2010

Gender Differences in Risk Behaviors of Adolescents Enrolled in an Inner City Charter High School

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Gender Differences in Risk Behaviors of Adolescents Enrolled in an Inner City Charter High School

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July 2010
Acknowledgements

Special thanks to my Committee Chair, Dr. Sharon Sherlock, for hosting this research project and guiding, advising, and supporting me throughout the entire process. Thanks to Dr. Christina Redko and Dr. James Ebert for their advice and expertise. Thanks to Ciandra D’souza for her moral support and to Dr. Bill Spears for his generous help with my data. This has been a learning experience. Thanks everyone for your help and patience.
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Abstract

Adolescents engage in health risk behaviors (Grunbaum, 2001). Persons engaging in high-risk behaviors during adolescence have disproportionately poor health as adults (Grunbaum et al., 2003; Resnick et al., 1997). Adolescents comprise a target group for health promotion and education programs to establish healthy lifestyle choices that transcend into adulthood. The purpose of this descriptive research study was to identify, analyze, and compare the health interests and health risk behaviors between male and female inner city, adolescent, charter high school students. The study served as a needs assessment before a health promotion and education program was implemented into the high school. This random sample study was conducted at an inner city charter high school with approximately 350 students aged 15 to 22. The American Medical Association’s Guidelines for Adolescent Preventive Services questionnaire was modified and converted to a web-based survey. Frequencies were calculated and chi square tests were done for significance. Males and females shared the same top three health interests of anger/temper, stress, and future plans. Males engaged in more health risk behaviors involving weapons and violence, tobacco, alcohol, and drugs. Females reported increased health risk behaviors involving diet and physical activity, family, sexual activity, and mental health and emotions. Local research studies are important to make an impact and change at a local level. Public Health departments along with school systems have the opportunity to develop health promotion and education programs that foster prevention and healthy lifestyle habits for adolescents, especially at risk youth.
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**Introduction**

Teenage adolescents are at a crossroads with their health. Emerging social experiences and identity development entice them to question adult values and partake in health risk behaviors (American Medical Association, 1997; Hensley-Quinn, 2008). A literature review showed most adolescents engage in at least three or four types of risk taking behavior (Grunbaum, 2001). These behaviors increase with age and tend to begin earlier than the previous generations. Health risk behaviors are determined by individual influences, especially through social contexts, such as family, friends, and school (Grunbaum et al. 2003; Resnick et al., 1997). Such health risk behaviors include unprotected sex, alcohol, drug, or tobacco use, and both intentional and unintentional injuries (Gans Epner, 1998).

Health risk behaviors can result in both acute and chronic health consequences (American Medical Association, 1997). Research shows persons engaging in high-risk behaviors during adolescence have disproportionately poor health as adults (Grunbaum et al., 2003; Resnick et al., 1997). Adolescents, therefore, comprise a target group for health promotion and education programs to establish healthy attitudes and lifestyle choices that can transcend into adulthood. These programs show promise in reducing not only adolescent morbidity and mortality, but also premature adult mortality (Montalto, 1998; Hensley-Quinn, 2008).

**Purpose**

The purpose of this descriptive research study is to analyze, assess, and prioritize the health needs of inner city, adolescent, charter high school students by identifying their health-risk behaviors and health concerns before implementing a health promotion and education
program within the school. The research will focus on identifying frequency of differences between male and female risk behaviors and the differences in their top ten health concerns.

Health risk behaviors identified by the Guidelines for Adolescent Preventive Services questionnaire include these variables: physical activity and diet, friends and family, weapons, violence, and safety, tobacco, alcohol, drugs, sexual activity and development, and mental health and emotions.

Health risk behaviors are any actions that can potentially produce negative consequences on an individual’s health (Aklin, 2003). At risk students in urban settings tend to have a greater relationship with risky behavior (Grunbaum, 2001). With the prevalence of chronic diseases and rising costs of health care, prevention is a key element in health practice and concern for public health. This research study will give school administrators and healthcare providers in the community information to strategically plan for effective health and safety programs. The goal of these programs is to educate, develop, and maintain healthy lifestyle habits that will improve the health of this adolescent population now and in the future.

Research Questions

1. What are the differences in the top health concerns between male and female students in an inner-city charter high school?

2. What are the differences between the health risk behaviors of male and female adolescent students at an inner-city charter high school?

3. Do adolescent males engage in more health risk behaviors than adolescent females?

4. What are the most prevalent health risk behaviors among male students?
5. What are the most prevalent health risk behaviors among female students?

Literature Review

The Centers for Disease Control and Prevention (CDC) have established multiple initiatives to impact and monitor adolescent health status. The National Initiative to Improve Adolescent Health stemmed from the Healthy People 2010 indicators and initiatives developed by the CDC to highlight priority health issues facing the nation’s youth. These include tobacco use, substance abuse, responsible sexual behavior, mental health, injury, violence, and prevention of adult chronic diseases (CDC, 2009). Additionally, the CDC conducts a national, state, and local survey, the Youth Risk Behavior Survey (YRBS) to monitor the health risk behaviors and prevalence of obesity in high school adolescents. The data was also used to monitor the trends of adolescent risk behaviors and impact public policy (CDC, 2008).

Adolescent Population

Adolescents are a unique population that need more attention in the health care field. They are least likely to have access to health care (Klein, 1998), more likely to be uninsured than younger children (Hensley-Quinn, 2008), and are often overlooked in health care policy debates (Klein, 1998). Hispanic adolescents were two to three times more likely to be uninsured than the general population (OJFS, 2008). Approximately 23% of poor adolescents lack health insurance (Hensley-Quinn, 2008). The majority of uninsured Ohio children, however, fall within the income eligibility requirements for Medicaid and State Children Health Insurance Program (SCHIP) (OJFS, 2008).
It has been shown that nonmainstream students, such as in alternative and charter schools, are at increased risk for certain health risk behaviors (Connor, 2004; Grunbaum, 2001). This is due to the type of students that enroll in nonmainstream high schools. For example, students may have poor role models and come from families of low socioeconomic status. These students experienced low attendance or passing rates, have previously dropped out, or are at their last resort before jail (Grunbaum, 2001). These characteristics increase the risk pool of adolescents that are in poor health or engage in a greater number of health risk behaviors.

Nonmainstream high schools also possessed, on average, older students, increased numbers of black students, and decreased number of white students.

National data is important to obtain and use as a comparison with local studies to assess how they compare with other adolescents within the nation. Local data is vital to prioritize local health behaviors and the most important for change at both a local and state level. While intermittent local studies reported significant differences between nonmainstream high schools and regular high schools, no national data was available (Grunbaum, 2001). For that reason, the CDC conducted the National Alternative High School Youth Risk Behavior Survey in 1998 in addition to their annual YRBS. When compared to the 1997 YRBS, results displayed significantly greater risk in nonmainstream high school students in almost all areas.

**Obesity/Physical Activity/Nutrition**

Obesity is a growing epidemic in the United States for all age groups. The prevalence of obesity among adolescents has increased considerably in the past twenty years, especially among minority groups (Jaser, 2009; Rogers, 2009; Hill, 1998). In the 2007 YRBS, 13% of United
States students were obese (95th percentile for BMI). Additional studies discovered approximately 17% of adolescents were obese (Jaser, 2009; Rogers, 2009) compared to 5% in the 1970s. A 1998 study found that between 11 and 25% of adolescents were considered overweight (Hill, 1998). Among minorities, roughly 18% of black and Hispanic males were obese compared to 28% of black females and 15% of Hispanic females (Jaser, 2009).

Obesity is related to many chronic health conditions, including diabetes and cardiovascular disease (Hill, 1998). This is an enormous challenge in our health care system. Lifestyle determines 50% of one’s health. Therefore, a majority of the leading causes of morbidity and mortality in the United States are highly preventable. Study results found over 65% did not achieve the recommended level of physical activity of at least one hour per day (CDC, 2008). Boys were found to engage in more minutes of physical activity than females (Sanchez, 2007). In the 2007 YRBS, approximately 35% of surveyed students watched three or more hours of television per day, compared to 32% of Ohio students surveyed (CDC, 2008). However, this does not take into account time spent on the computer or playing video games. Another survey found 43% of adolescents watched more than 2 hours of television per day (Sanchez, 2007). Surprisingly, only 34% of U.S. students surveyed and 30% of Ohio students surveyed drank at least one soda or pop per day. Almost 80% of U.S. students and approximately 85% of Ohio students did not meet the five servings of fruits and vegetables recommendation (CDC, 2008).

Nonmainstream high school students were significantly less likely to diet or exercise to lose weight than regular high school students (Grunbaum, 2001). They were also less likely to
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engage in physical activity than regular high school students at 48% and 64%, respectively. Both regular high school students and nonmainstream high school students consumed less than five servings of fruits and vegetables per day (71%).

As expected, female adolescents were more likely to perceive themselves as overweight and engage in dieting (almost half) and disordered eating (13%) than male adolescents (Neumark-Sztainer, 2000). Low self-esteem has been linked to increased health risk behaviors (Connor, 2004). Some suggest body image plays a major role in self-esteem, especially concerning female adolescents. This could help explain the reported lower self-esteem and dietary habits of female adolescents.

The Barbara Bush Children’s Hospital Kids CO-OP developed the 5-2-1-0 Goes to School project to increase physical activity and healthy eating in children (Rogers, 2009). The 5-2-1-0 mnemonic represents eating five servings of fruits and vegetables per day, limiting screen time to two hours per day, participating in at least one hour of physical activity per day, and drinking zero sugary beverages, such as soda pop, per day. Project kits were implemented into surrounding school districts and found to be an easy, cost effective, and fun way to not only raise awareness about healthier lifestyle habits, but also employ them. The study showed one third of the parents and many students made changes to their lifestyles. Unfortunately, only half of the teachers sent handouts in the kit home to parents and utilized the kit in the classroom.
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Weapons, Violence, Safety

Motor-vehicle accidents, other unintentional injuries, homicide, and suicide account for 72% of all deaths among 10-24 year olds in the United States (CDC, 2009). Data from the 2007 YRBS suggest many high school students engage in behaviors that increase their chances of mortality or morbidity from these causes. Approximately, 11% of U.S. students had never or rarely worn a seatbelt when riding in a car, and almost 30% rode in a vehicle driven by someone who had been drinking alcohol. As safety is concerned, 18% had carried a weapon, while 5.5% skipped school because they felt unsafe. Ohio students who responded to this survey were at equal or slightly less risk for each of these health risk behaviors.

Ethnic disparities play a role in adolescent health risk behaviors. Minority groups tend to show increased health risk behaviors compared to whites (Park, 2008). For example, data from the 1997-2003 YRBS showed the presence of risk behaviors like “feeling unsafe at school” and “violence at school” were threefold higher in urban American Indian and Alaskan Natives than urban white adolescents. Furthermore, students in nonmainstream high schools demonstrated approximately double the prevalence in weapon possession (34% to 18%) and fighting (62% to 37%) than students in regular high schools (Grunbaum, 2001).

Alcohol

In the 2007 YRBS, approximately 75% of adolescent students had ever drunk alcohol (CDC, 2008). Around 45% had at least one alcoholic drink in the past month, while 26% engaged in binge drinking at least one time in the past month. Ohio students were at equal risk for each of these behaviors at 76, 46, and 29% respectively. A study using the Guidelines for Adolescent
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Preventive Services found friends drinking alcohol (29%) as one of the six most prevalent health risk factors of rural older adolescents (Gadomski, 2003). Another study showed male adolescents were more likely to report driving after drinking alcohol and binge drinking compared to females (Grunbaum, 2001).

Students in nonmainstream high schools were significantly more likely to have drunk alcohol (65% vs. 51%) and engaged in binge drinking (52% vs. 33%) than students in regular high schools (Grunbaum, 2001). High feelings of hopelessness increased the number of low income, inner city, adolescents who consumed alcohol and got drunk off of alcohol by three and four times respectively (Bolland, 2003). This study also shows a higher odds ratio for drinking alcohol in male inner city adolescents than female inner city adolescents with high levels of hopelessness.

Tobacco

In the 2007 YRBS, about half of adolescent students reported ever using tobacco in the form of cigarettes, while about 20% currently smoked tobacco cigarettes within the past 30 days (CDC, 2008). Only 8% used smokeless tobacco within the past month. Ohio students displayed slightly elevated numbers for each of these behaviors, but were found to be at equal risk to all U.S. students. Male adolescent students were more likely to use smokeless tobacco than female students were in another study comparing nonmainstream high school students and regular high school students (Grunbaum, 2001). In addition, tobacco use was found to be twice as likely in nonmainstream high school students as regular high school students.
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In a study looking at health risk factors from the GAPS questionnaire, friends using tobacco (39%) and household tobacco use (28%) ranked in the top six most prevalent factors among adolescents (Gadomski, 2003). Both male and female adolescents who experienced high levels of hopelessness were 2.5 times more likely to use tobacco than those with lower levels of hopelessness (Bolland, 2003).

Drugs

In the 2003 study using GAPS in a clinical setting by Gadomski, the GAPS questionnaire showed friends using marijuana as one of the six most prevalent risk factors reported by adolescent students at 22%. According to the 2007 YRBS, approximately 38% of U.S. adolescent students had ever used marijuana compared to roughly 34% of Ohio adolescent students (CDC, 2008). An alarming 25% of U.S. students had ever used cocaine (7%), methamphetamines (4%) or inhalants (13%) with Ohio students again at equal risk for these health risk behaviors. No adolescents reported using steroids in the Gadomski study.

