2017

The Relationship Between Youths' Risky Sexual Behavior and Race/Ethnicity

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Abstract

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by

William P. Odhiambo Okello

MS, Central Michigan University, 2007

BS, Fayetteville State University, 2004

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Health

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May 2017

Abstract

According to the CDC, young people, aged 15–24 years, share the greatest risk of new sexually transmitted diseases (STD) and the negative impact of alcohol and drug use. The purpose of this quantitative study, based on the theory of social-psychological problem-behavior, was to analyze the 2013 YRBSS secondary data and document if a relationship existed between race/ethnicity and youth sexual behavior, alcohol consumption, and drug use for the 13,583 survey participants. A Kolmogorov-Smirnov test and Chi-Square were conducted to answer the research questions. Results indicated that American Indian/Alaskan Natives were most likely to report first sexual activity before 11 years old (7.5%), while Asians were most likely to report never having sex (76.6%). Race/ethnicity also impacted all other variables, such as drugs, with a mixture of results. Hispanic/Latinos were most likely to report higher alcohol consumption (15.12%) compared to Multiple Hispanic (5.12%), while, Multiple Non-Hispanic were more likely to report use of drugs before sexual activity (9.7%) compared to Hispanic Latinos (7.99%). Social change implication of the study called for developed and effective sustainable interventions to help youth with behavior, and it required full integration of race/ethnicity as prerequisites in alleviation strategy. Dissemination plans involved use of public health campaigns, school workshops, and churches to fight the negative impact on youth.

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Dedication

This dissertation is dedicated to my beautiful Wife Fenny and also to my children: Mitchell, Emmanuel and Angel. Thank you for supporting me through this journey. I love you all and I hope, in return, this research inspires you all. You and the children will forever be important building blocks in my life and I could not have done it without you all. Emmanuel and Angel, thank you for staying late with me day in night out and taking all your attention away, as you cried in the background for that particular attention.

Acknowledgments

I dearly acknowledge all the people that played a part in the development of this research paper, most of all, the Walden academic team my chair Dr. Peter Anderson, Dr. Michael Schwab, my committee member Dr. Vasileios Margaritis and the URR for their dedication and professionalism. To my friends who played a vital role in the process, especially Mrs. Lillian Oluoch, I say thank you for your dedication and efforts! To all my classmates and those that came along the path when I needed strength and encouragement in class, thank you so much for being there and truly your wisdom and words really mattered to me.

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Chapter 1: Introduction to the Study

Introduction

Youth aged 15–24 years acquired half of all new sexually transmitted diseases (STDs) in the United States in 2013, and 1 in 4 sexually active men and women, who were categorized as youths, contracted STDs, such as chlamydia or human papillomavirus (HPV), especially adolescents aged 15–19 years (Kann et al., 2013). One major set of risk factors for youth STDs was found sexual risk behavior to be alcohol and drug use related, especially marijuana use and depression, with different effects for male and female youths (Dembo et al., 2017). Excessive drinking is responsible for more than 4,300 deaths among underage youth each year, and costs the United States $24 billion (Sacks, Gonzalez, Bouchery, Tomedi & Brewer as cited in CDC, 2015). Although drinking under 21 years is illegal, people aged 12 to 20 drank 11% of all alcohol consumed in the United States (Eigen & Noble, 1996). More than 90% of alcohol consumed by youth is in the form of binge drinking, which is more than any other in that age group (Bonnie & O'Connell, 2004; Fetherman & Bachman, 2016). In 2010, approximately 189,000 emergency room visits in hospitals were by persons under the age of 21 years for injuries and other conditions linked to alcohol (Drug Abuse Warning Network [DAWN], 2012). In the years from 1999 through 2006, the number of fatal poisonings involving opioid analgesics more than tripled from 4,000 to 13,800 deaths and more than one type of drug was specified as contributing to the death (Warner, Chen, & Makuc, 2009). All these cases triggered the rate of emergency department visits on drug use cases that increased from 28.8 per 10,000 persons among those aged 0–19 years

(Albert, McCaig & Uddin, 2015). The elimination or reduction of health problems linked to causes from sexual behavior and risky activities among U.S. youth, was considered essential in order to promote the success of Healthy People 2020 goals (Baker, Metzler, & Gelea, 2005).

Tools such as communication, access, and shared decision-making are examples of the core 10 quality dimensions that are adopted and utilized by the youth to plan and evaluate their sexual behavior and risky activities (Mohammed et al., 2015). The youth access to healthcare accounted for 15% to 20% of variations of morbidity in the United States youth populations (Satcher & Higginbotham, 2007).

Although perceived discrimination was associated with greater problem behaviors among Black and Latino youths (Borgart et al., 2013), elimination of discrimination could considerably reduce mental health issues, However, certain factors related to high-risk activities from drug and alcohol use, could lead to undesired sexual behavior depending on multiracial backgrounds and communities (Borgart et al., 2013).

Background

In the United States, difference in racial backgrounds can impede cultural integration possibilities. Many sectors of the government have noted race as an important too in self-identification and listed race as part of equal employment opportunity disclosure requirement (U.S. Equal Employment Opportunity Commission, 2013).

In this study, race ranged from a wider spectrum, with dominances as White (Caucasian), African-American or black (to include all people of African descent), Hispanic, Asian, and Native American and other (Kann, et al., 2013). Racial divisions

have created social problems in communities. For example, Behrman and Davey (2001) examined over 271 real court cases, regarding cross-race bias, other-race bias, or own-race bias, and reported the habit of easily recognizing members of one's own race. In photographic line-ups with 231 participants in a cross-race versus same-race identification, only 45% of the people were correctly identified versus 60% for same-race identifications (Behrman & Davey, 2001).

