes YES!

   Mark the Big “NO!” if you think the statement is definitely not true for you.
   Mark the little “no” if you think the statement is mostly not true for you.
   Mark the little “yes” if you think the statement is mostly true for you.
   Mark the Big “YES!” if you think the statement is definitely true for you.
Form A

1) How old are you? □ □

2) What is your sex? 〇 Male 〇 Female

3) What is the name of your school? 〇 Armstrong 〇 Hugenot 〇 John Marshall

4) Who do you live with? 〇 Mother and Father 〇 Grandmother and/or Grandfather 〇 Mother only 〇 Relatives 〇 Father only 〇 Non-relatives

5) Putting them all together what were your grades like last year? 〇 Mostly F’s 〇 Mostly B’s 〇 Mostly D’s 〇 Mostly A’s 〇 Mostly C’s

6) Do you qualify for free or reduced lunch? 〇 Yes 〇 No 〇 Don’t know

7) How do you describe yourself? (You may select one or more responses.) 〇 American Indian or Alaska Native 〇 Asian 〇 Black or African American 〇 Hispanic or Latino 〇 Native Hawaiian or Other Pacific Islander 〇 White

8) What is the name of the neighborhood that you live in?

9) Have you ever tried cigarette smoking, even one or two puffs? 〇 Yes 〇 No

10) During the past 30 days, on how many days did you smoke cigarettes? □ □

11) How interesting are most of your courses to you? 〇 Very interesting and stimulating 〇 Slightly dull 〇 Quite interesting 〇 Very dull 〇 Fairly interesting

12) During the past 12 months, did you ever seriously consider attempting suicide? 〇 Yes 〇 No

13) During your life, on how many days have you had at least one drink of alcohol? 〇 1-2 〇 3-9 〇 10-19 〇 20-39 〇 40-99 〇 100 or more

14) During the past 30 days, on how many days did you have at least one drink of alcohol? 〇 1-2 〇 3-5 〇 6-9 〇 10-19 〇 20-29 〇 All 30

15) During your life, how many times have you used marijuana? 〇 1-2 〇 3-9 〇 10-19 〇 20-39 〇 40-99 〇 100 or more

16) During the past 30 days, how many times did you use marijuana? 〇 1-2 〇 3-9 〇 10-19 〇 20-39 〇 40 or more

17) During the LAST FOUR WEEKS, how many whole days of school have you missed because you skipped or “cut”? None 〇 1 〇 2 〇 3 〇 4-5 〇 6-10 〇 11 or more

18) In my school, students have lots of chances to help decide things like class activities and rules. 〇 Yes 〇 No

19) Teachers ask me to work on special classroom projects. 〇 Yes 〇 No

20) My teacher(s) notices when I am doing a good job and lets me know about it. 〇 Yes 〇 No

21) There are lots of chances for students in my school to get involved in sports, clubs, and other school activities outside of class. 〇 Yes 〇 No

22) There are lots of chances for students in my school to talk with a teacher one-on-one. 〇 Yes 〇 No

23) I feel safe at my school. 〇 Yes 〇 No

24) The school lets my parents know when I have done something well 〇 Yes 〇 No

25) My teachers praise me when I work hard in school. 〇 Yes 〇 No

26) I have lots of chances to be part of class discussions or activities. 〇 Yes 〇 No

27) If a kid smoked marijuana in your neighborhood, would he or she be caught by the police? 〇 Yes 〇 No

28) If a kid drank some beer, wine or hard liquor (for example, vodka, whiskey, or gin) in your neighborhood, would he or she be caught by the police? 〇 Yes 〇 No

Please continue to next page
Below is a list of the ways you might have felt or acted. Please check how much you have felt this way during the past week.

**During the past week:**

29) I was bothered by things that usually don’t bother me.  
30) I did not feel like eating, I wasn’t very hungry. 
31) I wasn’t able to feel happy, even when my family or friends tried to help me feel better. 
32) I felt like I was just as good as other kids.  
33) I felt like I couldn’t pay attention to what I was doing. 
34) I felt down and unhappy.  
35) I felt like I was too tired to do things. 
36) I felt like something good was going to happen. 
37) I felt like things I did before didn’t work out right. 
38) I felt scared.  
39) I didn’t sleep as well as I usually sleep. 
40) I was happy. 
41) I was more quiet than usual. 
42) I felt lonely, like I didn’t have any friends. 
43) I felt like kids I know were not friendly or that they didn’t want to be with me. 
44) I had a good time. 
45) I felt like crying. 
46) I felt sad. 
47) I felt people didn’t like me. 
48) It was hard to get started doing things.

**How wrong would most adults (over 21) in your neighborhood think it was for kids your age:**

49) To use marijuana? 
50) To drink alcohol? 
51) To smoke cigarettes?