Another study found marijuana use was twice as likely in nonmainstream high schools compared to regular high schools while cocaine use was five times more likely (16% to 3% in nonmainstream and regular high schools respectively) (Grunbaum, 2001). High feelings of hopelessness among adolescent students increased marijuana use and cocaine use greatly with a 2.9 and 6.3 odds ratio respectively (Bolland, 2003). More alarming results found illicit drug use twofold higher among American Indian and Alaskan Natives (Park, 2008). These results demonstrate the dire need for health promotion and educational programs among at risk, disadvantaged, and minority youth.
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Sexual Activity and Development

According to a GAPS questionnaire study, 36% of adolescents reported having friends whom have had sex, ranking among the six most prevalent health risk factors reported in a clinical setting (Gadomski, 2003). The least reported risk factors were having a sexually transmitted disease, sexual, physical, or emotional abuse, and attraction to the same sex with each one representing 2% or less of adolescents. The 2007 YRBS discovered around 48% of United States adolescent students and equally 45% of Ohio adolescent students had sexual intercourse. Approximately 35% of U.S. and Ohio students were currently sexually active, while 39% of U.S. and Ohio adolescent students did not use a condom the last time they had intercourse (CDC, 2008). A longitudinal study, mostly looking at adolescent white males, found the frequency of sexual intercourse and number of partners increasing while condom use decreased (Stevenson, 2007). When surveyed, adolescents were surprisingly least likely to know a source of health care for reproductive health and rarely sought this type of care from a primary care provider (Klein, 1998).

Further results showed 86% of nonmainstream high school students had sexual intercourse compared to 48% of regular high school students (Grunbaum, 2001). Condom use at last sexual intercourse, on the other hand, was about the same for each group (50%). Health disparities were present between races showing sexual behaviors, pregnancy, and experiences of assault or rape twofold higher with American Indian and Alaskan Natives than in their white counterparts (Parks, 2008). The odds ratio for having a child was much higher for males compared to females in a study concerning hopelessness among inner city adolescents.
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(Bolland, 2003). Both males and females feeling high levels of hopelessness were more likely to engage in sexual activity and have a child than those with lower feelings of hopelessness.

Mental Health and Emotions

The need for adolescent mental health care is present. Yet, surveyed adolescents were least likely to know where to find mental health care, which is often sought outside of the primary care setting (Klein, 1998). In the 2007 YRBS, approximately 14% of both U.S. and Ohio adolescent students surveyed had considered attempting suicide, while about seven percent actually attempted suicide during the past year (CDC, 2008). Another study found nonmainstream high school students had higher attempted suicide rates (18% to 8%) than regular high school students (Grunbaum, 2001). Additional disparities exist between inner city American Indian and Alaskan Native youth and their white counterparts (Park, 2008). These minority youth reported suicidal behaviors threefold higher than their white counterparts.

One study looked at the effects of depression on healthy lifestyle choices and attitudes of inner city youth at risk for type 2 diabetes mellitus (Jaser, 2009). Significant levels of depressive symptoms were present in roughly 21% of the sample population with Hispanic youth reporting higher levels of symptoms than similar black youth. Depressive symptoms were correlated with less physical activity, self-efficacy in diet choices, and higher BMIs. This shows the importance of addressing and treating depression in adolescents. However, the study does not conclude whether higher BMIs and diet choices influence depressive symptoms.

As mentioned already in this paper, self-esteem can play a role in the health risk behaviors of adolescents (Connor, 2004). Self-esteem can influence how youth respond to
stressful life events and feelings of depression, hopelessness, and suicide. It is shaped by multiple factors, including academic ability, social acceptance, body image, environment, media, socioeconomic status, age, and ethnicity. Nonmainstream students were at increased risk for suicide attempts compared to mainstream students (Grunbaum, 2001). Despite nonmainstream high school’s programs association with increases in self-esteem (Connor, 2004), students of nonmainstream high schools were shown to have low self-esteem (Dugger, 1998).

A study looked at the health and well-being of students from schools who have comprehensively embraced the World Health Organizations (WHO) Health Promoting School (HPS) programs by receiving the Healthy School Award (Lee, 2006). They found students from these schools had increased life satisfaction scores, decreased self-harming behaviors, and decreased feelings of hopelessness and sadness compared to those from schools who did not receive the award.

Gender Differences

A sizeable amount of research has illustrated greater reported risk behavior in male adolescents as opposed to female adolescents across most areas (Aklin, 2003). A Balloon Analogue Risk Task (BART) is a tool that analyzes risk taking through a computer game. Validity of this tool as a propensity measure for risk taking has been tested, and results have shown greater risk taking behavior among males (Aklin, 2003). However, in one BART analysis there was no gender differences in risk variables tested. A 2006 study looking at health differences in efficient Health Promoting Schools showed no gender differences in adolescents (Lee, 2006). In
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A high poverty, inner city population of adolescents, nearly half of males had moderate to severe feelings of hopelessness compared to a quarter of females (Bolland, 2003). They were also more likely to engage in more extreme behavior compared to females in areas like drinking alcohol, getting high, and having a child.

When health risk behaviors were assessed using the American Medical Association’s (AMA) GAPS questionnaire in a medical/clinical setting, females reported more total number of risk behaviors and health concerns than males (Gadomski, 2003). This goes against the majority of the research stating that health risk behaviors are more prevalent in males. This could be due to the medical/clinical setting or the perceptions of health risk behaviors differing between males and females.

Religion

Few studies have looked at gender differences regarding the relationship between youth risk behaviors and religiosity (Sinha, 2007). In one study, religious involvement was measured by adolescents’ response to the importance of religion in their lives, parents’ response to child attendance at religious worship, and involvement in organized religious programs. Results from this study demonstrated adolescents perceived religion as important and were active in religious worship and activities. They also explained behaviors like tobacco, alcohol, and marijuana use, sexual activity, and depression decreased with religious involvement when controlling for family background variables and self-esteem. However, one exception exists between religious importance and sexual activity, where there is a positive correlation. Black males and females showed the highest rates of this association and activity at
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38% and 28% respectively. This could be due to ethnic differences in religion and sex or the intimacy and love aspects of both.

The GAPS

The AMA developed the GAPS theory and questionnaire to inform adolescent health care and health issues by potentially reducing adolescent morbidity and mortality (Montalto, 1998). GAPS questionnaires are generally used in primary care practices to efficiently determine and address health risks and behaviors that affect adolescents coming into the office. GAPS also provide 24 recommendations for adolescent health and preventive care (American Medical Association, 1997; Montalto, 1998). The number of recommendations and various ways to implement them can pose a challenge to the physician (Montalto, 1998). However, identification of adolescent behaviors or concerns constitutes the focal point of appropriate intervention strategies. These strategies include counseling, education, self-help literature, follow up visits, or referrals.

A study done by Janet Gans Epner, Patricia Levenberg, and Michael Schoeny (1998) looked at primary care physicians’ responsiveness to reported health-risk behaviors of adolescent patients during preventive service visits. Physicians administered the GAPS questionnaire prior to the visit, while attempting to follow the GAPS recommendation model encompassing screening, guidance, physical examination, and immunizations. They found each adolescent reported an average of ten risk behaviors, of which only seven could be discussed. The severity of the risk behavior, number of biological health concerns, and patient gender significantly predicted physician responsiveness. The number of reported behaviors, visit
duration, physician gender, new patient status, and patient age were all determined unrelated to physician responsiveness. While physicians addressed the majority of adolescent risk-behaviors and concerns, improvements can still be made to increase physician responsiveness to risk behaviors.

School Programs

The doctor’s office is not the only place where adolescent health and wellness program initiatives are conducted to identify and decrease risky behavior. There is strong theoretical and evidence-based support for school connectedness and healthy youth development (Faulkner, 2009). School connectedness can be a protective factor against risky behaviors and mental health problems. In one study, odds of feeling disconnected were considerably higher for female students who perceived either their health or academic performance as poor. Academic administrators and health promotion advocates should consider increasing school connectedness because of its positive association with adolescent wellness and health. One way is to incorporate school-based interventions for healthy behaviors.

The primary source of substance use prevention among youth resides in schools (Ringwalt, 2002). They are less common in inner city schools and a large proportion of schools do not use the effective substance use prevention curricula available. Furthermore, no data is available describing school health programs and policies in nonmainstream high schools where risky behaviors are more prevalent (Grunbuam, 2001). Schools could implement programs addressing risk behaviors most prevalent in their population of students. Partnerships with
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community based programs or organizations designed for adolescents harbor the most potential for effective results.

Health Promoting Schools (HPS) programs, identified by the WHO, foster cost effective education with support from the community in adopting health improving behaviors and reducing health compromising behaviors (Lee, 2006). These programs when done right, showed decreases in poor dietary habits like fast food, proportion of overweight students, physical fights, self-harm, and depression. Extra effort to ensure the right programs and policies for healthy behaviors are in effect for all schools promises healthier outcomes.

Many adolescents identified school personnel as important and confidential resources for health and counseling needs, seeking information regarding HIV/AIDS and alcohol most (Klein, 1998). Nonetheless, several adolescents were unaware of where to find mental health, substance abuse, or reproductive services. No adolescents identified local health departments as a source of care. Therefore, schools have the unique opportunity to provide information on these services as well as implement health promotion and education programs to reduced risky behaviors (Grunbaum, 2001).

Summary

Adolescents of all races and demographics are engaging in health risk behaviors. These risk behaviors are more prevalent among minority groups, nonmainstream high school students, and in most areas, male adolescents. While the actual percentages for certain health risk behaviors vary between survey tools, such as the YRBS or GAPS, differences between groups (for instance, regular high school students and nonmainstream high school students) are
still present within these measures. For example, according to the GAPS questionnaire in a medical office, adolescents engaged in an average of ten health risk behaviors (Epner, 1998). Another survey with data from the YRBS found the average number of risk behaviors was three or four (Grunbaum, 2001).

There are few studies looking at nonmainstream high school adolescents, despite the increased prevalence of health risk behaviors among this population (Grunbaum, 2001). Schools are a focal place to teach kids healthy behaviors and act as a protective factor against health risk behaviors (Faulkner, 2009). Importantly, there are no studies that have looked at the health topics adolescents are interested in learning about. Finding not only the most prevalent health risk behaviors, but also the health interests of the students at a local level will foster the most effective and beneficial health promotion and education programs to improve adolescent health.

**Methods**

**Study Design**

This descriptive research study analyzed self-reported health risk behaviors and health interests of adolescent, inner city, students at a charter high school in Dayton, Ohio. A school-based survey was hosted online by Snap-Survey Incorporated. The Guidelines for Adolescent Preventive Services questionnaire, a standardized survey tool, was used and modified to incorporate up to date health behaviors, such as fruit and vegetable consumption. The outcome of this study was to compare male and female health interests and health risk behaviors among the students. Independent variables of the study included gender: male and female. Dependent
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variables included the health topics of interest to the students and health risk behaviors in the following categories: physical activity and diet, weapons, violence, and safety, tobacco, alcohol, drugs, sexual activity and development, and mental health and emotions. The overall goal of the study was to assess and prioritize the health needs of the students before a health promotion and education program was developed at the school.

Setting and Population

The study took place at Mound Street Academies, a charter high school in Dayton, Ohio. Dayton is an urban city in southwest Ohio with a population of approximately 156,771 in 2006 (US Census Bureau, 2006). The city of Dayton reported the highest concentration of poverty in Montgomery County (US Census Bureau, 2003). Ethnically, the Dayton population consists of 53% white and 43% African American (US Census Bureau, 2004). Comparatively, Montgomery County contains 21% African Americans and 76% white. The male/female ratio is almost equivalent at 52% female and 48% male (US Census Bureau, 2008). The total community student population for Dayton in 2004-2005 was approximately 6,374 students (Ziebarth, 2006) out of 22,739 students. Only 700 students were estimated in charter high schools, however (Dayton, 2004).

Sample

Surveys conducted at school were found to show a higher prevalence of risk behaviors than those conducted at home (Kann, Brener, Warren, Collins, & Giovino, 2002). The study sample was comprised of random volunteers from approximately 350 students at Mound Street Academies charter high school. The student population consists of around 57% females and
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43% males. The students’ ages ranged between 15 to 22 and were in the ninth through twelfth grades depending on their number of credits, not age. The high school is comprised of three academies: a health careers, IT, and military academy. Approximately 75% of the students at Mound Street Academies are African American, while 25% are white (Martin, 2006). Roughly, 76% of the students come from families at or below the federal poverty level, and one in three students is a parent to one or more children. All students were encouraged to participate in the study voluntarily and were able to opt out of the study at any time.

Instrument

The GAPS questionnaire is a standardized survey tool designed by the AMA to be used in doctors’ offices to assess the health risk behaviors of adolescent patients and discuss them during the visit. With AMA permission, a modified middle to older adolescent GAPS questionnaire was used to collect data concerning student demographics such as gender, age, grade, race, and religion. The questionnaire lists 36 health issues the students might be interested in learning more about and 54 questions regarding their health risk behaviors. The key variables for health risk behaviors include: physical activity and diet, friends and family, weapons, violence, and safety, tobacco, alcohol, and drug use, sexual behavior and development, emotions and mental health, and special circumstances like spending time in a homeless shelter, jail, or foster care setting.

The GAPS questionnaire was modified to include the 5-2-1-0 recommendation mnemonic for a healthy diet and exercise. This tracks the daily consumption of fruits, vegetables, and sugary beverages, along with physical activity and screen time per day. Religion
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was added in with the demographic questions at the beginning of the questionnaire, and additional responses such as “does not apply” or “don’t live at home” were inserted for more accurate results. Sexual, mental, or physical abuse by a girlfriend or boyfriend was added to look at the increasing prevalence of dating violence among youth.