Researchers have shown Blacks are more likely than Whites to be at risk in certain disparities such as Human Immunodeficiency Virus (HIV) and some other sexually transmitted diseases (Halpern et al., 2004). Therefore, this study is intended to find a correlation between racial backgrounds and behavior in order to build a stable and healthier community, where youth could be provided knowledge; skills and abilities to change their behavior awareness. To bring this vision into reality, communities must be involved in building more effective programs to educate the population on youth health and behavior.

Activities such as drug abuse among teenagers have remained high and popular, especially the use of marijuana (National Institute of Drug Abuse [NIH/NIDA], 2014). In a national survey data gathered in 2013, marijuana use was reported at 7% among 8th graders, 18% of 10th graders, and 22.7% of 12th graders, which was up from the 2008 report at 5.8%, 13.8%, and 19.4% respectively (NIH/NIDA, 2014). These behaviors led were linked to high school dropout rate at 62% among the youth (National Campaign to Prevent Teen Pregnancy and Unplanned Parenthood, 2009). According to National Research Council and Institute [NRCI], (2009), adolescents lives thrived; however, many

are still engaged in risky behavior with unhealthy habits. In a survey report by CDC (2010) the following observations were made from different researchers regarding youth activities and outcomes:

- 46% of all U.S. high school students had sexual intercourse (Tahlil & Michael, 2009)
- 34% of all U. S. high school students had sexual intercourse during the previous 3 months, and, of these (Navarro, 2013; Kann & Richard, 2012; Tahlil & Michael, 2009).
- 14% of all U.S. high school students have had sexual intercourse with 4 or more partners over their lifetimes (Mozes, 2015).
- 39% of sexually active U.S. high school students did not use a condom at their last intercourse (CDC, 2009).
- 6% of all high school students living in the United States were found to have had sexual intercourse before attaining age 13 years (Tahlil & Michael, 2009).

To reduce sexual risk behaviors and related health problems among youth, schools and other youth-serving organizations have been urged to help educate young people on lifelong behavior and attitudes to help change their health and well-being (CDC, 2009).

Large surveys of urban youth who had sex with men showed prevalent HIV infections with 14% Blacks while 3% were White (CDC, 2009). Drug use has also exposed young people to such risk especially with shared needles. Needle sharing has

endangered many youth leading to high infection rates in various diseases such as HIV. It is also important to note as well that non injection drug use also might have reduced inhibitions resulting in sexual risk taking as well (Weinstock, Berman, & Cates, 2004). Some risky behaviors co-varied in young adult populations while substance use, were positively related to sexual initiations, frequencies and risk-takings (Halpern et al., 2004).

In the YRBSS survey, youth behavior together with their general lives at large indicate potential risky activities, such as, sexual behavior and drug use that were likely to relate to racial background (CDC, 2013) The 2013 YRBSS data, was intended to assist with measurement of degree to which youth health outcome is in the community (CDC, 2013). A quantitative method of study and a cross-sectional study method were used as well as subsidiary tools in the analysis process of this study.

Interventions for the Youth Health Problems

In the literature review I focused on youth health and disparities based on behaviors, race, and socioeconomic background. The YRBSS 2013 questionnaire was retrieved from the general CDC website and used for the research analyses. high-risk behaviors were all those that had adverse effects on the overall development and well-being of youth, or those that might have prevented youth from attaining their future successes and development (Rosario & Pohlmeier, 2014), behavior with cumulative negative effects (e.g., substance use and alcohol consumption) are the core of the study.

According to de Guzman & Pohlmeier (2014), risky behaviors also affected youth by disrupting their normal development or prevented them from participating in typical experiences for their age group, for example, sexual behavior that led to teen

pregnancy precluded youth from experiencing typical adolescent events such as graduating from school or from developing close friendships with peers.

In an effort to overcome youth risky activities and sexual behavior, monitoring the youth, communicating expectations clearly, focusing on what is important, listening to teen carefully, acting as guardians, and ability to be very respectful as well, helped the youth learn from experiences and encouraged their participation in a more positive way as well as enabled them make healthy decisions (De Guzman & Pohlmeier, 2014).

Although some disparities may have showed a slight decline among general population, overall, among specific race/ethnic groups, rates have not declined and disparities still existed in large scale within many unidentified racial/ethnic groups, and more so, to those of low socioeconomic status (U.S Department of Health &Human Services, 2005).

Related Disparities and beliefs in Youth Health. Social determinants were in part responsible for the unequal and avoidable differences in health status within and between communities (Healthy People 2020), association between perceived discrimination and racial/ethnic disparities in problem behavior model among preadolescent youths (Bogart et al., 2013), racial and ethnic disparities in health risk behaviors among Missouri High school Students (Missouri Health Department, 2013), a theory of socioeconomic disparities in health over the life cycle (Galama & Kippersluis, 2010), a public health approach to eliminating disparities in health (Satcher & Higginbotham, 2008).

It is important to test a relationship between these disparities in youth health in proportion to their indifference in racial or ethnicity and socioeconomic background. The YRSBSS survey would be of great help to ensure the study came up with effective measures of interventions that assisted teen health, improved community health status and built healthier and stronger components of community health stronghold. The study identified gaps in teen health using strong literature reviews that presented possible theories to assist analysis of the theoretical underpinnings of the problem, or its relationship to other similar issues among youth.