**About how many adults (over 21) have you known personally who in the past year have:**

52) Used marijuana, crack, cocaine, or other drugs? 
53) Sold or dealt drugs? 
54) Done other things that could get them in trouble with the police, like stealing, selling stolen goods, mugging or assaulting others, etc.? 
55) Gotten drunk or high?

56) If I had to move, I would miss the neighborhood I now live in. 
57) My neighbors notice when I am doing a good job and let me know. 
58) I like my neighborhood. 
59) There are lots of adults in my neighborhood I could talk to about something important. 
60) There are people in my neighborhood who are proud of me when I do something well. 
61) I feel safe in my neighborhood. 
62) I’d like to get out of my neighborhood. 
63) There are people in my neighborhood who encourage me to do my best.

**How much do each of the following statements describe your neighborhood:**

64) Crime and/or drug selling. 
65) Fights. 
66) Lots of empty or abandoned buildings. 
67) Lots of graffiti.

---

Please continue to next page
96) I ignore rules that get in my way.
   Very false  Somewhat false  Somewhat true  Very true
   O          O            O            O

   How much do you think people risk harming themselves (physically or in other ways) if they:
   97) Try marijuana once or twice?
       No risk     Slight risk     Moderate risk     Great risk
       O          O            O            O

   What are the chances you would be seen as cool if you:
   98) Smoked marijuana?
       No or very little chance     Little chance     Some chance     Pretty good chance     Very good chance
       O          O            O            O            O

   How many times have you done the following things?
   99) Done crazy things even if they are a little dangerous.
       Never
       O
       I’ve done it, but not in the past year
       O
       Less than once a month
       O
       About once a month
       O
       2 or 3 times a month
       O
       Once a week or more
       O

   100) My parents notice when I am doing a good job and let me know about it.
       Never or almost never
       O
       Sometimes
       O
       Often
       O
       All the time
       O

   101) It’s 8:00 on a weeknight and you are about to go over to a friend’s home when your mother asks you where you are going. You say, “Oh, just going to go hang out with some friends.” She says, “NO, you’ll just get into trouble if you go out. Stay home tonight.” What would you do now?
       Leave the house anyway.
       O

   Explain what you are going to do with your friends, tell her when you’d get home, and ask if you can go out.
   Not say anything and start watching TV.
   Get into an argument with her.

   How wrong do you think it is for someone your age to:
   102) Steal anything worth more than $5?
       Very wrong  Wrong  A little bit wrong  Not wrong at all
       O          O            O            O

   103) Stay away from school all day when their parents thing they are at school?
       Very wrong  Wrong  A little bit wrong  Not wrong at all
       O          O            O            O

   104) Smoke marijuana?
       Very wrong  Wrong  A little bit wrong  Not wrong at all
       O          O            O            O

   How wrong do your parents feel it would be for you to:
   105) Drink beer, wine or hard liquor (for example, vodka, whiskey or gin) regularly?
       Very wrong  Wrong  A little bit wrong  Not wrong at all
       O          O            O            O

   106) Steal anything worth more than $5?
       Very wrong  Wrong  A little bit wrong  Not wrong at all
       O          O            O            O

   Have any of your brothers or sisters ever:
   107) Drunk beer, wine or hard liquor (for example, vodka, whiskey or gin)?
       No  Yes  I don’t have any brothers or sisters
       O          O            O

   108) Taken a handgun to school?
       No  Yes
       O          O

   The rules in my family are clear
   109) If you skipped school, would you be caught by your parents?
       O          O            O            O

   110) Do you feel very close to your mother?
       O          O            O            O

   112) Do you enjoy spending time with your father?
       O          O            O            O

   113) Do you feel very close to your father?
       O          O            O            O

   114) My parents give me lots of chances to do fun things with them.
       O          O            O            O

   115) People in my family have serious arguments.
       O          O            O            O

   116) My parents notice when I am doing a good job and let me know about it.
       O          O            O            O
This survey is voluntary. That means you do not have to take it.
If you choose to take it, you may skip any question you don’t want to answer.

Thank you for agreeing to participate in this survey. The survey asks your opinion about a number of things in your life, including your friends, your family, your neighborhood and your community. Your answers to these questions will be confidential. That means no one will know your answers. To help us keep your answers secret, please do not write your name on this survey form.