Administration of the survey through computers was found to yield higher rates of risk behavior than pencil and paper or interview surveys (Creative Research Systems, 2003). To take advantage of this evidence, the GAPS questionnaire was hosted by the marketing company, Snap Survey, through the World Wide Web. This provided the participants greater anonymity in the study and utilized the students’ familiarity with computers. The online GAPS questionnaire was easy to administer and complete. It read at a seventh grade reading level and contained approximately four questions per page. On the first screen page of the survey were directions as well as reiteration of confidentiality. On each page was permission to drop out of the study at any point in time and a status bar to inform the students of their progress toward completion of the survey.

The YRBS from the CDC was not used in this study because of the short time frame of the study and length and complexity of the YRBS questions. The GAPS questionnaire has less questions and occupied less time from schoolwork than the YRBS. Additionally, the YRBS questions are answered on a scale as opposed to yes or no answers in the GAPS questionnaire. Most importantly, the researches wanted to know the health topics of interest to the students, which the GAPS questionnaire already encompassed.
Data Collection

An agreement was obtained by Mound Street Academies' school board, granting permission to conduct this study. A petition for research involving human subjects underwent expedited review and was approved by the Wright State University Institutional Review Board. Several meetings took place between the research investigators, superintendent, and school nurse to coordinate the survey administration, date, time, collection, consent forms, and result presentation at the high school.

An educational session for teachers took place a month before the study to discuss survey background, requirements for student eligibility, survey process, confidentiality, and ended with a question and answer period. A flyer placed around the school advertised the study to students a couple of weeks before the survey. Parent consent and student assent forms were mailed home to parents and students with their progress report cards a couple of weeks before the survey. All of the students were eligible to participate in the study granted they signed an assent form to participate and had a parent-signed consent form if under the age of 18. Teachers kept a list of students who were eligible to participate in the survey. The research investigators collected the consent and assent forms from the teachers the day of the survey. Those who did not partake in the study were directed to a web site of school activities.

The questionnaire was administered in the classrooms of Mound Street Academies charter high school in Dayton, Ohio on November 3, 2009. A link to the survey was placed on the school’s home computer page and tested for access prior to the date of the survey. Snap Survey opened access for the survey at an agreed upon time that morning and closed at the
end of the allotted time that afternoon. Students completed the questionnaire on their individual computer workspaces in their classrooms, out of view from other students. The survey took around ten minutes to complete. Snap Survey collected and returned the data via a SPSS file. All data was kept completely confidential with no identifiers and was only handled by approved investigators.

Statistical Analysis

Nominal measurements were used in this research study. Chi square tests were used to assess the association of gender to each health risk behavior. A $p$ value of 0.05 or less was used to determine statistical significance. For the 38 health topics, students were to check any of interest to them. Frequency of each topic was calculated for all students and again according to gender. The top ten health topics were chosen to display. Contingency tables were used to display all of the findings.

Results

Participation Rate

Of the approximately 350 students at the school, 73 students agreed to volunteer for the survey by returning the consent/assent forms. Only one participant did not complete the first part of the questionnaire regarding health issues of interest to them, but did complete the second part of the questionnaire regarding health risk behaviors. Seventy one of the student participants completed a majority of the questions. The participation rate was calculated as a ratio of the number of completed electronic surveys ($n=73$) to the number of potential participants ($n=350$). The student participation rate for this study was 21%. 

Gender Differences in Risk Behaviors of Adolescents Enrolled in an Inner City Charter High School

Sample Characteristics

Out of the student participants, approximately 61% were female and 37% were male. Two participants declined to answer. Figure 1 compares the age distribution among male and female participants. Overall, 64% of student participants were 18 years of age or older, a large percentage (40.5%) was 18 years of age. Male participants tended to be older than female participants. Figure 2 shows grade level distribution among male and female student participants. About 80% of student participants were in the eleventh and twelfth grades. The highest percent of male students was in the twelfth grade, while the highest percent of female students was in the eleventh grade.

English was the primary language among the student sample at 97.5%, while 11% replied Spanish was spoken in the home as well. Overall, 69.4% of the participants were African American, 21.9% were White, and 7% answered other ethnicities such as Hispanic and Native American. Figure 3 represents the distribution of race among the male and female participants. Almost 80% of female respondents were African American, while about 55% of males were African American. Conversely, more males reported being white at 30% compared to 18% of females. Other races such as Native American or Hispanic were only reported among male participants (15%). Christian was the majority response for religion with about 23% of students saying they were involved in religious activity. Females were more likely to report a religion (67% compared to 55%) and involvement in religious activity than males.
Health Issues of Interest

The first research question looked at the differences in health interests between male and female adolescent, inner city, charter high school students. Table 1 displays the top 10 health issues students would be interested in learning about by gender. Stress, anger/temper, and future plans/job ranked in the top three health issues for both male and female student participants, but not in the same order. Males and females had seven of the same health issues within their top 10, but again with different rankings. The only health issue that ranked the same for male and female participants was trouble sleeping at number nine.

Figure 1. Age comparison between male and female student participants
Gender Differences in Risk Behaviors of Adolescents Enrolled in an Inner City Charter High School

![Graph showing gender differences in risk behaviors by grade level.](image)

**Figure 2.** Grade level comparison between male and female student participants

![Graph showing distribution of race among male and female participants.](image)

**Figure 3.** Distribution of Race among male and female participants by percent
Table 1. List of the top 10 health issues of interest for male and female students

<table>
<thead>
<tr>
<th>Male Top 10</th>
<th>%</th>
<th>Female Top 10</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Anger/Temper</td>
<td>67</td>
<td>1. Future Plans/Job</td>
<td>63</td>
</tr>
<tr>
<td>2. Stress</td>
<td>67</td>
<td>2. Anger/Temper</td>
<td>61</td>
</tr>
<tr>
<td>4. Height/Weight</td>
<td>56</td>
<td>4. Sad/Crying a lot</td>
<td>47</td>
</tr>
<tr>
<td>5. Violence/Personal safety</td>
<td>52</td>
<td>5. Diet/Food/Appetite</td>
<td>44</td>
</tr>
<tr>
<td>7. Eyes/Vision</td>
<td>41</td>
<td>7. Height/Weight</td>
<td>42</td>
</tr>
<tr>
<td>8. Feeling tired a lot</td>
<td>41</td>
<td>8. HIV/AIDS</td>
<td>40</td>
</tr>
</tbody>
</table>

Health Risk Behaviors

Table 2 displays the percent of yes responses to the questions from the GAPS survey concerning physical activity and diet health risk behaviors. Both male and female participants engaged in at least one hour of physical activity per day with more males meeting this recommendation than females (93% males, 75% females). More males drank at least one sugary beverage per day (88.9% to 79.5%) than female participants. They also were more likely than females to spend more than three hours in front of a screen per day (85.2% to 61.4%). Screen time was the only health risk behavior found to be statistically significant using the chi square test, $\chi^2 (1, N=71) = 4.559$, $p = .03$. Males were slightly more likely than females to eat five servings of fruits and vegetables per day (14.8% to 13.6% respectively). Female participants were more likely to spend time thinking of ways to be thin, and much more likely to have taken diet pills, laxatives, vomit, or starve themselves than male participants. Around half of the students, both male and female, were satisfied with their eating habits.
A large percentage of both male and female participants had at least one friend they liked and could talk with (see Table 3). Males were more likely to have at least one good friend (92.6%) to talk to and thought their parents usually listened and took them seriously (51.9%) than female participants (84.1% and 34.1% respectively). More females had seriously thought of running away from home than males (43.2% to 33.3%).

Table 4 displays the percent of yes responses to health risk behaviors concerning weapons, violence, and safety. Males were more likely to have a gun, rifle, or other firearm at home, (48.1%), have carried a gun, knife, club, or weapon for protection in the past year (37%), and been in a physical fight in the past three months (48.1%) than females. Females were more likely to worry about violence or safety (43.2%), wear a helmet (13.6%), and much more likely to wear a seat belt (77.3%) than males. A majority of both males and females did not usually wear a helmet when rollerblading, skateboarding, bicycling, motorcycling, minibiking, or riding an ATV. A weapon at home and seat belt use were found to have a statistically significant difference between males and females using the chi square test, $\chi^2 (1, N=71) = 6.113, p = .047$ and $\chi^2 (1, N=71) = 9.621, p = .002$, respectively.
### Table 2. Percent of yes responses to physical activity and diet health risk behavior questions

<table>
<thead>
<tr>
<th>Physical Activity/Diet</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>At least one sugary beverage per day</td>
<td>88.9 %</td>
<td>79.5 %</td>
<td>83.1 %</td>
</tr>
<tr>
<td>At least one hour of physical activity per day</td>
<td>92.6 %</td>
<td>75 %</td>
<td>81.7 %</td>
</tr>
<tr>
<td>* More than three hours screen time per day</td>
<td>85.2 %</td>
<td>61.4 %</td>
<td>70.4 %</td>
</tr>
<tr>
<td>Five servings of fruits and vegetables per day</td>
<td>14.8 %</td>
<td>13.6 %</td>
<td>14.1 %</td>
</tr>
<tr>
<td>Ever eat in secret</td>
<td>7.4 %</td>
<td>4.5 %</td>
<td>5.6 %</td>
</tr>
<tr>
<td>Spend a lot of time thinking of ways to be thin</td>
<td>18.5 %</td>
<td>22.7 %</td>
<td>21.1 %</td>
</tr>
<tr>
<td>Vomited, diet pills, laxatives, starve</td>
<td>3.7 %</td>
<td>11.4 %</td>
<td>8.5 %</td>
</tr>
<tr>
<td>self to lose weight in past year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfied with eating habits</td>
<td>51.9 %</td>
<td>47.7 %</td>
<td>49.3 %</td>
</tr>
</tbody>
</table>

* indicates statistically significant result using chi-squared test

### Table 3. Percent of yes responses to health risk behaviors dealing with friends and family

<table>
<thead>
<tr>
<th>Friends/Family</th>
<th>Males</th>
<th>Females</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have at least one friend you can talk to</td>
<td>92.6 %</td>
<td>84.1 %</td>
<td>87.3 %</td>
</tr>
<tr>
<td>Parents usually listen and take your feelings seriously</td>
<td>51.9 %</td>
<td>34.1 %</td>
<td>40.8 %</td>
</tr>
<tr>
<td>Seriously thought of running away from home</td>
<td>33.3 %</td>
<td>43.2 %</td>
<td>39.4 %</td>
</tr>
</tbody>
</table>

* indicates statistically significant result using chi-squared test
Male participants engaged in more tobacco-related risk behaviors than female participants (see Table 5). About 33% of males had ever smoked cigarettes, cigars, or used snuff compared to 25% of females. A high percentage of both males and females reported a close friend(s) (77.8% and 61.4% respectively) and someone they live with (63% and 61.4% respectively) had ever smoked cigarettes or cigars or used snuff.

Table 6 displays the percent of yes responses to health risk behaviors including alcohol. There was a statistically significant difference between male and female students who had ever gotten drunk on alcohol in the past month, $\chi^2 (1, N=71) = 9.213$, $p = .002$, from a chi-squared test. Males were also statistically significantly more likely to have at least one close friend get drunk on alcohol in the past month than females (74.1% and 45.5% respectively), $\chi^2 (1, N=71) = 5.572$, $p = .018$. Males were more likely to have drunk alcohol and drive a motor vehicle in the past year than females (14.8% to 2.3% respectively). Males were slightly more likely to be criticized or in trouble for drinking (25.9%) and in a motor vehicle where the driver had been

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**Table 4. Percent of yes responses, by gender, to health risk behavior questions related to weapons, violence, and safety**

<table>
<thead>
<tr>
<th>Weapons/Violence/Safety</th>
<th>Males</th>
<th>Females</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Anyone at home have a gun, rifle, or other firearm</td>
<td>48.1 %</td>
<td>25.0 %</td>
<td>33.8 %</td>
</tr>
<tr>
<td>Carried gun, knife, club, or weapon for protection in past year</td>
<td>37.0 %</td>
<td>25.0 %</td>
<td>29.6 %</td>
</tr>
<tr>
<td>Been in physical fight in past three months</td>
<td>48.1 %</td>
<td>27.3 %</td>
<td>35.2 %</td>
</tr>
<tr>
<td>Worried about violence or your safety</td>
<td>25.9 %</td>
<td>43.2 %</td>
<td>36.6 %</td>
</tr>
<tr>
<td>Usually wear helmet when rollerblade, skateboard, bicycle, motorcycle, minibike, or ATV</td>
<td>7.4 %</td>
<td>13.6 %</td>
<td>11.3 %</td>
</tr>
<tr>
<td>* Usually wear seat belt in a car, truck, van</td>
<td>40.7 %</td>
<td>77.3 %</td>
<td>63.4 %</td>
</tr>
</tbody>
</table>

* indicates statistically significant result using chi-squared test
drinking or on drugs (33.3%) than females (22.7% and 31.8% respectively). Females were more likely than males to report having a family member that drank or used drugs so much that it worried them at 40.9% and 22.2% respectively.

For all questions regarding drugs, males engaged in more health risk behaviors than female participants. Approximately 48% of male students had ever used marijuana, other drugs, or sniffed inhalants compared to about 27% of female students. Males were significantly higher in reporting close friend(s) who ever used marijuana, drugs, or inhalants at almost 78% compared to about 48% of females, $\chi^2 (1, N=70) = 5.788$, $p = .016$ using a chi-squared test. Females were not very likely to ever use non-prescription drugs to sleep, stay awake, calm down, or get high and zero reported ever using steroids without permission from a physician. About 26% of male participants had ever used non-prescription drugs and was found statistically significant using chi-square test, $\chi^2 (1, N=71) = 5.049$, $p = .025$ using the chi squared test. About 11% of males had ever used steroids without a physician’s permission (see Table 7).