Problem Statement

Young people aged 15–24 years stood a higher risk of acquiring half of all new STDs, such as chlamydia or HPV for a combination of behavioral, biological, and cultural reasons, compared with older adults. I this study I intended to find a link between different races and youth behavior aged 15–24 years and live in the United States. Drug use among teenagers remained high, and exposed young people at risk of contracting HIV and other diseases related to sharing of needles in the direct blood routes (NIH/NIDA, 2014). Many youth were endangered in many ways by infection and continued re-infection of one another in the process of sharing needles (NIH/NIDA, 2014). Researchers have suggested that social determinants were also in part responsible for the unequal and avoidable differences in health status within and between communities as well (Healthy People, 2020). Also perceived discrimination caused behavior problems among preadolescent youths (Bogart et al., 2013). Variables such as religion, gender roles, values, race and ethnicity also redefined the way youth acted and

behaved and while seeking for their independence (American Association for Marriage and Family Therapy [AAMFT], 2013).

Purpose of Study

The purpose of the study was to analyze the 2013 YRBSS data to determine whether a relationship existed between race/ethnicity and youth sexual behavior and drug use. Prevalence of STD risk factors continues to be primarily related to alcohol and drug use and mental health status of the youth participants (McKinnon, Gariépy, Sentenac, & Elgar, 2016). Data for the study were retrieved from the public domain of the CDC website and analyzed for quantitative results, especially in descriptiveness and cross-tabulation to achieve the study outcome. All participants were derived from eight diverse communities living in the United States. and were in their ages of 9-24 years old (CDC, 2013). A 2013 YBBS System's questionnaire was selected for the analysis study because that study did not show in depth if race or ethnicity was a driving factor to the youth behavior in all sphere of represented races. The study analyzed overall picture of how, where, and why such sexual behavior and risky activities such as alcohol and drug use among youths significantly affected the youth health (National Institute of Drug Abuse [NIH/NIDA], 2014). As a result, this study will go further in depth for possibilities in providing potential intervention process in today's community health system.

Research Questions, Hypothesis and Null Hypothesis

The following five research questions, hypotheses, and null hypothesis were used to guide this study:

1. RQ1: Is there a racial difference in alcohol use among the youth?

- H_0 1: There is no racial difference in alcohol use among the youth
- $H_1$1: There is a racial difference in alcohol use among the youth

2. RQ2: Is there a racial difference in the number of sexual partners among the youth?
   - H_0 2: There is no racial difference in the number of sexual partners among the youth
   - H_1 2: There is racial difference in the number of sexual partners among the youth
3. RQ3: Is there a racial difference in the proportion of drug or alcohol use before sex among the youth?
   - H_0 3: There was no racial difference in the proportion of drug or alcohol use before sex among the youth
   - H_1 3: There was racial difference in the proportion of drug or alcohol use before sex among the youth
4. RQ4: Were there a racial difference in the proportion of condom use during sex among the youth?
   - H_0 4: There was no racial difference in the proportion of condom use during sex among the youth
   - H_1 4: There was no racial difference in the proportion of condom use during sex among the youth
5. RQ5: Was there a racial difference in the use of contraceptive methods during sex among the youth?

- H_0 5: There was not a racial difference in the use of contraceptive methods during sex among the youth
- H_1 5: There was a racial difference in the use of contraceptive methods during sex among the youth

Theories and or Conceptual Framework for the Study

In this study, problem-behavior theory, which is a social-psychological framework, helps to explain the nature and development of alcohol abuse, drug misuse, and other problem behaviors (Jessor, 1987). The theory was developed initially for the purpose of studying alcohol abuse and other problem behaviors in a small, tri-ethnic community comprised only of Hispanic Americans, Native Americans, and Anglo Americans (Jessor, 1987). However, the theories of socioeconomic status "SES' and descriptive theory (Galama & Kippersluis, 2010) were found to be essential to the study.

These theories guided the study, using racial and ethnic approaches to community health (REACH) as a program designed to develop community-driven interventions and solutions to the disproportionate rates of cardiovascular disease, diabetes mellitus, and HIV/AIDS (CDC, 2011). This a national initiative was used by CDC to eliminate racial and ethnic disparities in infant mortality, breast or cervical cancer, and immunization within one or more of racial and ethnic groups such as African American, Hispanic/ Latino, Asian, Pacific Islander, and Native American/ Alaska Natives (Galloway-Gilliam, 2013). In this study I attempted to investigate alcohol consumption, drug use, and sexual behavior among youths of different racial, and

socioeconomic background in-depth (Mann, Kretsch, Tackett, Harden & Truck-Dob, 2015).

Developmentally, most youth transition from abstinence to delinquent behavior, and then escalate to co-occurring problem behavior (Monahan, Rhew, Hawkins, & Brown, 2013). In the study, both independent variables used are race, and gender while dependent variables were alcohol consumption, drug use, and sexual behavior, were used in the study in the form of different questionnaire and were also perceived according to environmental, personality, and behavior system, that was based on individual youths and the five research questions that guided the study.

Nature of the Study

In the study research, data used for analysis are available and retrieved from CDC public domain. The initial data are collected from a survey questionnaire by the CDC from youths who came from all states in the country. The data were based on the observations derived from the YRBSS questionnaire trends; hence, the responses to the survey questionnaires were based on respondents' opinions without manipulations. Response information came from eight different races or ethnic groups and compared amongst them. The study findings have been drawn from the analyses of the 2013 YRBSS survey questionnaire responses examined a diverse youth population from eight different races to find (a) the relationship of race/ethnicity and sexual behavior among youth, and (b) whether alcohol or drugs use by the youth is an influence of their race. The investigation and analyses performed on such behavior were reviewed and findings supported evidence of correlation of behavior based on the nonparametric tests used. The

initial survey conducted by CDC, made participants complete sociodemographic questionnaire portion, and revealed specifics such as their age, sex, gender, and race or ethnicity. Researchers also found that many young people that engaged in sexual behaviors and risky activities resulted in many unhealthy outcomes including unintended pregnancies in a U.S. high school students surveyed in 2010 (CDC, 2009).