1. This is not a test. There are no right or wrong answers.
2. If you don’t find an answer that fits exactly, use one that comes closest. If any question does not apply to you, or you are not sure what it means, just leave it blank.
3. Mark your answers clearly:
   • Completely fill in the circles.
   • If you change your mind about an answer that you have already marked, draw a line through or X over the incorrect answer and then either fill in the correct circle or write your new answer next to the fill-in box (depending on the format).
   • Make no other markings or comments on the answer pages.
4. Some of the questions have the following format:

   **NO! no yes YES!**

   Mark the Big “NO!” if you think the statement is definitely not true for you.
   Mark the little “no” if you think the statement is mostly not true for you.
   Mark the little “yes” if you think the statement is mostly true for you.
   Mark the Big “YES!” if you think the statement is definitely true for you.
1) How old are you? 

2) What is your sex?  
- Male  
- Female

3) What is the name of your school?  
- Armstrong  
- Hugenot  
- John Marshall

4) Who do you live with?  
- Mother and Father  
- Grandmother and/or Grandfather  
- Mother only  
- Relatives  
- Father only  
- Non-relatives

5) Putting them all together what were your grades like last year?  
- Mostly F's  
- Mostly B's  
- Mostly D's  
- Mostly A's  
- Mostly C's

6) Do you qualify for free or reduced lunch?  
- Yes  
- No  
- Don't know

7) How do you describe yourself?  
   (You may select one or more responses.)  
- American Indian or Alaska Native  
- Asian  
- Black or African American  
- Hispanic or Latino  
- Native Hawaiian or Other Pacific Islander  
- White

8) What is the name of the neighborhood that you live in?

9) Have you ever tried cigarette smoking, even one or two puffs?  
- Yes  
- No

10) During the past 30 days, on how many days did you smoke cigarettes? 

11) How interesting are most of your courses to you?  
- Very interesting and stimulating  
- Slightly dull  
- Quite interesting  
- Very dull  
- Fairly interesting

12) During the past 12 months, did you ever seriously consider attempting suicide?  
- Yes  
- No

13) During your life, on how many days have you had at least one drink of alcohol?  
- 0  
- 1-2  
- 3-9  
- 10-19  
- 20-39  
- 40-99  
- 100 or more

14) During the past 30 days, on how many days did you have at least one drink of alcohol?  
- 0  
- 1-2  
- 3-5  
- 6-9  
- 10-19  
- 20-29  
- All 30

15) During your life, how many times have you used marijuana?  
- 0  
- 1-2  
- 3-9  
- 10-19  
- 20-39  
- 40-99  
- 100 or more

16) During the past 30 days, how many times did you use marijuana?  
- 0  
- 1-2  
- 3-9  
- 10-19  
- 20-39  
- 40 or more

17) During the last four weeks, how many whole days of school have you missed because you skipped or "cut"?  
- None  
- 1  
- 2  
- 3  
- 4-5  
- 6-10  
- 11 or more

18) In my school, students have lots of chances to help decide things like class activities and rules.  
- NO!  
- no  
- yes  
- YES!

19) Teachers ask me to work on special classroom projects.  
- NO!  
- no  
- yes  
- YES!

20) My teacher(s) notices when I am doing a good job and lets me know about it.  
- NO!  
- no  
- yes  
- YES!

21) There are lots of chances for students in my school to get involved in sports, clubs, and other school activities outside of class.  
- NO!  
- no  
- yes  
- YES!

22) There are lots of chances for students in my school to talk with a teacher one-on-one.  
- NO!  
- no  
- yes  
- YES!

23) I feel safe at my school.  
- NO!  
- no  
- yes  
- YES!

24) The school lets my parents know when I have done something well.  
- NO!  
- no  
- yes  
- YES!

25) My teachers praise me when I work hard in school.  
- NO!  
- no  
- yes  
- YES!

26) I have lots of chances to be part of class discussions or activities.  
- NO!  
- no  
- yes  
- YES!

27) If a kid smoked marijuana in your neighborhood, would he or she be caught by the police?  
- NO!  
- no  
- yes  
- YES!

28) If a kid drank some beer, wine or hard liquor (for example, vodka, whiskey, or gin) in your neighborhood, would he or she be caught by the police?  
- NO!  
- no  
- yes  
- YES!

Please continue to next page
Below is a list of the ways you might have felt or acted. Please check how much you have felt this way during the past week.