**Table 5. Percent of Yes responses to health risk behaviors concerning tobacco according to gender**

<table>
<thead>
<tr>
<th>Tobacco</th>
<th>Males</th>
<th>Females</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever smoke cigarettes, cigars or use snuff or chew tobacco</td>
<td>33.3 %</td>
<td>25.0 %</td>
<td>28.2 %</td>
</tr>
<tr>
<td>Any close friends ever smoke cigarettes/cigars or use chew/snuff</td>
<td>77.8 %</td>
<td>61.4 %</td>
<td>62.0 %</td>
</tr>
<tr>
<td>Live with anyone who smokes cigarettes/cigars or use snuff/chew</td>
<td>63.0 %</td>
<td>61.4 %</td>
<td>62.0 %</td>
</tr>
</tbody>
</table>

* indicates statistically significant result using chi-squared test
Table 6. Percent of yes responses to health risk behavior questions concerning alcohol

<table>
<thead>
<tr>
<th>Alcohol</th>
<th>Males</th>
<th>Females</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Get drunk on beer, wine, or other alcohol in past month</td>
<td>55.6 %</td>
<td>20.5 %</td>
<td>33.8 %</td>
</tr>
<tr>
<td>* Any close friends get drunk on beer, wine, or other alcohol in past month</td>
<td>74.1 %</td>
<td>45.5 %</td>
<td>56.3 %</td>
</tr>
<tr>
<td>Been criticized or in trouble because of drinking</td>
<td>25.9 %</td>
<td>22.7 %</td>
<td>23.9 %</td>
</tr>
<tr>
<td>Drank alcohol then driven a motor vehicle in past year</td>
<td>14.8 %</td>
<td>2.3 %</td>
<td>7.0 %</td>
</tr>
<tr>
<td>Been in motor vehicle when the driver had drunk alcohol or using drugs</td>
<td>33.3 %</td>
<td>31.8 %</td>
<td>32.4 %</td>
</tr>
<tr>
<td>Family members who drink or use drugs so much that it worries you</td>
<td>22.2 %</td>
<td>40.9 %</td>
<td>33.8 %</td>
</tr>
</tbody>
</table>

* indicates statistically significant result using chi-squared test

Table 7. Percent of yes responses to health risk behavior questions concerning drugs

<table>
<thead>
<tr>
<th>Drugs</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever use marijuana, other drugs, or sniff inhalants</td>
<td>48.1 %</td>
<td>27.3 %</td>
<td>35.2 %</td>
</tr>
<tr>
<td>* Any close friends ever use marijuana, drugs, or sniff inhalants</td>
<td>77.8 %</td>
<td>47.7 %</td>
<td>59.2 %</td>
</tr>
<tr>
<td>* Ever use non-prescription drugs to sleep, stay awake, calm down, or get high</td>
<td>25.9 %</td>
<td>6.8 %</td>
<td>14.1 %</td>
</tr>
<tr>
<td>Ever used steroid pills or shots without physician permission</td>
<td>11.1 %</td>
<td>0.0 %</td>
<td>4.2 %</td>
</tr>
</tbody>
</table>

* indicates statistically significant result using chi-squared test

Table 8 represents the percent of “yes” responses to health risk behavior questions concerning development and sexual activity. More females had concerns or questions about the size and shape of their bodies than males at 43% and 22% respectively. Roughly, 7% of both males and females thought they were gay, lesbian, or bisexual. A little over half of both male and female students had pierced their body, other than the ears, or gotten a tattoo.
A large percentage of both male and female participants had sexual intercourse, with males more likely than females (88.9% males, 77.3% females). Male students were more likely to use a method to prevent pregnancy than females at 44.4% to 34.1%. Males were also slightly more likely than females to always use a condom when having sex (37% to 34%). Close friends whom have had sexual intercourse ranked high for both male and female students at 77.8% for males and 72.7% for females. A chi-squared test showed a statistically significant difference between males and females for being told they had a sexually transmitted infection or disease by a physician or nurse, with females much more likely than male participants, $\chi^2(1, \ N=71) = 8.868, p= 0.012$. Female students showed a statistically significant difference in wanting information or supplies to prevent pregnancy or sexually transmitted infections compared to male students, $\chi^2(1, \ N=71) = 6.049, p= 0.049$. Likewise, females were more likely to get pregnant (29.5%) and have a miscarriage, abortion, or live birth in the past year (18.2%) than males. A large portion of both male and female students wanted more information on HIV/AIDS, with more male students interested than female students (81.5% to 70.5%).

A high percentage of both male and female student participants reported having fun during the past two weeks, with more males reporting yes than females (89% to 75% respectively). Females were statistically significantly more likely to feel sad, down, or have nothing to look forward to in the past few weeks than males, $\chi^2(1, \ N=71) = 4.309, p= 0.038$. Male and female students had similar response rates for serious thoughts of suicide at around 31%. Females reported higher percentages for ever making a plan to kill themselves (32%) and ever attempting suicide (27%) than males. Similarly, male and female participants had equal
response rates of 22% for any physical, emotional, or sexual abuse by a family member. Female students reported almost double that of male students for any physical, emotional, or sexual abuse by a boyfriend or girlfriend at 20.5%. Females reported doing violent things when angry more than males (45.5% to 40.7%) (see Table 9).

Table 10 displays the percent of participants that responded yes to questions regarding special circumstances. Male students were twice as likely to have stayed overnight in a homeless shelter, jail, or detention center in the past year than female students (18.5% to 9.1% respectively). Female students were much more likely to have lived in foster care or a group home than male students (18.2% to 2.7%). There was only one male student who reported being around someone with tuberculosis in the past year.

Table 8. Percent of yes responses to health risk behavior questions concerning development and sexual activity

<table>
<thead>
<tr>
<th>Development/Sexual Activity</th>
<th>Males</th>
<th>Females</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any concerns or questions about size or shape of your body</td>
<td>22.2%</td>
<td>43.2%</td>
<td>35.2%</td>
</tr>
<tr>
<td>Think you are gay, lesbian, or bisexual</td>
<td>7.4%</td>
<td>6.8%</td>
<td>7.0%</td>
</tr>
<tr>
<td>Ever had sexual intercourse</td>
<td>88.9%</td>
<td>77.3%</td>
<td>81.7%</td>
</tr>
<tr>
<td>Using a method to prevent pregnancy</td>
<td>44.4%</td>
<td>34.1%</td>
<td>38.0%</td>
</tr>
<tr>
<td>Always use condoms when having sex</td>
<td>37.0%</td>
<td>34.1%</td>
<td>35.2%</td>
</tr>
<tr>
<td>Any close friends had sexual intercourse</td>
<td>77.8%</td>
<td>72.7%</td>
<td>74.6%</td>
</tr>
<tr>
<td>* Told had sexually transmitted infection or disease by doctor or nurse</td>
<td>3.7%</td>
<td>31.8%</td>
<td>21.1%</td>
</tr>
<tr>
<td>Been pregnant or gotten someone pregnant</td>
<td>22.2%</td>
<td>29.5%</td>
<td>26.8%</td>
</tr>
<tr>
<td>Had miscarriage, abortion, or live birth in past year</td>
<td>11.1%</td>
<td>18.2%</td>
<td>15.5%</td>
</tr>
<tr>
<td>* Like information or supplies to prevent pregnancy or sexually transmitted infections</td>
<td>29.6%</td>
<td>52.3%</td>
<td>43.7%</td>
</tr>
<tr>
<td>Like to know how to avoid getting HIV/AIDS</td>
<td>81.5%</td>
<td>70.5%</td>
<td>74.6%</td>
</tr>
<tr>
<td>Pierced your body (not ears) or gotten a tattoo</td>
<td>51.9%</td>
<td>54.5%</td>
<td>53.5%</td>
</tr>
</tbody>
</table>

* indicates statistically significant result using chi-squared test
Table 9. Percent of yes responses to health risk behavior questions concerning mental health and emotions

<table>
<thead>
<tr>
<th>Mental Health/Emotions</th>
<th>Males</th>
<th>Females</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Had fun during past two weeks</td>
<td>88.9 %</td>
<td>75.0 %</td>
<td>80.3 %</td>
</tr>
<tr>
<td>* Often felt sad, down, or nothing to look forward to in past few weeks</td>
<td>40.7 %</td>
<td>65.9 %</td>
<td>56.3 %</td>
</tr>
<tr>
<td>Ever seriously thought about killing yourself</td>
<td>29.6 %</td>
<td>31.8 %</td>
<td>31.0 %</td>
</tr>
<tr>
<td>Ever made a plan to kill yourself</td>
<td>22.2 %</td>
<td>31.8 %</td>
<td>28.2 %</td>
</tr>
<tr>
<td>Ever actually tried to kill yourself</td>
<td>18.5 %</td>
<td>27.3 %</td>
<td>23.9 %</td>
</tr>
<tr>
<td>Ever been physically, sexually, or emotionally abused by a family member</td>
<td>22.2 %</td>
<td>22.7 %</td>
<td>22.5 %</td>
</tr>
<tr>
<td>Ever been physically, sexually, or emotionally abused by boyfriend or girlfriend</td>
<td>11.1 %</td>
<td>20.5 %</td>
<td>16.9 %</td>
</tr>
<tr>
<td>When angry, do you do violent things</td>
<td>40.7 %</td>
<td>45.5 %</td>
<td>43.7 %</td>
</tr>
</tbody>
</table>

* indicates statistically significant result using chi-squared test

Table 10. Percent of yes responses to health risk behavior questions involving special circumstances

<table>
<thead>
<tr>
<th>Special Circumstances</th>
<th>Males</th>
<th>Females</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Been around someone with tuberculosis (TB) in past year</td>
<td>3.7 %</td>
<td>0.0 %</td>
<td>1.4 %</td>
</tr>
<tr>
<td>Stayed overnight in homeless shelter, jail, or detention center in past year</td>
<td>18.5 %</td>
<td>9.1 %</td>
<td>12.7 %</td>
</tr>
<tr>
<td>Ever lived in foster care or group home</td>
<td>3.7 %</td>
<td>18.2 %</td>
<td>12.7 %</td>
</tr>
</tbody>
</table>

* indicates statistically significant result using chi-squared test
Gender Differences in Risk Behaviors of Adolescents Enrolled in an Inner City Charter High School

Discussion

The purpose of this descriptive research study was to identify, analyze, and compare the health interests and health risk behaviors between male and female inner city, adolescent, charter high school students. The study served as a needs assessment before a health promotion and education program was implemented into the high school. There were five research questions:

1. What are the differences in the top health concerns between male and female students in an inner-city charter high school?
2. What are the differences between the health risk behaviors of male and female adolescent students at an inner-city charter high school?
3. Do adolescent males engage in more health risk behaviors than adolescent females?
4. What are the most prevalent health risk behaviors among male students?
5. What are the most prevalent health risk behaviors among female students?

Major Results

A majority of the students were females and 18 years of age or older, making the sample population older adolescents to young adults. Eighty percent of student participants were in the 11th and 12th grades. Since this is a charter high school, age and grade level do not always correspond. Students 18 years of age or older were allowed to volunteer for the survey without parental consent. This may be the main reason a majority of the participants fell into these age groups and grade levels.
Overall, the sample population matched closely with the school reported statistics for race (approximately 75% African American and 25% White). A much larger percentage of female participants were African American (80%) than male participants (56%). It was interesting to find all 15% of those who answered “other” for race were males. These other races included Hispanic, East Indian, and Native American.

**Research Question 1**

Male and female student participants shared their top three health interests of anger/temper, stress, and future plans/jobs, but with a different ranking. The top health interest for males was anger/temper, while the top health interest for females was future plans/job. Male and female students reported 7 out of the top 10 same health concerns. The three differing health concerns for males included muscle/joint pain in arms and legs, eyes/vision, and neck/back. The three different health concerns for females included sad or crying a lot, diet/food/appetite, and HIV/AIDS. While both males and females reported wanting to know more information about HIV/AIDS in the health risk behavior questions, only females reported it among their top 10 health interests. These results show the students know health issues they have and want to know how to deal with them. Their choices will influence the topics covered in the health promotion and education program implemented within the school after this study.

**Research Question 2**

At least one hour of physical activity per day was the only positive health behavior males and females met according to the CDC’s 5-2-1-0 health recommendations with 93% of
Gender Differences in Risk Behaviors of Adolescents Enrolled in an Inner City Charter High School

males and 75% of females meeting this behavior. Males were more likely than females to meet this recommendation, which may help explain the muscle/joint and arm/leg aches in the male top 10 health interests. Despite their increased activity, males were more likely to drink at least one sugary beverage and it was statistically significant that more males had more than three hours of screen time per day than females. Males are more likely to play video games than females, which could explain the higher prevalence of screen time per day in male students. As predicted, female students were more likely to think of ways to be thin and use unhealthy measures to lose weight than male students. Neither males nor females ate five servings of fruits and vegetables per day. Clearly, nutrition needs to be addressed in the school’s health promotion and education program to help reach the 5-2-1-0 healthy lifestyle recommendations.

There was a statistical significant difference between male and female participants in having a weapon at home. It is unclear why more males reported having a weapon at home than females. Males were more likely to carry a weapon in the past year than females so perhaps they are more aware of weapons in the household or even used those weapons for their own protection. Males were engaged in a physical fight recently more so than females. Females were more likely to be worried about violence or safety than males and were statistically, significantly more likely to wear a seatbelt than males. Neither males nor females usually wore a helmet when biking, rollerblading, skateboarding, or motorcycling.