The analyses were able to compare many different variables at the same time for better results. All resource were considered if they described all or in part of the youth disparity on health and risky behavior in line youth, racial, ethnic and social economic background (CDC, 2009). In the course of determining the results, a statistical package for the social sciences (SPSS) version II software package, licensed by IBM Statistics Standard Version 21.0 (International Business Machines [IBM], 2013), was used to perform nonparametric tests on the data retrieved from the YRBSS survey questionnaire for analyses and compared differences in youth behavior as pertained to; alcohol consumption and drug use in relationship to race and or ethnic background of those participants.

Definitions

AAMFT: American Association for Marriage and Family Therapy (American Association for Marriage & Family, 2002).

BAHH: Be Active, Healthy, and Happy. This is a program meant to motivate the youth to avoid risky activities and sexual behavior (U.S department of Health & Human services, 2008).

DLT: Descriptive learning theories, a devise model that can be used to explain and predict learning results (Ullrich, 2008).

DNA: Deoxyribonucleic acids, cells that help identify biological features of an individual (NIH, 2013).

EPHPP: Effective Public Health Practice Project. This is a tool for quantitative research studies (NIH, 2013; Langlois, Miszkurka, Ghaffar, Ziegler, Daniel, 2015).

HIV: Human Immunodeficiency Virus (Kann, et al, 2013).

NIH/NIDA: National Institute of Health / National Institute of Drug Abuse. A body that collects data and help analyze all drug use related information.

HPV: Human Papilloma Virus (Kann, et al, 2013).

RB: Risky Behavior, an activity or behavior that uses solutions that already exist in the community to bring about sustainable behavioral and social change (Pascale et al., 2010).

REACH: Racial and Ethnic Approaches to Community Health, is a national initiative vital to the Centers for Disease Control and Prevention's (CDC) efforts to eliminate racial and ethnic disparities in health (CDC, 2011).

ROCA: Organization with a mission to promote justice through creating opportunities for young people (Zeira & Molly, 2016).

PAGFA: Physical Activity Guidelines for Americans, a body that provide health guidelines to many Americans (U.S department of Health & Human services, 2008).

SPSS: Statistical Package for the Social Sciences

UP: A short acronym for unintended pregnancy

STD: Sexually Transmitted Disease, a disease that exists in human being and is transmitted by sexual activity (Kann, et al, 2013).

YRBSS: Youth Risk Behavioral Surveillance System

Assumptions

The following assumptions were made in this study: (a) enough valid and reliable information was publicly available for the study; (b) all documentation and resources used by pertaining to youth and their health problems, and risky and sexual behaviors based on race and ethnic differences, provide meaningful conclusions; (c) the initial study that was conducted by the YRBSS was credible with no bias to any race or youth; and (d) neither discrimination nor prejudices were expressed in the initial data research and collections.

Scope of Delimitation

The study eliminated secured webpages. Only publicly available documents, including peer-reviewed studies and gray literature documents, were used as informational sources. The 2013 YRBSS survey questionnaire was also established by the Centers for Disease Control & Surveillance [CDC&S] and used as a guide in the study analysis process. It listed health disparities related to topics or to any known determinant of youth health records. Only documents that were in English language, and could be understood by many readers were included in the study. Other materials that were avoided by CDC or YRBSS were never exposed or included in the course of this study.

Limitations

This study's limitations came from the fact that secondary data were used. All flaws by the YRBSS researcher while carrying out the initial survey responses from youths around the nation were adopted without check. The initial data collected by the CDC were based on uncorroborated self-reports and that not all states agreed to participate in every survey (CDC, 2013). All information used was limited to what was available in the CDC website for the study design. Even though all documentations used were subject to publications that were non-bias, they had to be showing similar challenges among youth and programs that existed as intervention process, if there were any.

Brener et al. (2003) stated that the CDC (2013), survey was only provided to youth who were in school, but ignored youth who had dropped out of school or are in juvenile detention facilities or mental hospitals and are at higher risk for suicide than those who are in school. Raw data were collected, observed, and taken into considerations by the YRBSS team even though chances of underreporting or over reporting of behaviors could not have been determined (Brener et al., 2003).

Because it is cross sectional, it was difficult to determine a temporal relationship between exposure and outcome particularly in long duration cases. Also as a limitation, cross sectional is unable to measure incidences and is susceptible to bias due to low response and misclassifications due to recall bias (Hennekens & Burling, 1987).

Significance

This study addressed risky activities, sexual behavior, and drug use among youth to better correlate possibilities of race, ethnicity, and socioeconomic relationship (CDC, 2013). Pro-health lifestyle is evinced in current worldwide epidemiology statistics that reflect the staggering prevalence of disease chronicity and c-morbid health conditions (Langlois, Miszkurka, Ghaffar, Ziegler, Daniel, 2015; WHO, 2013). Previous researchers have indicated that youth risky activities and behavior could be caused by heritage as a factor, hence; the YRBSS by the CDC, and be able to provide outcomes and show existing gaps in prevention process and promotion of awareness among the youth. These study findings are expected to provide public health professionals with vital information on prevalence and prevention measures on youth health implications to better improve adolescent health. Additionally, it will also increase awareness to the community and in schools to enable effective intervention process.