**During the past week:**

<table>
<thead>
<tr>
<th></th>
<th>Not At All</th>
<th>A Little</th>
<th>Some</th>
<th>A Lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td>I was bothered by things that usually don’t bother me.</td>
<td>○ ○ ○ ○ ○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>I did not feel like eating, I wasn’t very hungry.</td>
<td>○ ○ ○ ○ ○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>I wasn’t able to feel happy, even when my family or friends tried to help me feel better.</td>
<td>○ ○ ○ ○ ○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>I felt like I was just as good as other kids.</td>
<td>○ ○ ○ ○ ○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>I felt like I couldn’t pay attention to what I was doing.</td>
<td>○ ○ ○ ○ ○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>I felt down and unhappy.</td>
<td>○ ○ ○ ○ ○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>I felt like I was too tired to do things.</td>
<td>○ ○ ○ ○ ○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>I felt like something good was going to happen.</td>
<td>○ ○ ○ ○ ○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>I felt like things I did before didn’t work out right.</td>
<td>○ ○ ○ ○ ○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>I felt scared.</td>
<td>○ ○ ○ ○ ○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>I didn’t sleep as well as I usually sleep.</td>
<td>○ ○ ○ ○ ○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>I was happy.</td>
<td>○ ○ ○ ○ ○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>I was more quiet than usual.</td>
<td>○ ○ ○ ○ ○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>I felt lonely, like I didn’t have any friends.</td>
<td>○ ○ ○ ○ ○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>I felt like kids I know were not friendly or that they didn’t want to be with me.</td>
<td>○ ○ ○ ○ ○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>I had a good time.</td>
<td>○ ○ ○ ○ ○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>I felt like crying.</td>
<td>○ ○ ○ ○ ○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>I felt sad.</td>
<td>○ ○ ○ ○ ○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>I felt people didn’t like me.</td>
<td>○ ○ ○ ○ ○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>It was hard to get started doing things.</td>
<td>○ ○ ○ ○ ○</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**How wrong would most adults (over 21) in your neighborhood think it was for kids your age:**

<table>
<thead>
<tr>
<th></th>
<th>Very wrong</th>
<th>Wrong</th>
<th>A little bit wrong</th>
<th>Not wrong at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>49</td>
<td>To use marijuana?</td>
<td>○ ○ ○ ○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>To drink alcohol?</td>
<td>○ ○ ○ ○</td>
<td></td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>To smoke cigarettes?</td>
<td>○ ○ ○ ○</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**About how many adults (over 21) have you known personally who in the past year have:**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>52</td>
<td>Used marijuana, crack, cocaine, or other drugs?</td>
</tr>
<tr>
<td>53</td>
<td>Sold or dealt drugs?</td>
</tr>
<tr>
<td>54</td>
<td>Done other things that could get them in trouble with the police, like stealing, selling stolen goods, mugging or assaulting others, etc.?</td>
</tr>
<tr>
<td>55</td>
<td>Gotten drunk or high?</td>
</tr>
</tbody>
</table>

**If I had to move, I would miss the neighborhood I now live in.**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>56</td>
<td></td>
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</table>

**My neighbors notice when I am doing a good job and let me know.**

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>57</td>
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</tbody>
</table>

**I like my neighborhood.**

<p>| | |</p>
<table>
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<th></th>
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<tbody>
<tr>
<td>58</td>
<td></td>
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</tbody>
</table>

**There are lots of adults in my neighborhood I could talk to about something important.**

<p>| | |</p>
<table>
<thead>
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</thead>
<tbody>
<tr>
<td>59</td>
<td></td>
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</tbody>
</table>

**There are people in my neighborhood who are proud of me when I do something well.**

<p>| | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>60</td>
<td></td>
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</table>

**I feel safe in my neighborhood.**

<p>| | |</p>
<table>
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<tr>
<th></th>
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<tbody>
<tr>
<td>61</td>
<td></td>
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</table>

**I’d like to get out of my neighborhood.**

<p>| | |</p>
<table>
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<tbody>
<tr>
<td>62</td>
<td></td>
</tr>
</tbody>
</table>

**There are people in my neighborhood who encourage me to do my best.**

<p>| | |</p>
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<th></th>
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</thead>
<tbody>
<tr>
<td>63</td>
<td></td>
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</tbody>
</table>

**How much do each of the following statements describe your neighborhood:**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>64</td>
<td>Crime and/or drug selling.</td>
</tr>
<tr>
<td>65</td>
<td>Fights.</td>
</tr>
<tr>
<td>66</td>
<td>Lots of empty or abandoned buildings.</td>
</tr>
<tr>
<td>67</td>
<td>Lots of graffiti.</td>
</tr>
</tbody>
</table>

Please continue to next page
Form B

Student ID

What are the chances you would be seen as cool if you:

95) Smoked cigarettes?
96) Carried a handgun?

97) I like to see how much I can get away with.
   Very false  Somewhat false  Somewhat true  Very true

98) It is all right to beat up people if they start the fight.
   NO!  no  yes  YES!

How many times have you done the following things?