As expected, males were more likely than females to engage in all health risk behaviors involving tobacco and drugs. Ever used non-prescription drugs or having any close friends who
have ever used marijuana, drugs, or sniffed inhalants were the only statistically significant differences between male and female participants in these categories. The majority of both males and females are around friends and/or family who smoke or chew tobacco (roughly 60-75%), but only a portion of these students actually smoke or use chew (roughly 30%). The same is true regarding drugs. There were more close friends who ever used drugs (60% average) than male or female students who reported ever using drugs (35% average). It seems many of these friends may come from the community and not from the school, since a large percentage of these students do not smoke nor do drugs like their friends.

Male participants engaged in more health risk behaviors involving alcohol than female participants. They were statistically significantly more likely to have been drunk in the past month or have any close friends gotten drunk in the past month than females. This may be influenced by the higher percentage of females worried about a family member drinking or doing drugs too much.

Male and female student participants exemplified a need for sexual activity and development programs to reduce the related health risk behaviors. Females had questions or concerns about the size or shape of their body. This coincides with the diet/food/appetite and height/weight choices in their top 10 health interests. A very large percentage of both males and females and their close friends have had sexual intercourse. A majority of students reported not using a method to prevent pregnancy and not always using a condom during sex. Almost a third of the students had been pregnant or gotten someone pregnant as the school demographic statistics mentioned. Females were more likely to have been pregnant than males
Gender Differences in Risk Behaviors of Adolescents Enrolled in an Inner City Charter High School

reportedly gotten someone pregnant. Surprisingly, females were statistically significantly more likely to have been told they had an STI or STD by a healthcare worker than males. This disparity does not necessarily mean this many more female students have an STI or STD than males, but females could be more likely to get tested for STIs and STDs than male students. Females did report they wanted information or supplies to prevent pregnancy or STIs/STDs. A large percentage of both males and females wanted to know how to avoid getting HIV/AIDS. This was in the females’ top 10 health interests, despite a higher percentage of males wanting this information.

While most of the students had fun in the past two weeks, males were more likely to have fun than females, who were more likely to feel depressed. Thoughts, plans, or attempts of suicide were alarmingly high compared to the rates for students in regular high schools from the YRBS (CDC, 2008). For example, thoughts of suicide were 31% in this inner city charter high school sample population, while the national statistic for regular high school students was only 14%. Male and female students reported almost equal percentages for serious thoughts of suicide; however, females reported higher percentages for any plans or attempts of suicide. Increased depression and suicidal health risk behaviors in females may stem from sensitivity to unhealthy situations at home. As mentioned, females were more likely to worry about violence and safety, drug or alcohol issues at home, considered running away, and felt unheard from their parents. They were also more likely to suffer from sexual, emotional, or physical abuse by a boyfriend or girlfriend than males, yet not more likely to be abused by a family member than males.
Males were twice as likely as females to have stayed in a shelter, jail, or detention center. This was not surprising considering their increased health risk behaviors involving alcohol, drugs, and violence. Females were more likely to have lived in a foster care or group home than males. This seemed logical considering their increased health risk behaviors involving family, sexual activity, and mental health. Interestingly, females were more likely than males to do violent things when they were angry, despite males engaging in more health risk behaviors involving weapons and violence. It appears this violence may manifest from the emotional stress female adolescent students have experienced. Both males and females listed anger/temper and stress in their top three health interests. Females also listed sad or crying a lot in their top 10 health interests. According to this research, the students realize their weaknesses and want to learn how to better themselves and live healthier lives. The health promotion and education program implemented into the school after this study must include these health interests to help these adolescents become more emotionally healthy and stable adults.

Research Question 3

Studies have shown male adolescents engage in more health risk behaviors than female adolescents. One of the research questions asked if this was true for this specific population. A study involving the GAPS questionnaire in a medical office showed female adolescents reported more health risk behaviors than male adolescents. Although almost equal, it was found that female students engaged in slightly more health risk behaviors than male students overall. This was determined by the greater percentage between male and female participants for each
health risk behavior question. The opposite was true (lower percentage) for health positive behavior questions. The severity of health risk behavior was unknown, however, and not taken into account. If looking by health risk behavior variables (e.g. Diet and physical activity), males and females displayed equal risk. Males engaged in more health risk behaviors than females in four variables: weapons, violence, and safety, tobacco, alcohol, and drugs. Females were more likely to engage in health risk behaviors in the four variables: diet and physical activity, friends and family, sexual activity, and mental health. Special circumstances were counted as equal risk, even with a higher percentage of males engaging in more health risk behaviors than females due to a male encounter with Tuberculosis.

Research Question 4 and 5

The most prevalent health risk behaviors observed among female students included consumption of sugary beverages, sexual intercourse, lack of pregnancy or STI/STD prevention, more than three hours of screen time, family and friends who smoke, close friends who have had sex, and depression. The most important issues to concentrate on for females seem to be pregnancy and STD/STI prevention and depression. The most prevalent health risk behaviors observed among male students included sexual intercourse, consumption of sugary beverages, more than three hours of screen time, less than five servings of fruits and vegetables per day, friends who smoke, drink, do drugs, and had sex, and not always using a condom. The most important issues to concentrate on for males seem to be nutrition, condom use, and their friends.
Adolescents have easily fallen through the cracks of the health care system. Adolescents comprise a target age group to implement educational programs to increase and promote healthy lifestyle choices that will transcend into adulthood. These lifestyle changes therefore not only impact adolescent morbidity and mortality, but adult morbidity and mortality as well. Public Health departments serve as the leading health services providers to at risk populations, including inner city, lower socioeconomic status, and minority populations like this one. A large portion of these students and their families may already be patients at the local public health department. Public health understands the importance of health promotion and education to increase health and preventive care. They can put this principle into action by developing and utilizing their connections within the community, such as with schools, academic institutions, and other health organizations. Past research found a majority of students were unaware of where to get reproductive or mental health care. Utilization of these services can take place within the school or public clinics with the help of Public Health.

Next Steps

The next steps after this study will be to implement a health promotion and education program within the charter high school to address the health interests and health risk behaviors of the students. This study was done to aid in the prioritization of topics for these health promotion and education program. Determining which topics to emphasize depends on the prevalence of the health risk behavior, severity of the risk, as well as the availability of the expertise covering the topic. The school board must provide recommendations and solutions to
ensure minimal state regulations are met. Cost can be a major factor in school health programs. Medical, public health, and other health professional students could be utilized for free to assist in the health program teachings within the schools.

Limitations

There were some limitations to this research study. A small sample size made it difficult for statistical analysis and for proper generalization to the entire student population at this high school. The consent forms for the study were mailed home to parents with H1N1 flu vaccination consent forms and progress reports. The consent forms themselves were two pages in length and may have been too much information at once for the parents. Since most participants were 18 years of age and older, the results are limited to mostly this age group. It is unknown whether parents did not want their child to participate in the research study or they did not remember or bother to sign the consent forms. Additionally, students who engage in high health risk behaviors may not have wanted to participate in the survey, especially if parental consent was necessary. It would be interesting to see if younger participants would have altered the results in any way. The data is limited to students enrolled in this particular charter high school and do not represent all students enrolled in charter high schools or alternative high schools.

Recommendations for Future Research

Replication of this study could be useful in other charter high schools or alternative high schools both locally and nationally to assess and prioritize the health risk behaviors of adolescent students. This would be especially important for schools with high rates of at risk
Gender Differences in Risk Behaviors of Adolescents Enrolled in an Inner City Charter High School

youth or no structured health program. Web-based surveys are the future of research. Most people, especially children and young adults, are very comfortable and knowledgeable with computers. Additionally, an online setting can be more anonymous and confidential than paper surveys.

Teachers at the high school were asked for recommendations to improve student response rate. They suggested keeping the survey open for more than one day; however, caution must be taken to ensure confidentiality and protection of the survey and data when there are multiple access times. Future researchers might want to consider shorter consent forms, if possible, and more than two weeks for consent form returns. Additionally, verify with the school to make sure state testing or other conflicts like the H1N1 vaccine are not on the same week or time frame of the study. Teacher participation and support was important in obtaining consent forms from the students. Not all of the teachers were on board to support the study and encourage their students to participate in the research, despite meeting with them twice. Emphasis should be placed on gaining their complete support to make it a success.
Gender Differences in Risk Behaviors of Adolescents Enrolled in an Inner City Charter High School

References


Gender Differences in Risk Behaviors of Adolescents Enrolled in an Inner City Charter High School


Gender Differences in Risk Behaviors of Adolescents Enrolled in an Inner City Charter High School


Appendix A

March 24, 2009

Sharon Sherlock, Executive Director
Reach Out of Montgomery County
25 E. Foraker Street
Dayton, OH 45409-2918

Dear Sharon:

Mound Street Academies' mission is to recapture out-of-school youth and direct them to earn a high school diploma. The majority of our students come to MSA with a history of excessive absences, few academic credits and limited success in passing mandatory state assessments. About 76% come from families at or below the poverty level. One in three is a parent to one or more children.

Mound Street Academies desires to partner with Reach Out of Montgomery County in an effort to provide our students with information on health and wellness topics. Many of our students lack access to medical care and do not have the social support to encourage good health habits.

We will conduct a survey to be administered to our students to obtain a needs assessment prior to starting this teaching initiative. In this way we can be sure that Reach Out's teaching will meet the needs of our students.

Mound Street Academies employs a full-time registered nurse, Angela Nedeff. Nurse Angela will coordinate activities with Reach Out of Montgomery County to provide access to our students and staff.

We look forward to partnering with this initiative and feel strongly that our students will benefit from your involvement.

Sincerely,

Anne M. Beane
Superintendent
Appendix B

Petition for Approval of Research Involving Human Subjects

Office of Research and Sponsored Programs (RSP)
201J University Hall
Wright State University
Dayton, OH 45435

(937) 775-2425 – Voice / (937) 775-3781 - Facsimile

The attached petition is to be used when requesting review for approval of research protocols involving human subjects by the Wright State University Institutional Review Board (IRB). This petition is to be used for either full board or expedited (Screening Committee) review. A separate form is used for submitting amendments to approved protocols. This form, which includes instructions for use, can be found on the RSP web site (www.wright.edu/rsp/subjects.html).

The information requested in this petition is necessary and must be on file for inspection by authorized individuals. Therefore, the appropriate Board/Committee cannot review this petition unless all the questions have been adequately addressed. When submitting your application, follow the INSTRUCTIONS below.

The information in this petition may become publicly available either through the Ohio Open Records Act or through open meetings. For additional information, see the signature page.

INSTRUCTIONS

Review by the Full Institutional Review Board:
Research activity involving more than minimal risk to the subject (see http://ohrp.osophs.dhhs.gov/humansubjects/guidance/45cfr46.htm#46.102 for definition of minimal risk) must be reviewed by the full Institutional Review Board (IRB). If this project falls under full board review, submit 22 copies of the completed petition and all supporting documents (one copy must contain original signatures of principal investigator, co-investigator(s) and, for a student PI, the faculty advisor). Supporting documents may include: 1-2 page summary, consent form(s), cover letter(s), agency permission documents, questionnaires, interviews, debriefing material, advertisements, etc. In addition, submit 4 copies of the complete research protocol, 4 copies of the PI’s CV (and CV of faculty advisor for students) 2 copies of the grant proposal (if applicable) and 4 copies of the investigator’s brochure (if applicable). If this is a funded study and the sponsor (incl. DHHS/NIH) has approved the human subjects protocol and consent form, submit one copy of these documents as approved. Submit all documents to the Institutional Review Board, c/o RSP. Please submit double-sided copies whenever possible.

Expedited Review:
Research activity involving no more than minimal risk to the subject (see http://ohrp.osophs.dhhs.gov/humansubjects/guidance/45cfr46.htm#46.102 for definition of minimal risk) may be eligible for expedited review. If this project falls under expedited review, submit 10 copies of the completed petition, CV of PI (and faculty advisor for students) and all supporting documents (one copy must contain original signatures of principal investigator, co-investigator(s) and, for a student PI, the faculty advisor). Supporting documents may include: summary (max of 4 double-spaced pages), consent form(s), cover letter(s), agency permission documents, questionnaires, interviews, debriefing material, advertisements, etc. In addition, submit 1 copy of the research protocol, if available. Submit all documents to the Screening Committee, c/o RSP. Please submit double-sided copies whenever possible.
Gender Differences in Risk Behaviors of Adolescents Enrolled in an Inner City Charter High School

**Exempt Research:**
Eligibility of protocols for exemption under current NIH guidelines (see the six items in paragraph b. of http://www.hhs.gov/ohrp/humansubjects/guidance/45cfr46.htm#46.101) is determined by the IRB Chair. To request an exemption for your project, complete the petition and submit 1 copy of the appropriate documents as described under Expedited Review by the Screening Committee.

Please TYPE and SIGN before submitting. Copies should be individually stapled, clipped or banded, with no covers. If you have any questions concerning the petition or meeting dates, please contact the IRB Coordinator at 775-4462.