The study built a solid foundation for future research into how to sustain a healthy youth population and provide ideas of moral and comprehensive attitudes to make healthy decisions. This study potentially contributed a positive social change to the youth population by thriving awareness among them and creating a holistic understanding on different racial, ethnic and socioeconomic groups to solidify a divergent background. This study also contributed to raising awareness among the youth sexual behaviors and drug use.

Summary

The objectives of the study are well designed and source material was retrieved from the 2013 YRBSS data. The initially collected of data were from survey response concerning youth behavior and risky activities, which was conducted by the CDC. The participants were drawn from all over the nation and the study leaned on literature background that indicated and supported the existence of the problem among the youth. However, gap still exist for future research study that could be used to create specific interventions based on race, age and other diversity factors.

Quantitative methods of study and non- parametric tests were suggested for the study to solve research questions, hypothesis and the null hypothesis. All factors of limitations and research designs were considered for better outcome. The youth are still under represented when it comes to interventions. The ones in place have not been successful in resolving their behavior issues and risky activities specifically to their diverse backgrounds. Chapter 2 contains a list of literature used that relate to the study objectives, and Chapter 3 provided a detailed methodology and study approaches used for this study analysis.

In Chapter 4, I analyzed data that were previously retrieved and indicated the results of the study. In Chapter 5 I presented recommendations from the study outcomes for future effective intervention on youth drug, alcohol, and sexual behavior control.

Chapter 2: Literature Review

Introduction

In the U.S. young people of different racial backgrounds aged 15–24 years acquired half of all new STDs according to the CDC 2000-2014 reports (CDC, 2014). In the report, 1 in 4 sexually active of those adolescents contracted an STD, such as chlamydia or HPV compared with older adults (CDC. 2014). According to the CDC (2013), sexually active adolescents aged 15–19 years stood a higher risk of acquiring the STDs for a combination of behavioral, biological, and cultural reasons. Hill et al. (2013) found that a total of 399 risk behaviors were revealed to research staff by the participants, while only 24 risk behaviors were revealed to providers. Caruthers, Van Rynzin, and Dishion (2013) conducted a study on 998 adolescents and their families who were randomly assigned to a family-centred intervention in sixth grade. Approximately 23% of the intervention families engaged in the family check-up [FCU] and approximately 18% engaged in more intensive treatment. There is clear indication that a gap still exists in complete prevention of youth behavior and risky activities. Although existence of behavior and risky activities among the youth are well represented in many studies, detailed data are lacking to link effective intervention programs to behavior and risky activities based on racial backgrounds comprehensively. Adolescent-specific interventions that aim at targeting youths, to help reduce sexual behavior among high school students who are at risk for teen pregnancy, STI/HIV, and other health conditions, is highly necessary (Ravello, Jones, Tulloch, Taylor & Doshi, 2013). While consensus has grown about the prevalence of negative Black media images, measuring the influence

of these images and youth rejection or endorsement of these images on Black youth well-being and identity is a new and understudied phenomenon, analysis of variance [ANOVA] results from the study demonstrated that few variables were significant for the positive stereotype Black Media Messages Questionnaire [BMMQ] factors, but endorsement of negative Black stereotype media messages resulted in significant age and gender differences (Adams-Bass, Stevenson, & Kotzin, 2014).

According to Georgiades, Boyle, and Fife, (2012), *school belongingness*, was associated negatively with emotional and behavioural problems, and partially accounted for the effects linked to congruence in schools. The immigrant and racial/ethnic composition of schools and perceptions of belonging have strong links with emotional and behavioural problems and may represent important targets for intervention (Georgiades et al, 2012). There is clear need to scale up prevention research efforts tailored for this subgroup and other diverse groups. In Idele et al. (2014), a number of gaps exist for adolescent-specific HIV-related data; however, important implications for programming can be drawn. These researchers failed to associate effective race specific intervention and behaviors of those youth in their study. In urban youth who have active sexual intercourse with men have high prevalence of HIV infection (CDC, 2011) and that drug use also exposed young people at risk especially by sharing needles in the direct drug-related route and also persons with drug addiction as well; however, little is mentioned if there was an influence from their racial or ethnic background. According to survey reports by CDC (2011), 46.8% of the youth population interviewed from across the nation using web base through their schools and state resources, revealed had sexual

intercourse; 34.0% had had sexual intercourse during the previous 3 months; and, of these 40.9% did not use a condom the last time they had sex and 5.0% had had sex with four or more people during their life but clearly does not indicate race being a factor of such behavior. However, Bonar et al. (2013) found that among 600 youth aged 14 to 24 years with past 6-month drug use, bivariate correlates of HIV risk included older age, female gender, depressive symptoms, alcohol use, marijuana use, other drug use, and dating, peer, and community violence the regression analyses indicated that older age, marijuana use, and dating violence were positively related to HIV risk. Results suggest HIV prevention efforts for youth in the urban emergency department [ED] should address marijuana use and dating violence as well as sexual risk behaviors. Therefore, research fails to show a broader racial diversity background and specific intervention measures to help the youth.

The purpose of the study was intended to analyze data from survey responses from the youth participants conducted in 2013 by the YRBSS of the CDC, drawn from a diverse representation from eight different ethnic groups across United States and to find out if causes of such risky activities and sexual behavior among youth population was related to the racial or ethnic backgrounds of those youth participants. Source materials were retrieved from the CDC YRBSS webpage. Collection of response was from youths nationwide on a voluntary basis through the use of individual based web system. CDC web data collection process is highly authenticated with applied necessary tools to avoid response bias. The YRBSS develops data bank to enable public health professionals, educators, policy makers, and researchers to learn about the prevalence of health-risk

behaviors among youths, assess trends in health-risk behaviors over time, and evaluate and improve health-related policies and programs (CDC, 2013).