99) Done what feels good no matter what.
   Never  
   I’ve done it, but not in the past year  
   Less than once a month  
   About once a month  
   2 or 3 times a month  
   Once a week or more  

100) You are visiting another part of town and you don’t know any
    of the people your age there. You are walking down the street,
    and some teenager you don’t know is walking toward you. He
    is about your size, and as he is about to pass you, he deliberately
    bumps into you and you almost lose your balance. What would
    you say or do?
    Push the person back  
    Say “Excuse me” and keep on walking  
    Say “Watch where you’re going” and keep on walking  
    Swear (curse) at the person and walk away  

How wrong do you think it is for someone your age to:

101) Pick a fight with someone?
102) Drink beer, wine or hard liquor
    (for example, vodka, whiskey or gin) regularly?
103) Use LCD, cocaine, amphetamines
    or other illegal drug?

How wrong do your parents feel it would be for you to:

104) Smoke cigarettes?
105) Draw graffiti, or write things or
draw pictures on buildings or other
property (without the owner’s permission)?

Have any of your brothers or sisters ever:

106) Smoked marijuana?
107) Been suspended or expelled
    from school?

108) We argue about the same things in
    my family over and over.  
109) My family has clear rules about
    alcohol and drug use.  
110) If you carried a handgun without
    your parents’ permission, would you
    be caught by your parents?
111) Do you share your thoughts and
    feelings with your mother?
112) Do you share your thoughts and
    feelings with your father?
113) Would your parents know if you did
    not come home on time?

How much do you think people risk harming themselves
(physically or in other ways) if they:

114) Smoke marijuana regularly?
    No risk  
    Slight risk  
    Moderate risk  
    Great risk  

115) How often do your parents tell you they’re proud of you for
    something you’ve done?
    Never or almost never  
    Sometimes  
    Often  
    All the time
This survey is voluntary. That means you do not have to take it. If you choose to take it, you may skip any question you don’t want to answer.

Thank you for agreeing to participate in this survey. The survey asks your opinion about a number of things in your life, including your friends, your family, your neighborhood and your community. Your answers to these questions will be confidential. That means no one will know your answers. To help us keep your answers secret, please do not write your name on this survey form.

1. This is not a test. There are no right or wrong answers.
2. If you don’t find an answer that fits exactly, use one that comes closest. If any question does not apply to you, or you are not sure what it means, just leave it blank.
3. Mark your answers clearly:
   • Completely fill in the circles.
   • If you change your mind about an answer that you have already marked, draw a line through or X over the incorrect answer and then either fill in the correct circle or write your new answer next to the fill-in box (depending on the format).
   • Make no other markings or comments on the answer pages.
4. Some of the questions have the following format:

   NO! no yes YES!

   Mark the Big “NO!” if you think the statement is definitely not true for you.
   Mark the little “no” if you think the statement is mostly not true for you.
   Mark the little “yes” if you think the statement is mostly true for you.
   Mark the Big “YES!” if you think the statement is definitely true for you.
13) During your life, on how many days have you had at least one drink of alcohol?
   0  1-2  3-9  10-19  20-39  40-99  100 or more
   O  O  O  O  O  O  O

14) During the past 30 days, on how many days did you have at least one drink of alcohol?
   0  1-2  3-5  6-9  10-19  20-29  All 30
   O  O  O  O  O  O  O

15) During your life, how many times have you used marijuana?
   0  1-2  3-9  10-19  20-39  40-99  100 or more
   O  O  O  O  O  O  O

16) During the past 30 days, how many times did you use marijuana?
   0  1-2  3-9  10-19  20-39  40 or more
   O  O  O  O  O  O  O

17) During the LAST FOUR WEEKS, how many whole days of school have you missed because you skipped or “cut”?
   None  1  2  3  4-5  6-10  11 or more
   O  O  O  O  O  O  O

18) In my school, students have lots of chances to help decide things like class activities and rules.
   O  O  O  O  O  O  O  O

19) Teachers ask me to work on special classroom projects.
   O  O  O  O  O  O  O  O

20) My teacher(s) notices when I am doing a good job and lets me know about it.
   O  O  O  O  O  O  O  O

21) There are lots of chances for students in my school to get involved in sports, clubs, and other school activities outside of class.
   O  O  O  O  O  O  O  O

22) There are lots of chances for students in my school to talk with a teacher one-on-one.
   O  O  O  O  O  O  O  O

23) I feel safe at my school.
   O  O  O  O  O  O  O  O

24) The school lets my parents know when I have done something well
   O  O  O  O  O  O  O  O

25) My teachers praise me when I work hard in school.
   O  O  O  O  O  O  O  O

26) I have lots of chances to be part of class discussions or activities.
   O  O  O  O  O  O  O  O

27) If a kid smoked marijuana in your neighborhood, would he or she be caught by the police?
   O  O  O  O  O  O  O  O

28) If a kid drank some beer, wine or hard liquor (for example, vodka, whiskey, or gin) in your neighborhood, would he or she be caught by the police?
   O  O  O  O  O  O  O  O

Please continue to next page
Below is a list of the ways you might have felt or acted. Please check how much you have felt this way during the past week.