**Note: Deadline dates for submission of petitions to RSP may be found on the human subjects web page at:** http://www.wright.edu/rsp/subjects.html
Petition for Approval of Research Involving Human Subjects
Wright State University Office of Research and Sponsored Programs

Date: August 28, 2009
For RSP use only
IRB Assignment Number: _______________________

Title of Research Project: Male Adolescents Enrolled in an Inner City Charter High School Will Have a Greater Presence of Risk Behaviors than the Female Adolescents

Requested Review Assignment (NOTE: Research and Sponsored Programs will determine the actual review designation. Therefore, you may be required to provide additional copies)

☐ Full Board Review
☒ Expedited Review [see http://www.hhs.gov/ohrp/humansubjects/guidance/expedited98.htm]
☐ Exempt Research [see http://www.hhs.gov/ohrp/humansubjects/guidance/45cfr46.htm#46.101]*

*you must provide the appropriate citation for this exemption request: _______________________

PRINCIPAL INVESTIGATOR INFORMATION:

Kimbra Dent
Academic Title: Master Public Health Student
Phone: 937-974-7117

Department: Wright State University- Boonshoft School of Medicine
Fax: 937-424-2399

Address: 3123 Research Blvd.Suite 200 Kettering, Ohio 45420
E-mail: Dent.5@wright.edu

Position (check one):

Faculty: ☐ Student/Resident: ☒ Staff ☐ Other (specify): _______________________

Indicate the names of other investigators participating in the research. If a student is listed as principal investigator, specify a faculty advisor. If study-related healthcare decisions are to be made and the PI does not have a license to practice medicine in Ohio, a qualified clinician must be listed. Indicate academic titles, if any, for all investigators.

Sharon Sherlock DHA, MSA, BSN, RN

☐ Check here to indicate that the PI has completed the required human subjects protection training offered by Collaborative Institutional Training Initiative (CITI)—see http://www.citiprogram.org/ and IRB Policy P.5. (found in the IRB Charter at http://www.wright.edu/rsp/IRB/irb_charter.html).

FUNDING INFORMATION:

Indicate the category of the sponsor (if applicable):

RSP/IRB-1 (2005/8)
INVESTIGATOR POTENTIAL FINANCIAL CONFLICT(s) OF INTEREST:

1. Does the investigator or co-investigator(s) have a vested interest in any actual or potential commercial enterprise/business associated with any aspect of this protocol (other than patents)?

   ☐ Yes  ☒ No

   If yes, fully explain and identify the safeguards taken to prevent investigator bias in subject recruitment and/or the consent process: 

2. Are there financial issues that may be of concern to potential subjects? If no, please certify this for all investigators by checking the following boxes to indicate that the investigator(s):

   ☒ Does not have ownership interest, stock options or other financial interest related to the research whose value, when aggregated for immediate family, represents >5% interest in any one single entity

   ☒ Will not receive compensation related to the research whose amount is affected by the outcome of the research

   ☒ Has no equity interests in the sponsor of this study greater than $10,000 (when aggregated for the immediate family), or does not have ownership interest, stock options, or other financial interest related to the research of any value whose value could not be determined through reference to publicly available prices

   ☒ Does not have Board or executive relationship related to the research, regardless of compensation

   ☒ Is/are receiving no payments by the sponsor greater than $10,000 to the investigator’s performing organization(s) exclusive of the costs of conducting the study

   ☒ Will receive no payments by the sponsor directly to the investigator(s), their spouses or dependent children

   ☒ Has no financial interests (other than patents) in any non-sponsored research

   If all boxes above cannot be checked, please describe below (or in a separate attachment) how such financial arrangements will not adversely affect the interests of the research subjects, and how subjects will be given any information which may be material to potential subjects’ decision-making process.

PROTOCOL INFORMATION

Attach a concise description summarizing the following areas (specifically address the subject’s role in the research). This will be provided to all IRB members for review. [Note: for expedited or exempt review protocols, submit a MAXIMUM of 4 double-spaced pages; descriptions exceeding this limitation will be returned for re-writing.]
• Purpose of research
• Background and hypothesis
• Procedures
• Risks
• Potential benefits
• Inclusion and exclusion criteria

*For all DHHS studies, a copy of the DHHS-approved sample consent document and the complete DHHS protocol must be submitted.*

In addition, provide (1) copy of all documents to be given to subjects during the research.

Please answer the following questions about the protocol:

3. Indicate all that apply to the research:

- [ ] Investigational new drug
- [ ] FDA approved drug being used for unapproved use
- [ ] FDA approved drugs
- [ ] FDA approved drug – new route of administration
- [ ] Humanitarian use device
- [ ] FDA approved drug – new formulation
- [ ] Investigational new device
- [ ] Tissue banking
- [ ] Gene therapy
- [ ] New drug delivery system
- [ ] Chart review
- [ ] In-person interview*
- [ ] Telephone interview*
- [ ] Self-administered questionnaire*
- [ ] Retrospective study
- [ ] Other (describe)

*Note: copies (see instructions for number) of any interview, surveys, or questionnaires must be submitted along with documentation that permission has been obtained to use any copyrighted materials in your research. ✗ Please check here that appropriate permission has been obtained. For chart reviews or retrospective studies, copies of the data collection instruments must be provided.*

4. Does the research involve a drug or device for which an investigational new drug (IND) or investigational device exemption (IDE) has been filed? [ ] Yes  ✗ No

If yes,

Provide the IND or IDE number: 

Who holds the IND or IDE? 

Please provide documentation verifying the IND or IDE number, such as a letter from the sponsor or a copy of FDA correspondence.

If no and the research involves the use of drugs or devices, please answer the following questions

**Device Studies**

- [ ] Yes  [ ] No  Is the device intended as an implant?
- [ ] Yes  [ ] No  Does the device present a potential for serious risk to the health, safety or welfare of a subject?

**Drug Studies**
Will study results be reported to the FDA in support of a new indication for use: OR to support any other significant change in the labeling of the drug(s); OR to support a significant change in the advertising for the product(s)?

Will the study involve a route of administration, dosage level, use in a patient population or other factor that significantly increases the risks (or decreases the acceptability of the risks) associated with the drug product?

Please list all study drugs or devices by generic name only (if no name, list sponsor’s study drug number)

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**RISK ASSESSMENT:**

5. Does the study involve any risk to the subjects? Examples of risks/discomforts include: dizziness, nausea, embarrassment, social stigma (shame or disgrace), psychological distress, loss of employment, invasion of privacy and breach of confidentiality. ☒ Yes ☐ No

If yes:

a. Indicate where these risks are described in the protocol and consent form/cover letter. Risks are outlined under Risks in the protocol and consent form. Are the risks/discomforts reasonable in relation to anticipated benefits (if any)? ☒ Yes ☐ No

b. Indicate how risks to subjects have been minimized where possible. For example:

☒ Subjects have received 24-hour emergency phone numbers
☐ More frequent health exams or diagnostic tests are being performed to monitor for known or anticipated risks
☐ Emergency equipment is available for use if needed
☐ Specimens/samples already collected for standard treatment are used for research purposes whenever possible
☒ Other (please specify) Subjects will answer the questionnaire online, on their own computer at school, in their own private cubicle. The school nurse will also be available during school hours and a directory of community medical services will be provided for additional assistance or needs after the study.

**SAFETY MONITORING:**

A plan for data safety monitoring should be provided in any situation in which participants might be at greater than minimal risk of harm, including when a drug or device is being tested for safety or effectiveness for marketing.
approval, or in placebo-controlled trials, or when marketing drugs are being tested for another indication or compared for safety or effectiveness. A plan is required for all clinical trials, including the development or evaluation of clinical laboratory tests e.g. imaging or diagnostic tests) if the test will be used for medical decision-making for the subject, or if the test itself imposes more than minimal risk for subjects. Guidelines regarding drafting this plan can be found in Part II, Supplemental Instructions for Preparing the Human Subjects Section of the Research Plan, of the U.S. Department of Health and Human Services Public Health Service Grant Application (PHS 398) instructions at <http://grants.nih.gov/grants/forms.htm>.

6. Does the protocol require a safety data monitoring plan? 
   Yes ☑ No ☑ If yes:
   - Indicate where the description may be located within the protocol ☑
   - If not described within the protocol attach a copy of the plan. Copy attached? Yes ☑ No ☑
   - If there is no plan, please explain why there isn’t one. ☑

7. When applicable, will medical or psychological resources be made available to participants after their completion of the study, if the research produces consequences in which these services are required? Yes ☑ No ☑ N/A. If yes:
   - Indicate where the description may be located within the protocol: Located under Risk in the protocol ☑
   - If not described in the protocol, attach an explanation of resources. Explanation attached? Yes ☑ No ☑
   - If there are no resources, please explain why there aren’t any. ☑

CONFIDENTIALITY AND PRIVACY:

8. Indicate the procedure for assuring confidentiality of the data (e.g. responses kept in locked safe, restricted access to information etc.) or for assuring the anonymity of the subjects (e.g. no names on instrument(s), no personal identifiers linked to instrument(s), no in-person interviews/videos, etc.) and for assuring that method(s) used during data collection protect the privacy of the participants (for example, recruitment, obtaining of consent, or obtaining of data will be done in a private location or manner). The data is completed online through a secure and confidential source, Snap Survey. Restricted access to the information will be held to only the principle investigator, advisor, and those qualified individuals involved in the data analysis. Snap Survey will also open and close access to the survey at an agreed upon time. Subjects anonymity will also be maintained because no names or personal identifiers will be linked to the data or instrument.

9. Does the protocol involve immediate or future testing of genetic material and/or pedigree studies? Yes ☑ No ☑

If yes, briefly describe any additional means (other than those described in “8”) that will be used to protect the confidentiality or anonymity of the subjects. In addition, standard wording must be added to the consent document that cautions prospective subjects about the hazards of identifiable genetic findings toward future insurability and/or employability. See suggested wording in “Cover Letter/Consent Form Guidelines” (http://www.wright.edu/rsp/IRB/Consent_Guide.doc).

10. Have adequate safeguards been taken to protect against identifying, directly or indirectly, any individual subject in any report of the research project? Yes ☑ No ☑
11. If identifiable medical information is being collected, indicate agreement to follow the HIPAA requirements published in the “Cover Letter/Consent Form Guidelines” (see http://www.wright.edu/rsp/IRB/Consent_Guide.doc). ✗ Yes  ☐ No  ☐ N/A

12. Will a Certificate of Confidentiality be requested from NIH?  ☐ Yes  ✗ No
   • If yes, does the Consent Form advise the subjects of situations where the PI may voluntarily comply with state laws?  ☐ Yes  ☐ No
   • If yes, has the standard confidentiality statement been modified to be consistent with Confidentiality Certificate protections? See http://grants.nih.gov/grants/policy/coc/index.htm.  ☐ Yes  ☐ No

STUDY SITE RESOURCES:

13. Is this a multi-site study for which the PI at WSU is the lead investigator or WSU is the coordinating site of the study?  ☐ Yes  ✗ No
   If yes, are there procedures in place for the PI or WSU to adequately manage the protection of human subjects (such as AEs, modifications and progress reports) at all the research sites?  ☐ Yes  ☐ No. If no, please explain ______

14. You may either answer the following questions or attach a separate page.
   a. State where you will be conducting the research study (e.g. WSU, VA, GSH etc.)
      Include the address for any site not affiliated with WSU
      • Name of site(s): Mound Street Academies, 354 Mound St. Dayton, Ohio 45402-3325
      • If other than WSU, DCOP or hospital facility, describe the facility where the study will be conducted Charter High School
   b. How will the PI ensure that all research staff for the study are adequately informed of the research-related duties and functions? There is a teacher training form to be given to the staff involved at the school during the survey.
   c. Are there adequate resources to complete the research study? ✗ Yes  ☐ No
   d. Is there access to a population that will allow recruitment of the required number of participants?  ✗ Yes  ☐ No If no, explain how subjects will be recruited in item 17., below.
   e. Is a separate page attached? ✗ Yes  ☐ No

RECRUITMENT:

15. Will this research study recruit any subjects from the following “Vulnerable” categories? Check all that apply.
   ☐ Cognitively Impaired
   ☐ Fetuses
   ☐ Pregnant Women
   ☐ Prisoners
   ☐ Healthy Volunteers (applies only to more than minimal risk protocols)
   ☐ Others vulnerable to coercion (e.g. employee of research site or sponsor, students of investigator).
   Describe:
Minors (<18 years of age)

For research involving minors, please indicate which of the categories listed below accurately describes this protocol (refer to the appropriate section of 45CFR46, Subpart D)

- Not involving greater than minimal risk (46.404)
- Involving greater than minimal risk but of direct benefit to individual subjects (46.405)
- Involving greater than minimal risk, no direct benefit to individual subjects, but likely to yield generalizable knowledge about the subject disorder or condition (46.406)
- Involving research not otherwise approvable which presents an opportunity to understand, prevent, or alleviate a serious problem affecting the health or welfare of minors (46.407)

16. Describe the population from which the researcher will recruit: All students enrolled at the Mound Street Academies Charter school in Dayton, Ohio who have consented (along with parental consent if a minor) to participate in the study. Students enrolled in charter schools have previously dropped out of Public school systems and have decided to get their diploma through Mound Street Academies. 75% of students come from families at or below the national poverty level, while one in three students are parents to one or more children. Approximately 75% of the students are black and 25% are white. Note: if subjects are being recruited at a non-WSU site (e.g. local schools) provide a copy of the permission to use that site signed by an institutional official, or, equivalently, approval from their IRB.

17. How will participants be recruited for this study? Attach copies of any materials given to prospective subjects and/or scripts of any oral communication used to recruit subjects.

Flyer reminding of the research day and when to return the consent forms.

18. What type of advertising will be used for this study? Check all that apply.

Note: If an advertisement is to be used, WSU policy requires prior written approval from your department chair and dean. A copy of the advertisement with approval of your chair and dean must be submitted with this application for IRB review.

- No advertising will be used
- Newspaper
- Patient Recruitment Letter
- Poster
- Brochure
- Internet
- E-mail
- Web Site
- Radio or TV (script)

19. State the approximate expected number and age range of participants to be enrolled. List each group, arm, cohort, etc. if applicable, including control groups, on separate lines. If only one group, description would be “All”.