This summarized synopsis of the entire chapter before transitioning to the next chapter, chapter 3was based on the typical literature study that relates to alcohol, drug use and sexual behavior among the youth. Proceeding is Chapter 3 that explained the methodologies applied to the study. Quantitative method of study and non-parametric analyses tests such as a one sample Kolmogorov-Smirnov, Homogeneity of Variance, Chi-Square and Descriptive Statistics were all used in the analysis process of the 2013 YRBSS questionnaire source material for the study results. .

Literature Search Strategy

In the process of developing the literature review, thorough research was done from various sources to build a case on how alcohol use, drug use and sexual behaviors among different young have remained a concern within the youth population. In this dissertation excerpt, the intended objective was to find an existence of relationship between race/ ethnicity and youth behavior and risky activities such as alcohol, drug use, and sexual behavior. A search was based from multiple databases sources ranging from Elton B. Stephens Company [EBSCO] host research databases revised 2013, to ProQuest Dissertations &Thesis Global Brochure, to Ovid technologies-Wolters Kluwer- 2016, and also SAGE Journals online and other interfaces copyrighted 2013. Also sourced was the virtual Walden University Library, as well as the CDC public domain website. Elaborate in research inclusions also embraced CINAHL database 2013, MEDLINE interface 2007 and 2008, PsycARTICLES, PsycBOOKS, PsycINFO, SocIndex, Academic Search

Premier. Also searched are articles that contained terms such as alcohol, drug use and youth risky sexual behavior. No restrictions were placed on sexual behavior especially on courses to the youth health articles in terms of publication dates or location. Articles searched were restricted to those published in English only and not any other language. I sourced additional literature on *youth drug use, sexual behavior and alcohol consumption* from Healthy People 2020 website (Healthy People, 2014).

Theoretical Foundation

Theoretical framework conceptualized the nature of the research problem and established grounds for that study (Creswell, 2009). A social-psychological problem-behavior theory was a systematic, conceptual framework derived initially from the basic concepts of value and expectation (Jessor, 2016). Since the study purpose investigates the relationship between sexual behavior; alcohol consumption and drug use and the racial, and socioeconomic background of youth participants, it is intended to achieve find the youth's own opinions in the analysis tests. The fundamental premise of the theory is as follows: all behavior is the result of person-environment interaction, reflects a field theory perspective in social science (Lewin, 1951) and those theoretical beliefs described the spread ideas of such beliefs throughout a population (Jessor, 1998).

Some of these theoretical frameworks are formulated based on race; ethnicity; gender and behavior (Jessor, 1998). However, other variables are perceived according to environmental system, personality system, and the behavior system based on these individual youths (Jessor, 2016).

Approaches and Theories Related to Community Health:

1) A REACH program was a national initiative vital to the CDC for their efforts to reduce racial and ethnic health disparities (CDC, 2015). Racial and ethnic health gaps were very complex (CDC, 2015). They are affected by factors related to individuals, communities, society, culture and environmental and so through REACH program and partners, it is intended to plan strategies to address many different health issues among a diverse racial background such as, African Americans, American Indians, Hispanics/Latinos, Asian Americans, Alaska Natives, and Pacific Islanders (CDC, 2015). Every person should have the opportunity to attain their full health potential and should seek to eliminate barriers in achieving their potential health goals (CDC, 2013).

2) Participatory Approaches. REACH partners used community-based participatory approaches that identified, developed, and disseminated effective strategies for addressing health issues across a wide range of health priority (CDC, 2015). Since causes of racial and ethnic health disparities are complex and included individuals, community, societal, cultural, and environmental factors, REACH's approaches, according to CDC, (2015), cut across a number of evidence and practice based interventions by:

- Supporting community coalitions that design, implement, evaluate, and disseminate community-driven strategies to eliminate health disparities.
- Providing the infrastructure to implement, coordinate, refine, disseminate, and evaluate successful evidence- or practice-based approaches and programs in local communities.

- Supporting national and international organizations, with local affiliates and chapters, to share evidence- and practice- based strategies and culturally-based community practices to eliminate racial and ethnic health disparities.
- Funding community-based organizations to reduce health disparities.

3) Comprehensive Community Development Approaches. Community development and community building approaches emphasized the development of community capacity and community connections as the means to produce better outcomes such as economic opportunity, safe and healthy status (Chaskin, Brown, Venkatesh, & Vidal, 2001). Horowitz and Lawlor (2010) emphasized community building approaches, promotion of collaborations, strengthening the capacity of community based organizations, strengthening of social capital, and generation of new resources for economic development.

Among the agencies that have used similar framework for major economic foundations, are Ford, McArthur, and Kellogg, who built their strategies and funding priorities around those comprehensive community development initiative resources (Horowitz & Lawlor, 2010). These foundations partners with organizations such as CDC to help fund health intervention process even though, their efforts did not capture effective results but showed leverage on measurable health outcomes deficiencies (Horowitz & Lawlor, 2010). While the connections of community building initiatives and the efforts of public health and disparities programs operating in communities may seem self-evident (Horowitz & Lawlor, 2010), a recent review by Kieffer and Reischman (2004), public health interventions are not coupled with community building strategies,

and, that many groups that undertook community building could not include measures of improved public health as an outcome of their activities (Kieffer & Reischman, 2004, p.2).

Health disparity initiatives could not command the level of resources and community attention necessary to impact all the myriad racial, social, environmental, and economic factors that underlie community health outcomes (Kieffer & Reischman, 2004).and, since community leadership and institutions are critical to the success of any health intervention, it may be necessary for community-health interventions to become aligned with these larger community development efforts to be able to capture the necessary time and attention.