*During the past week:*

29) I was bothered by things that usually don’t bother me. ○ ○ ○ ○ ○
30) I did not feel like eating, I wasn’t very hungry. ○ ○ ○ ○ ○
31) I wasn’t able to feel happy, even when my family or friends tried to help me feel better. ○ ○ ○ ○ ○
32) I felt like I was just as good as other kids. ○ ○ ○ ○ ○
33) I felt like I couldn’t pay attention to what I was doing. ○ ○ ○ ○ ○
34) I felt down and unhappy. ○ ○ ○ ○ ○
35) I felt like I was too tired to do things. ○ ○ ○ ○ ○
36) I felt like something good was going to happen. ○ ○ ○ ○ ○
37) I felt like things I did before didn’t work out right. ○ ○ ○ ○ ○
38) I felt scared. ○ ○ ○ ○ ○
39) I didn’t sleep as well as I usually sleep. ○ ○ ○ ○ ○
40) I was happy. ○ ○ ○ ○ ○
41) I was more quiet than usual. ○ ○ ○ ○ ○
42) I felt lonely, like I didn’t have any friends. ○ ○ ○ ○ ○
43) I felt like kids I know were not friendly or that they didn’t want to be with me. ○ ○ ○ ○ ○
44) I had a good time. ○ ○ ○ ○ ○
45) I felt like crying. ○ ○ ○ ○ ○
46) I felt sad. ○ ○ ○ ○ ○
47) I felt people didn’t like me. ○ ○ ○ ○ ○
48) It was hard to get started doing things. ○ ○ ○ ○ ○

*How wrong would most adults (over 21) in your neighborhood think it was for kids your age:*

<table>
<thead>
<tr>
<th>Very wrong</th>
<th>Wrong</th>
<th>A little bit wrong</th>
<th>Not wrong at all</th>
</tr>
</thead>
</table>
49) To use marijuana? ○ ○ ○ ○ ○
50) To drink alcohol? ○ ○ ○ ○ ○
51) To smoke cigarettes? ○ ○ ○ ○ ○

*About how many adults (over 21) have you known personally who in the past year have:*

52) Used marijuana, crack, cocaine, or other drugs? ○ ○
53) Sold or dealt drugs? ○ ○
54) Done other things that could get them in trouble with the police, like stealing, selling stolen goods, mugging or assaulting others, etc.? ○ ○
55) Gotten drunk or high?

66) If I had to move, I would miss the neighborhood I now live in. ○ ○ ○ ○ ○
57) My neighbors notice when I am doing a good job and let me know. ○ ○ ○ ○ ○
58) I like my neighborhood. ○ ○ ○ ○ ○
59) There are lots of adults in my neighborhood I could talk to about something important. ○ ○ ○ ○ ○
60) There are people in my neighborhood who are proud of me when I do something well. ○ ○ ○ ○ ○
61) I feel safe in my neighborhood. ○ ○ ○ ○ ○
62) I’d like to get out of my neighborhood. ○ ○ ○ ○ ○
63) There are people in my neighborhood who encourage me to do my best. ○ ○ ○ ○ ○

*How much do each of the following statements describe your neighborhood:*

64) Crime and/or drug selling. ○ ○ ○ ○ ○
65) Fights. ○ ○ ○ ○ ○
66) Lots of empty or abandoned buildings. ○ ○ ○ ○ ○
67) Lots of graffiti. ○ ○ ○ ○ ○

Please continue to next page
How many times have you done the following things?
96) Done something dangerous because someone dared you to do it.
   Never ○
   I’ve done it, but not in the past year ○
   Less than once a month ○
   About once a month ○
   2 or 3 times a month ○
   Once a week or more ○

How much do you think people risk harming themselves (physically or in other ways) if they:
97) Smoke one or more packs of cigarettes per day?
   No risk ○
   Slight risk ○
   Moderate risk ○
   Great risk ○

98) Take one or two drinks of an alcoholic beverage (beer, wine, liquor) nearly every day?
   No risk ○
   Slight risk ○
   Moderate risk ○
   Great risk ○

99) You’re looking at CDs in a music store with a friend. You look up and see her slip a CD under her coat. She smiles and says, “Which one do you want? Go ahead, take it while nobody’s around.” There is nobody in sight, no employees and no other customers. What would you do now?
   Ignore her ○
   Grab a CD and leave the store ○
   Tell her to put the CD back ○
   Act like it’s a joke, and ask her to put the CD back ○