<table>
<thead>
<tr>
<th>Group</th>
<th>NUMBER OF SUBJECTS</th>
<th>AGE RANGE OF SUBJECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All sites for which you are the PI</td>
<td>All other sites</td>
</tr>
<tr>
<td>all</td>
<td>250</td>
<td></td>
</tr>
</tbody>
</table>
a. Are subjects who might otherwise benefit from the research excluded from participation?  
   ☑ Yes  ☑ No. If yes, provide scientific and ethical reasons for excluding these subjects.

b. Is the subject population representative of the population base from which subjects could be selected with respect to gender representation (see NIH guidelines at [http://grants.nih.gov/grants/funding/women_min/guidelines_amended_10_2001.htm]).  
   ☑ Yes  ☑ No. If no, please explain.

c. Is the subject population representative of the population base from which subjects could be selected with respect to minority representation (see NIH guidelines at [http://grants.nih.gov/grants/funding/women_min/guidelines_amended_10_2001.htm]).  
   ☑ Yes  ☑ No. If no, please explain.

20. Will subjects be paid or otherwise compensated?  ☑ Yes  ☑ No. If yes:
   a. What is the amount of the compensation?  ☑
   b. If not monetary, what will be used for compensation?  ☑
   c. What is the reason for compensation?  ☑
   d. If subjects are to be remunerated, indicate how this remuneration will be prorated over the course of their participation.  ☑

21. Will the research involve the intentional use of or introduction into subjects of:
   a. Biohazards (e.g. rDNA, microorganisms, biological toxins) requiring approval by the Institutional Biosafety Committee?  ☑ Yes  ☑ No
   b. Radioisotopes, radiation, or x-rays requiring approval by the Radiation Safety Committee:  ☑ Yes  ☑ No
   c. Hazardous chemicals (not covered elsewhere in this petition) requiring approval of Environmental Health and Safety?  ☑ Yes  ☑ No

22. Does the protocol involve exposure to human blood or body fluids by study personnel?  ☑ Yes  ☑ No
   If yes, have study personnel received appropriate training?  ☑ Yes  ☑ No (if no, describe the steps that will be taken to ensure that training occurs [ ]).

INFORMED CONSENT:

23. Indicate who will be signing the informed consent (indicate all that may apply):
   ☑ Participant (adult)
   ☑ Participant (minor, signing an assent) with parent or guardian signing permission
   ☑ Legally authorized representative for participant
   ☑ Next of kin for participant (emergency research only)

   OR

   Is a waiver or alteration of informed consent documentation being requested?  ☑ Yes  ☑ No
If yes, please provide rationale for exception:

☐ The only record linking the subject and the research would be the consent document and the principal risk would be potential harm resulting from a breach of confidentiality.

☐ The research presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required outside of the research context

(refer to 45CFR46.117(c))

24. Describe the process by which informed consent will be obtained and documented: (note: if the short form for consent will be used, the complete process that will be followed for obtaining short form consent must be described and attached. See WSU Standard Operating Procedures, Policy 12 – Obtaining Informed Consent in Human Subjects Research. [www.wright.edu/rsp/subjects.html])

a. The consent interview will be conducted by:
   ☒ Study staff ☐ Investigator or co-investigator ☐ Other (describe) ☐ N/A (e.g. if the consent process does not involve an interview)

b. Is there a waiting period between the consent discussion and the signing of the consent document?
   ☒ Yes ☐ No ☐ N/A

c. Will participants be allowed to review the document at home?
   ☒ Yes ☐ No ☐ N/A

d. Are there procedures in place to minimize the possibility of coercion or undue influence?
   ☒ Yes ☐ No. If no, please explain: 

25. Are there anticipated costs to study participants? ☐ Yes ☒ No. If yes, describe and justify the costs:

SIGNATURES AND CERTIFICATIONS

By signing and submitting this application, the Principal Investigator agrees that he/she:

1. Accepts responsibility for the scientific conduct of the project, that the scientific portion of the protocol is original and contains no false, fictitious, or fraudulent statements or date. Signature certifies that all listed investigators have reviewed the proposal and that the research will be conducted in full compliance with WSU policies and federal regulations.
2. Has provided the IRB with all the information on the research project necessary for its complete review.
3. Will submit progress reports to the IRB for review in a timely manner in order to obtain appropriate continuing review to maintain the approval status of the protocol.
4. Will submit all changes in the study to the IRB for review and approval before implementing those changes.
5. Will submit anticipated problems (including adverse events) to the IRB for review in a timely manner.
6. Has not put this research project into effect until final IRB approval is received.
7. Has completed the required modules in the CITI training program, which can be found at [http://www.citiprogram.org/](http://www.citiprogram.org/) (see also IRB Policy P.5.)

If this protocol involves more than minimal risk AND the research is or is proposed to be funded by an external grant/contract, you must include two (2) copies of the external grant/contract proposal. [NOTE: Grant/contract proposals for external funding that is to be administered by Wright State University must be processed through Research and Sponsored Programs.] One of the following two boxes must be checked:

- More than minimal risk AND externally funded; two copies of the proposal are included
- Not applicable

*DCOP protocols are assumed to be conducted under the umbrella NCI grant, a copy of which is provided to the IRB separately. Thus copies of the DCOP/NCI grant proposal are not required to be submitted with DCOP petitions.

Signature of Principal Investigator Date

All other Investigators and/or Faculty Advisor listed on the cover of this petition (if any) must sign to acknowledge their participation in this project:

Signature of Faculty Advisor Date

Signature of Co-Investigator Date

Signature of Co-Investigator Date

Signature of Co-Investigator Date
IRB Protocol for Expedited IRB Petition

*Gender Differences in Risk Behaviors of Adolescents Enrolled in an Inner City Charter High School*

**Purpose**

The purpose of this descriptive research study is to analyze, assess, and prioritize the health needs of the students at the Mound Street Academies charter school before a health promotion and education program is implemented in the school by the Reach Out free clinic of Montgomery County. This will be accomplished by identifying the risk behavior characteristics of the students through utilization of a standardized tool, the American Medical Association’s Guidelines for Adolescent Preventive Services (GAPS). Research indicates students in urban settings tend to have a greater relationship with risky adolescent behavior. With approximately 76% of students coming from families at or below the federal poverty level, most lack access to medical care and the social support to encourage healthy lifestyle habits. In addition, one in three students is a parent to one or more children. The health promotion and education programs will provide students with information on health and wellness topics most pertinent to them.

In addition, charter high schools are exempt from some Ohio revised code safety and health regulations. Therefore, there is potential for inconsistency in health education. This research study will give school administrators and healthcare providers in the community information to strategically plan for effective health and safety programs. The goal of these programs is to educate, develop, and maintain healthy lifestyle habits that will translate from adolescents into adulthood. With the prevalence of chronic diseases and rising costs of health care, prevention is a key element in health practice.
Background and Hypothesis

During adolescence, teenagers are at a crossroads with their health. Increased cognitive abilities and emerging social experiences entice them to question adult values and partake in risky health behaviors (American Medical Association, 1997). Research shows most adolescents engage in at least some type of risk taking behavior. These behaviors increase with age and tend to begin earlier than the previous generations. Health risk behaviors are determined by individual influences, especially through social contexts, such as family and school (Grunbaum et al., 2003; Resnick et al., 1997). Such health risk behaviors include: unprotected sex, alcohol, drug, or tobacco use, and both intentional and unintentional injuries (Gans Epner, 1998). These behaviors can result in both acute and chronic health consequences (American Medical Association, 1997). Research shows persons engaging in high-risk behaviors during adolescents have a disproportional poor health as adults (Grunbaum et al., 2003; Resnick et al., 1997). Adolescents, therefore, comprise a target group for health interventions to establish healthy attitudes and lifestyle choices that can transcend into adulthood. These interventions show promise in reducing not only adolescent morbidity and mortality, but also premature adult mortality, especially when incorporated into the social context of school (Montalto, 1998).

Procedures

A modified GAPS questionnaire will be used to gather information concerning student demographics and risk behaviors. Key variables include: eating and weight, school, friends and family, weapons, violence, and safety, tobacco, alcohol, and drug use, sexual behavior and development, emotions and mental health, and special circumstances like spending time in a homeless shelter, jail, or foster care setting. The survey and intervention will take place in the classrooms of Mound Street Academies charter school in Dayton at a designated time. The questionnaire will be an internet-based format controlled by the marketing company, Snap Survey, for anonymous entry and data. The data will
be collected and returned via a SPSS file. The company will open access for the survey at an agreed upon time and close at the end of the allotted time.

An agreement was obtained by Mound Street Academies school board granting permission to conduct this study. Also, an educational session for the teachers will be performed twice, once for introductory and second for logistics and acknowledgement of the guidelines for this research study. For example, a guideline includes detecting signs a student is not of sound mind to participate in the study. The investigators along with the teachers will be available to answer questions from the students on an individual basis about accessing the survey. These students, ranging from age 15 to 22, have previously dropped out of school and returned through this charter school to receive their high school diploma. All of the students are eligible to participate in the study granted they or their parents or guardian sign a consent form. Those who wish to not partake in the study will be directed to a web-site of school activities.

Risks

The students and their parents or guardians, if underage, must sign a consent form to participate in the study. Minimal risks to the participants are possible. The survey asks questions concerning safety, violence, alcohol, drug, and tobacco use, sexual and developmental experiences, eating habits, family and friend relationships, problems in school, and mental health. Some of these questions may cause discomfort, shame, or some psychological distress when answered if the student is sensitive to the issue. These behaviors can also be perceived as embarrassing, illegal, and negatively self “label” the student as a “risk” taker. To help minimize risks, the surveys will be completed on computers through a secure internet source, in individual student cubicles, out of view from teachers, researchers, and other students, to ensure privacy. Participants will be anonymous to the researchers, and the data will be confidentially collected and accumulatively analyzed. Participants are also able to terminate their
involvement in the study at anytime or skip questions if they feel uncomfortable. Additionally, student participants will receive 24 hour emergency phone numbers if they need help or someone to talk to.

Potential Benefits

As mentioned, this study will analyze and assess the health needs of the students before implementing health promotion and education programs in the school. The findings will also raise the interest of the students by having them participate in the selection process of topics they would like to know more about. This will provide knowledge and skills to engage in healthier habits. These lifestyle changes can aid in the reduction of both adolescent and adult morbidity and mortality and have potentially grand effects on the overall health of not only these students, but the nation as a whole. Furthermore, this study could be used as a basis for future research with similar objectives.

Inclusion and Exclusion Criteria

Participants must be an enrolled student at the Mound Street Academies charter school in Dayton, Ohio on the day of the survey with a signed consent(s) forms. These students are previous school drop-outs who have enrolled in the charter school to earn their high school diploma and develop a career pathway (Martin and Halperin, 2006).

References


Appendix C

Consent for Participation in Research

Please read the attached letter and return this consent form to Mound Street Academies no later than November 2, 2009.

Research Title:
Gender Differences in Risk Behaviors of Adolescents Enrolled in an Inner City Charter High School

Purpose of Study:

Kimbra Dent BA, a Master of Public Health student, and Sharon Sherlock DHA, MSA, BSN, RN from Wright State University Boonshoft School of Medicine are conducting this research study to identify and prioritize the health needs of the students at the Mound Street Academies charter school before a health promotion, educational program is introduced into the school by the Reach Out free clinic of Montgomery County. Students are asked to participate in this study by completing a computer-based survey to identify the risk behavior characteristics of the students. This research study will give school administrators and healthcare providers in the community information to strategically plan for effective health and safety programs. These programs will provide students with information on health and wellness topics most pertinent to them. Additionally, the goal of these programs is to educate, develop, and maintain healthy lifestyle habits that will translate from adolescents into adulthood.

Procedure:

The survey will take place in the classrooms of Mound Street Academies. A questionnaire will be used to gather information concerning student demographics and risk behaviors. Questions will cover the topics of physical activity and diet, friends and family, weapons, violence, and safety, tobacco, alcohol, and drug use, sexual behavior and development, emotions, and special circumstances like spending time in a homeless shelter, jail, or foster care setting. The questionnaire will be an internet-based format controlled by the marketing company, Snap Survey, to assure student anonymity. No one in the study or at the school will know what answers were given by any particular student. All students are eligible to participate in the study with a completed parental or guardian signed consent form (if under the age of 18) and signed student volunteer consent form. Those who do not wish to participate in the study will be directed to a web-site of school activities. The survey will take about 20 minutes to complete.

Risks:

Minimal risks to the participants are possible. Some of these questions may cause discomfort, shame, or some distress when answered if the student is sensitive to the topic. These sensitive “risk behavior” topics may also be perceived as embarrassing, illegal, or negatively self “label”
the student as a “risk” taker. To help the students, participants will receive emergency phone numbers if they need help or someone to talk to. The Mound Street Academies nurse will also be available for referral to medical services if needed.

Benefits:

As mentioned, this study will identify the health needs of the students before starting health promotional education programs within the school. Having the students select topics they want to know more about involves them in the process and increases their interest. The health promotional programs will provide knowledge on how to avoid risk behaviors and skills to engage in healthier habits. These lifestyle changes can help lower both adolescent and adult disease and death rates and possibly make a major difference in the overall health of not only these students, but the community as a whole.

Confidentiality:

To help minimize risks, the surveys will be completed on computers through a secure internet source, in individual student cubicles, out of view from teachers, researchers, and other students, to ensure privacy. Participants will be anonymous to the researchers, and the data will be confidentially collected and analyzed as a group.