According to Horowitz & Lawlor (2010), first, collaborations, connections, relationship building, partnerships, and process often take precedence over specific interventions and implementation; second, these approaches vested enormous control with community residents and stakeholders to define their own assets and approaches, whatever the views of experts may be and in particular health disparities may or may not rise to the top of the community hierarchy of priorities and needs for attention and resources; third, by the very nature of comprehensive community approaches, these initiatives may have low target efficiency for a particular health condition. Efforts to improve employment, education, safety, and other community factors may have marginal or indirect effects on a particular health condition of interest and finally, these comprehensive collaborations are often slow and halting in their progress and observable outcomes.

***Theory of Socioeconomic Disparities*.** Disparities in health across socioeconomic status (SES) groups, often called the SES health gradient, are substantial (Galama and Kippersluis, 2010). According to Deaton (2005) in the United States, a 20 year old low-income (bottom quartile of family income) male, on average, reports to be in similar health as a 60 year old high-income (top quartile) male. In Glasgow, U.K., life expectancy of men in the most deprived areas is 54 years, compared with 82 years in the most affluent (Hanlon, 2015). In cross sectional data the disparity in health between low and high SES groups appears to increase over the life cycle until ages 50-60, after which it narrows. Similar patterns hold for other measures of SES, such as education and wealth and other indicators of health, such as onset of chronic diseases, disability and mortality (Adler, Boyce, Chesney, Cohen, Folkman, Kahn, Syme, 1994). This pattern is remarkably similar between countries with relatively low levels of protection from loss of work and health risks, such as the U.S., and those with stronger welfare systems, such as the Netherlands (Case and Deaton, 2005). Recent significant contributions to the understanding of socioeconomic disparities in health have concentrated on the identification of causal effects, but have stopped short of uncovering the underlying mechanisms that produce the causal relationships, for example, education is found to have a causal protective effect on health (Lleras-Muney, 2005) but it is not known exactly how the more educated achieve their health advantage. Understanding of the relative importance of underlying mechanisms responsible for the observed relationships is hampered by the lack of a sufficiently comprehensive theory.

According to Case and Deaton (2005), it is extremely difficult to understand the relationships between health, education, income, and wealth and labor-force status without some guiding theoretical framework. Integrating the roles of proposed mechanisms and their long-term effect into a theoretical framework allows researchers to disentangle the differential patterns of causality and assess the interaction between mechanisms which is deemed essential in designing effective policies to reduce disparities (Deaton, 2002).

According to researchers Case and Deaton, (2005), absence of a theory of SES and health over the life cycle has emphasized the need and importance of developing one. SES would be the most suitable framework in which multiple mechanisms and their cumulative long-term effects can be studied. A developed model of the role of work and consumption behavior in explaining the SES-health gradient is very vital (Case and Deaton, 2005). Case and Deaton (2005) extended Grossman model to include the detrimental effect of hard/ risky labor and of unhealthy consumption behavior on health. However, the researcher concludes that the model is not able to explain a number of the most salient features of the SES health gradient. Other problems with some of the predictions and properties of health production models have been pointed out in the literature (Grossman, 2000). The primary objective of this paper is to develop a conceptual framework that will lead to providing efficient health intervention among different racial, ethnical and socioeconomic group of youth on health disparities and risky behavior. The framework includes simplified representations of major mechanisms, which allows for improvement of understanding of operational roles in explaining the

SES health gradient and making predictions. What is generally interpreted as the equilibrium condition for health can alternatively be interpreted as the first-order condition for health investment (Galama, 2010). This interpretation necessitates the assumption of decreasing-returns-to-scale (DRTS) in the health production function and addresses: (a) the indeterminacy problem, for investment in medical care, (b) the inability to reproduce the observed negative relation between health, and the demand for medical care and, (c) the lack of history in the model solutions and lastly, (d) the lack of capacity to explain differences in the rate of health decline between different socioeconomic groups (Case and Deaton, 2005).

A formulation can account for a greater number of observed empirical patterns and suggests that the Grossman model provides a suitable foundation for the development of a life-cycle model of the SES-health gradient. A second contribution is therefore to incorporate many potential mechanisms in the model that could explain disparities in health by SES and to include a multitude of potential bi-directional pathways between health and dimensions of SES, with one important concept in work as "job-related health stress", which can be interpreted broadly and can range from physical working conditions to the psychosocial aspects of work (Case & Deaton, 2005). Other important features of the model are lifestyle factors (preventive care, healthy and unhealthy consumption), curative (medical) care, labor force withdrawal (retirement) and mortality. The model integrates a life cycle approach, and the concepts of financial, education and health capital (Muurinen and LeGrand, 1985).

The Descriptive Theory. Descriptive theory is primarily concerned with providing a description of what people actually do, and devising models that can be used to explain and predict learning results (Ullrich, 2008, p.37). According to Issroff and Scanlon (2002), activity theory provides a useful "lens" that highlights problematic features in a teaching setting (p.83). Wenger, McDermott, and Synder (2002) provided descriptive criteria for what constitutes a community of practice, and they provide guidance on how to cultivate such communities. People have explicit contacts for learning, of which, some are determined by structural relationships, while, others are created informally (Boud & Middleton, 2003, p.200).

Theoretical Framework. According to Frohlich, Ross, and Richmond (2006), a large part of the debate on the explanation of socioeconomic disparities in health concentrates on the contribution of cultural/behavioral versus materialism/structuralism argument.