100) You are at a party at someone’s house, and one of your friends offers you a drink containing alcohol. What would you say or do?
   Drink it ○
   Tell your friend “No thanks, I don’t drink” and suggest that you and your friend go and do something else ○
   Just say “No, thanks” and walk away ○
   Make up a good excuse, tell your friend you had something else to do, and leave ○

How wrong do you think it is for someone your age to:
101) Take a handgun to school?
    Very wrong ○
    Wrong ○
    A little bit wrong ○
    Not wrong at all ○

102) Attack someone with the idea of seriously hurting them?
    Very wrong ○
    Wrong ○
    A little bit wrong ○
    Not wrong at all ○

103) Smoke cigarettes?
    Very wrong ○
    Wrong ○
    A little bit wrong ○
    Not wrong at all ○

How wrong do your parents feel it would be for you to:
104) Smoke marijuana?
    Very wrong ○
    Wrong ○
    A little bit wrong ○
    Not wrong at all ○

105) Pick a fight with someone?
    Very wrong ○
    Wrong ○
    A little bit wrong ○
    Not wrong at all ○

What are the chances you would be seen as cool if you:
106) Began drinking alcoholic beverages regularly, that is, at least once or twice a month?
   No or very little chance ○
   Little chance ○
   Some chance ○
   Pretty good chance ○
   Very good chance ○

NO! no yes YES!
107) People in my family often insult or yell at each other.
    ○ ○ ○ ○

108) When I am not at home, one of my parents knows where I am and who I am with.
    ○ ○ ○ ○

109) If you drank some beer or wine or liquor (for example, vodka, whiskey, or gin) without your parents’ permission, would you be caught by your parents?
   No ○
   Yes ○

110) Do you enjoy spending time with your mother?
    ○ ○ ○ ○

111) Do you enjoy spending time with your father?
    ○ ○ ○ ○

112) If I had a personal problem I could ask my mom or dad for help.
    ○ ○ ○ ○

113) My parents ask if I’ve gotten my homework done.
    ○ ○ ○ ○

114) Has anyone in your family ever had a severe alcohol or drug problem?
    No ○
    Yes ○

Have any of your brothers or sisters ever:
115) Smoked cigarettes?
    No ○
    Yes ○
    I don’t have any brothers or sisters ○
This survey is voluntary. That means you do not have to take it. If you choose to take it, you may skip any question you don’t want to answer.

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4. Some of the questions have the following format:

   NO! no yes YES!

   Mark the Big “NO!” if you think the statement is definitely not true for you.
   Mark the little “no” if you think the statement is mostly not true for you.
   Mark the little “yes” if you think the statement is mostly true for you.
   Mark the Big “YES!” if you think the statement is definitely true for you.
1) How old are you?  

2) What is your sex?  ○ Male  ○ Female

3) What is the name of your school?  ○ Armstrong  ○ Hugenot  ○ John Marshall

4) Who do you live with?  ○ Mother and Father  ○ Grandmother and/or Grandfather  ○ Mother only  ○ Relatives  ○ Father only  ○ Non-relatives

5) Putting them all together what were your grades like last year?  ○ Mostly F’s  ○ Mostly B’s  ○ Mostly D’s  ○ Mostly A’s  ○ Mostly C’s

6) How do you describe yourself?  (You may select one or more responses.)  ○ American Indian or Alaska Native  ○ Asian  ○ Black or African American  ○ Hispanic or Latino  ○ Native Hawaiian or Other Pacific Islander  ○ White

7) What is the name of the neighborhood that you live in?  

8) How interesting are most of your courses to you?  ○ Very interesting and stimulating  ○ Slightly dull  ○ Quite interesting  ○ Very dull  ○ Fairly interesting

9) How often do you feel that the schoolwork you are assigned is meaningful and important?  ○ Never  ○ Seldom  ○ Sometimes  ○ Often  ○ Almost Always

Now, thinking back over the past year in school, how often did you:

10) Try to do your best work in school?  ○ Never  ○ Seldom  ○ Sometimes  ○ Often  ○ Almost Always

11) You’re looking at CDs in a music store with a friend. You look up and see her slip a CD under her coat. She smiles and says, “Which one do you want? Go ahead, take it while nobody’s around.” There is nobody in sight, no employees and no other customers. What would you do now?  ○ Ignore her  ○ Grab a CD and leave the store  ○ Tell her to put the CD back  ○ Act like it’s a joke, and ask her to put the CD back

12) You are visiting another part of town and you don’t know any of the people your age there. You are walking down the street, and some teenager you don’t know is walking toward you. He is about your size, and as he is about to pass you, he deliberately bumps into you and you almost lose your balance. What would you say or do?  ○ Push the person back  ○ Say “Excuse me” and keep on walking  ○ Say “Watch where you’re going” and keep on walking  ○ Swear (curse) at the person and walk away

13) It’s 8:00 on a weeknight and you are about to go over to a friend’s home when your mother asks you where you are going. You say, “Oh, just going to go hang out with some friends.” She says, “NO, you’ll just get into trouble if you go out. Stay home tonight.” What would you do now?  ○ Leave the house anyway.  ○ Explain what you are going to do with your friends, tell her when you’d get home, and ask if you can go out.  ○ Not say anything and start watching TV.  ○ Get into an argument with her.