Contact Information:

If you or your parents have questions about the research study, please contact either the student researcher, Kimbra Dent, at dent.5@wright.edu or the research adviser, Sharon Sherlock, at 937-258-2000. If you have general questions about giving consent or your rights as a research participant in this study, please call the Wright State University Institutional Review Board at 937-775-4462. A summarized report of the study will be made available to the school administrator. The Mound Street Academies nurse will be available Monday through Friday, along with a directory of community medical services for additional help.

Voluntary Consent:

I understand that I am free to refuse to participate in this study or to withdraw at any time. I may also skip any questions I do not feel comfortable answering. My decision to participate or to not participate will not adversely affect my care at the school or cause a loss of benefits to which I might otherwise be entitled. My signature below means that I have freely agreed to participate in this research study.

Student Name (print): __________________________ Age: ____________

Student Signature: __________________________________________ Date: ____________
Parent or Guardian Consent:

I understand by signing this form below I am consenting for my child named above (if under the age of 18) to participate in this research study. I understand that my child may refuse to participate despite my consent and is able to withdraw his or her participation on the day of the study.

Parent/Guardian Name (print):
.

Parent/Guardian Signature: _____________________________ Date: ___
Appendix D

Confidential (Your answers will not be given out.)

Date ________________________________

Date of Birth _____________________ Grade in School ______________

Sex: Male  Female       Age __________

What languages are spoken where you live?  ____________ __________________

Race ___________________________

Religion_____________________________  Involved in Religious activities   Yes ☐ No ☐

Specific Health Issues
Please check all topics you are interested in learning about this year.

☐ Height/weight  ☐ Mouth/teeth/breath  ☐ Frequent or painful urination  ☐ Trouble sleeping
☐ Blood pressure  ☐ Neck/back  ☐ Discharge from penis or vagina  ☐ Feeling tired a lot
☐ Diet/food/appetite  ☐ Chest pain/trouble breathing  ☐ Wetting the bed  ☐ Cancer
☐ Future plans/job  ☐ Coughing/wheezeing  ☐ Sexual organs/genitals  ☐ Dying
☐ Skin (rash, acne)  ☐ Breasts  ☐ Menstruation/periods  ☐ Sad or crying a lot
☐ Headaches/migraines  ☐ Heart  ☐ Wet dreams  ☐ Stress
☐ Dizziness/fainting  ☐ Stomach ache  ☐ Physical or sexual abuse  ☐ Anger/temper
☐ Eyes/vision  ☐ Nausea/vomiting  ☐ Masturbation  ☐ Violence/personal safety
☐ Ears/hearing/ear aches  ☐ Diarrhea/constipation  ☐ Masturbation  ☐ Other (explain)
☐ Nose  ☐ Muscle or joint pain in arms/legs  ☐ HIV/AIDS
☐ Lots of colds  ☐ Diarrhea/constipation  ☐ Muscle or joint pain in arms/legs  ☐ N/A

Health Profile
Choose the answer that best describes what you feel or do. Your answers will not be seen. You may skip or leave blank any question.

Physical Activity/Dietary/Obesity
1. Do you eat 5 servings of fruits and vegetables every day? ☐ Yes ☐ No
2. Do you spend more than 3 hours a day watching television or on the computer? ☐ No ☐ Yes
3. Are you physically active for at least 1 hour every day? ☐ No ☐ Yes
4. Do you drink a can, bottle, or glass of soda pop or other sugary beverage at least 1 time per day? ☐ Yes ☐ No
5. Are you satisfied with your eating habits? ☐ No ☐ Yes
6. Do you ever eat in secret ☐ Yes ☐ No
7. Do you spend a lot of time thinking about ways to be thin: Yes ☐ No
8. In the past year, have you tried to lose weight or control your weight by vomiting, taking diet pills or laxatives, or starving yourself? ☐ Yes ☐ No

Friends & Family
9. Do you have at least one friend who you really like and feel you can talk to? ☐ No ☐ Yes
10. Do you think that your parent(s) usually listen to you and take your feelings seriously? ☐ No ☐ Yes ☐ N/A
11. Have you ever thought seriously about running away from home: ☐ Yes ☐ No ☐ Not sure ☐ Don’t live at home

Weapons/Violence/safety
12. Do you or anyone you live with have a gun, rifle, or other firearm? ☐ Yes ☐ No
13. In the past year, have you carried a gun, knife, club, or other weapon for protection? ☐ Yes ☐ No
14. Have you been in a physical fight during the past three months? ☐ Yes ☐ No
15. Are you worried about violence or your safety: □ Yes □ No
16. Do you usually wear a helmet when you rollerblade, skateboard, ride a bicycle, motorcycle, minibike, or ride in an all-terrain vehicle (ATV)? □ No □ Yes
17. Do you usually wear a seat belt when you ride in or drive a car, truck, van? □ No □ Yes

Tobacco
18. Do you ever smoke cigarettes/cigars, use snuff or chew tobacco? □ Yes □ No □ Not sure
19. Do any of your close friends ever smoke cigarettes/cigars, use snuff or chew tobacco? □ Yes □ No □ Not sure
20. Does anyone you live with smoke cigarettes/cigars, use snuff or chew tobacco? □ Yes □ No

Alcohol
21. In the past month, did you get drunk on beer, wine, or other alcohol? □ Yes □ No
22. In the past month, did any of your close friends get drunk on beer, wine, or other alcohol? □ Yes □ No □ Not sure
23. Have you ever been criticized or gotten into trouble because of drinking? □ Yes □ No □ Not sure
24. In the past year have you used alcohol and then driven a car/truck/van/motorcycle? □ Yes □ No □ Does not apply
25. In the past year, have you been in a car or other motor vehicle when the driver has been drinking alcohol or using drugs? □ Yes □ No □ Not sure
26. Does anyone in your family drink or take drugs so much that it worries you? □ Yes □ No □ Not sure

Drugs
27. Do you ever use marijuana or other drugs, or sniff inhalants? □ Yes □ No □ Not sure
28. Do any of your close friends ever use marijuana or other drugs, or sniff inhalants? □ Yes □ No □ Not sure
29. Do you ever use non-prescription drugs to sleep, stay awake, calm down, or get high? (These drugs can be bought at a store without a doctor’s prescription.) □ Yes □ No □ Not sure
30. Have you ever used steroid pills or shots without a doctor telling you to? □ Yes □ No □ Not sure

Development
31. Do you have any concerns or questions about the size or shape of your body? □ Yes □ No □ Not sure
32. Do you think you may be gay, lesbian, or bisexual? □ Yes □ No □ Not sure
33. Have you ever had sexual intercourse? □ Yes □ No □ Not sure
34. Are you using a method to prevent pregnancy? □ No □ Yes □ Not sure
35. Do you and your partner(s) always use condoms when you have sex? □ No □ Yes □ Not active
36. Have you ever been told by a doctor or nurse that you had a sexually transmitted infection or disease? □ Yes □ No □ Not sure
37. Would you like to receive information or supplies to prevent pregnancy or sexually transmitted infections? □ Yes □ No □ Not sure
38. Have you had sexual intercourse? □ Yes □ No □ Not sure
39. Would you like to know how to avoid getting HIV/AIDS? □ Yes □ No □ Not sure
40. Have you pierced your body (not including ears) or gotten a tattoo? □ Yes □ No □ Thinking about it

Emotions
41. Have you had fun during the past two weeks: □ No □ Yes
42. During the past few weeks, have you often felt sad or down or as though you have nothing to look forward to? □ Yes □ No
43. Have you ever seriously thought about killing yourself? □ Yes □ No
44. Have you ever made a plan to kill yourself? □ Yes □ No
45. Have you ever actually tried to kill yourself? □ Yes □ No
46. Have you ever been physically, sexually, or emotionally abused by a family member? □ Yes □ No □ Not sure
47. Have you ever been physically, sexually, or emotionally abused by a boyfriend or girlfriend? □ Yes □ No □ Not sure
50. When you get angry, do you do violent things? □ Yes □ No

Special Circumstances
51. In the past year, have you been around someone with tuberculosis (TB)? □ Yes □ No □ Not sure
52. In the past year, have you stayed overnight in a homeless shelter, jail, or detention center? □ Yes □ No
53. Have you ever lived in foster care or a group home? □ Yes □ No

Self
54. What four words best describe you? ____________________________________________
55. If you could change one thing about your life or yourself, what would it be? ____________________________________________
Appendix E

Looking for Students to Participate in a 15 minute, *in class*...

**Web-Based**

**Survey**

Confidential

*Voluntary Participation*

**Tuesday November 3rd**

*(morning and afternoon session)*

*For more information see the school nurse.*

Return Consent forms to Mr. Wortham

in cafeteria Oct. 26th - 30th

Earn an out of uniform day on Nov. 6th!
Appendix F

Teacher Survey Instructional Session
Date/Time
Mound Street Academies Dayton, Ohio

Presenters: WSU Boonshoft School of Medicine MPH Student: Kimbra Dent and
WSU Boonshoft School of Medicine, Assistant Professor, Executive Director of Reach Out: Dr Sharon Sherlock, DHA

AGENDA

- Summary of the MPH’s student culminating experience/research study
- The background, purpose and objective for the study
- Volunteer Participation guidelines (parent/guardian consent)(volunteer consent for the student)
- Define confidential requirements in conducting this survey
- Discuss procedure to follow if the teacher feels a student is not able to participate
- Discuss distributing medical referral or availability of the school-nurse
- Accumulated results will be available in the principal’s office in one month
- Answer Questions

Students Not Participating

1. Current student “do not participate list” of those students without parent/guardian consent
   forms returned or those students choosing NOT to participate, will be updated the day of the
   survey
2. Briefly Introduce the study assignment: If you have elected not to participate in this study please
   open XYZ on the computer and complete the assignment
3. Explain that this assignment will take approximately 20 minutes
4. If you get done early please sit quietly until everyone is done
5. Distribute instructional activity assignment

Students Volunteering to Participate

6. Brief introduction “For the next 20 minutes those students who have volunteered to participate
   in this survey will you please type in the following web address: http://snap-survey.com (plus
   the new code) and follow the directions on the first page. (write address on black board if
   available). Please be honest with your answers.” Remind participants their responses are
   confidential and cannot be traced back to a specific person.
7. Ask both groups to begin
8. Notify students half way through the timeframe.
9. Teachers: Do not walk behind students as they are taking their survey
10. Assistance may be offered to students who have trouble signing on or off the internet site:
    http://snap-surveys.com
11. Assistance will be offered to those students signing off the web page if needed
12. Contact Sharon Sherlock at the nurses office if you need assistance
13. Report any unusual circumstances or questions to Sharon Sherlock (cell phone: 554-1421 or
    email at Sharon.Sherlock@wright.edu)
14. Students distributing or not respecting the privacy of others should be removed from the room
Appendix G

Listed Below are the Public Health Competencies met in each Domain:

1. Analytic Assessment Skills
   a. Defines a problem
   b. Determines appropriate uses and limitations of both quantitative and qualitative data
   c. Selects and defines variables relevant to defined public health problems
   d. Identifies relevant and appropriate data and information sources
   e. Evaluates the integrity and comparability of data and identifies gaps in data sources
   f. Applies ethical principles to collection, maintenance, use, and dissemination of data and information
   g. Partners with communities to attach meaning to collected quantitative and qualitative data
   h. Makes relevant inferences from quantitative data
   i. Obtains and interprets information regarding risks and benefits to the community
   j. Applies data collection processes, information technology applications, and computer systems storage/retrieval strategies
   k. Recognizes how the data illuminates ethical, political, scientific, economic, and overall public health issues

2. Policy Development/Program Planning Skills
   a. Collects, summarizes, and interprets information relevant to an issue

3. Communication Skills
   a. Communicates effectively both in writing and orally
   b. Solicits input from individuals and organizations
   c. Advocates for public health programs and resources
   d. Leads and participates in groups to address specific issues
   e. Uses the media, advanced technologies, and community networks to communicate information
   f. Effectively presents accurate demographic, statistical, programmatic, and scientific information for professional and lay audiences
   g. Listens to others in an unbiased manner, respects points of view of others, and promotes expression of diverse opinions and perspectives

4. Cultural Competency Skills
   a. Utilizes appropriate methods for interacting sensitively, effectively, and professionally with persons from diverse cultural, socioeconomic, educational, racial, ethnic and professional backgrounds, and persons of all ages and lifestyle preferences
b. Understands the dynamic forces contributing to cultural diversity

c. Understands the importance of a diverse public health workforce

5. Community Dimensions of Practice Skills
a. Establishes and maintains linkages with key stakeholders
b. Utilizes leadership, team building, negotiation, and conflict resolution to build community partnerships
c. Collaborates with community partners to promote the health of the population
d. Accomplishes effective community engagements
e. Identifies community assets and available resources
f. Develops, implements, and evaluates a community public health assessment

6. Basic Public Health Sciences Skills
a. Identifies the individuals and organizations responsibilities within the context of the Essential Public Health Services and core functions
b. Defines, assesses, and understands the health status of populations, determinants of health and illness, factors contributing to health promotion and disease prevention, and factors influencing use of health services
c. Understands the historical development, structure, and interaction of public health and health care systems
d. Identifies and retrieves current relevant scientific evidence
e. Identifies limitations of research and the importance of observations and interrelationships
f. Develops lifelong commitment to rigorous critical thinking

8. Leadership and Systems Thinking Skills
a. Creates a culture of ethical standards within organizations and communities
b. Helps create key values and shared vision and uses these principles to guide action
c. Facilitates collaboration with internal and external groups to ensure participation of key stakeholders