These questions ask about the neighborhood and community where you live.

14) If you wanted to get some beer, wine, or hard liquor (for example, vodka, whiskey, or gin), how easy would it be for you to get some?  ○ Very hard  ○ Sort of hard  ○ Sort of easy  ○ Very easy

15) If you wanted to get some cigarettes, how easy would it be for you to get some?  ○ Very hard  ○ Sort of hard  ○ Sort of easy  ○ Very easy

16) If you wanted to get a drug like cocaine, LSD, or amphetamines, how easy would it be for you to get some?  ○ Very hard  ○ Sort of hard  ○ Sort of easy  ○ Very easy

17) If you wanted to get some marijuana, how easy would it be for you to get some?  ○ Very hard  ○ Sort of hard  ○ Sort of easy  ○ Very easy

18) If you wanted to get a handgun, how easy would it be for you to get one?  ○ Very hard  ○ Sort of hard  ○ Sort of easy  ○ Very easy

Please continue to next page
Form P

How wrong would most adults (over 21) in your neighborhood think it was for kids your age:

19) To use marijuana?  
20) To drink alcohol?  
21) To smoke cigarettes?

22) If a kid drank some beer, wine or hard liquor (for example, vodka, whiskey, or gin) in your neighborhood, would he or she be caught by the police?
23) If a kid carried a handgun in your neighborhood, would he or she be caught by the police?
24) If a kid smoked marijuana in your neighborhood, would he or she be caught by the police?
25) If I had to move, I would miss the neighborhood I now live in.
26) My neighbors notice when I am doing a good job and let me know.
27) I like my neighborhood.
28) There are lots of adults in my neighborhood I could talk to about something important.
29) There are people in my neighborhood who are proud of me when I do something well.
30) I feel safe in my neighborhood.
31) I'd like to get out of my neighborhood.
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37) In my school, students have lots of chances to help decide things like class activities and rules.
38) Teachers ask me to work on special classroom projects.
39) My teacher(s) notices when I am doing a good job and lets me know about it.
40) There are lots of chances for students in my school to get involved in sports, clubs, and other school activities outside of class.
41) There are lots of chances for students in my school to talk with a teacher one-on-one.
42) I feel safe at my school.
43) The school lets my parents know when I have done something well.
44) My teachers praise me when I work hard in school.
45) I have lots of chances to be part of class discussions or activities.

What are the chances you would be seen as cool if you:

46) Smoked marijuana?
47) Smoked cigarettes?
48) Carried a handgun?
49) Began drinking alcoholic beverages regularly, that is, at least once or twice a month?

How much do each of the following statements describe your neighborhood:

33) Crime and/or drug selling.
34) Fights.
35) Lots of empty or abandoned buildings.
36) Lots of graffiti.
Vita

Tamika DeLaine Gilreath

Tamika D. Gilreath received her bachelor’s degree in Interdisciplinary Science from Virginia Commonwealth University. She received her master’s degree in General Psychology from Virginia State University. Currently, she is a doctoral candidate in Biobehavioral Health with a minor in Applied Statistics and a Kligman Graduate Fellow in the College of Health and Human Development. Ms. Gilreath has worked on several projects related to substance use including biomedical studies of smoking patterns, serving as a mentor for at risk African American adolescent females, and performing secondary data analyses of socio-demographic correlates of smoking among African Americans. Her primary interests include research on health disparities and substance use and mental health of adolescent African Americans, as well as international tobacco consumption among adolescents in sub-Saharan Africa.

With regard to international tobacco consumption and substance use among African Americans, Ms. Gilreath has co-authored several peer-reviewed articles, an encyclopedia chapter, and presented at several national conferences on these topics. Ms. Gilreath has collaborated internationally with colleagues from France, South Africa, and Tanzania. She most recently participated as a training fellow in the PSU-Minority Health International Research Training program where she worked on several projects focused on adolescent substance use in South Africa and Tanzania while visiting the Muhimbili University in Dar es Salaam, Tanzania and INSERM in Paris, France. She will begin a postdoctoral fellowship position at The Consultation Center in the Division of Prevention and Community Research of the Department of Psychiatry at Yale University School of Medicine in August 2007.