This literature review tends to provide grounds to explain the inequities in opportunities, resources and constraints and how they are rooted as causes of those inequities in health today. It is therefore imperative to have interventions address inequity in the resources. It is evident that Health disparities relates to unequal distribution of resources such as economic, cultural and social.

Literature Review Related to Key variables and Concepts

In the United States, due to diversity, there might have been some rapid expansion of variety of different health issues among those diverse groups. These are discussed under the following categories:

(i) Risk Behaviors and the History of Health Disparities in U.S: According to Gibbons, (2005), large scale epidemiologic evidence existed by the mid-19th century. As recent attention focused on the substantial health disparities that exist within the United States, a 2013 report from the National Research Council and Institute of Medicine cited these socioecological factors, along with unhealthy behaviors and deficiencies in the health care system, as leading explanations for the "health disadvantage" of the U.S. (Zimmerman, Woolf, & Haley, 2015). In a comparison of 17 high-income countries, age-adjusted all-cause mortality rates for 2008 ranged from 378.0 per 100,000 in Australia to 504.9 in the U.S. (Zimmerman et al., 2015).

Approximately 33%, or more than 100 million persons, identified themselves as belonging to a racial or ethnic minority population; 51%, or 154 million, were women; approximately 12% or 36 million of those people had a disability. An estimated 70.5 million persons lived in rural areas (23% of the population), while roughly 233.5 million lived in urban areas equivalent to 77% (U.S Census Bureau, 2008).

Long before the year 2008, an estimated 4% of the U.S. population aged 18 to 44 years had already identified themselves as lesbian, gay, bisexual, or transgender by 2002 (Healthy People 2020, 2014). According to U.S. Census Bureau, (2009) the history of the

Black population (African American) is shown as was nonexistent by 1610; however, it increased rapidly after 1620 with the implementation of the slave trade in colonial areas which later became parts of the U.S.

The Great Migration throughout the twentieth century, starting from World War I, resulted in more than six million African Americans left Southern U.S.A, (especially rural areas), and moved to other parts of the United States (especially to urban areas) due to the greater economic or job opportunities, reasons of less anti-black violence (such as lynching and a smaller amount of segregation and discrimination) occurring (U.S. Census Bureau, 2009; Cited by Wikipedia, 2014). On the other hand, Whites (including Non-Hispanic Whites) historically made up the overwhelming majority (usually between eighty and ninety percent) of the total United States population even though, the United States historically had few Hispanics, Asians, and Native Americans, especially before the late twentieth century (U.S. Census Bureau, 2009; Cited by Wikipedia, 2014). By 20th century, the Hispanic and Asian population of the United States rapidly increased while the African American percentage of the U.S. population was slowly increasing as well at a low point of less than ten percent in 1930 (U.S. Census Bureau, 2009; Cited by Wikipedia, 2014).

Health disparities, historically affected the entire population across racial board. However, the legacy of racial and ethnic health disparities suffered by African-Americans (the second largest minority group in the U.S.) has consistently reminded patients, health practitioners and policymakers of the taint of America's "slave health deficit example is the infamous health scandal like the Tuskegee Syphilis Study that affected the healthcare

choices of both Blacks together with their providers, often against a backdrop of racist, classist and paternalist medical conduct (Williams and Johnson, 2002).

According to Williams and Johnson (2002), despite passage of the 1964 Civil Rights Act, numerous medical milestones, and the government's Healthy People initiative to eliminate minority health disparities by 2010, African-Americans still suffered much higher diseases and excess death rates than other racial groups. This attribute is because of many factors, some of which are professionally driven for example, in a study by the Kaiser Family Foundation (2002) National Survey of Physicians indicated that eight out of ten Black physicians reported that the "healthcare system often' treats people unfairly based on various characteristics, with differences particularly striking with regard to race and ethnicity. False constructs of racial effects on health should be analyzed very keenly to reduce health disparities from traits that are largely psychosocially, historically and economically driven, and to combat such factors, accurate conceptions of race must first be academically redefined and therefore 'racial' groups are not consequences of their biological inheritance, but products of historical and contemporary social, economic, educational and political circumstances (William and Johnson, 2002). An empirical research on perceived discrimination and health reveals a pattern of racial disparities as an outcome of multiple ways from racism (Williams and Mohammed, 2009).

(ii) Good Health Benefits to the Youth Population: In 2008, the U.S. Department of Health and Human Services released its 2008 Physical Activity Guidelines for

Americans (PAGFA): Be Active, Healthy, and Happy (BAHH), representing the first major review of the science on the benefits of physical activity in more than a decade (U.S. Anti-Doping Agency, 2014). Indications reveal that inactivity has remained high among youth and adults.

According to U.S. Anti-Doping Agency (2014), adopting regular habits of physical activity can reduce general health problems. In addition, adolescents who participate in greater levels of physical activity are less likely to smoke, or they will smoke fewer cigarettes and girls who engage in sport will improve their health and well-being in both the short term and the long term. Fitness, as a routine program, will enable the youth maintain healthy weight, and a stress reduction and in the long run, physical activity in youth is considered as critical preventive factor for heart condition (U.S. Anti-Doping Agency, 2014).

Since young people are known to always form friendships rapidly with peers, friends protect friends in most cases and more so, some friends especially positive ones, would talk friend off negative and high risk activities. This has implications for understanding how peer influence may be used to influence teen behavior. To be actively involved in the development, delivery, management and evaluation of projects can bring about significant benefits for young people, organizations, communities and society as a whole (Maxwell, 2002).

According to the researcher, Maxwell (2002), some projects work with young people, young offenders, ex-offenders and those at risk of offending and found that active and meaningful involvement increased engagement of young people, helped motivate

them to be more involved and encouraged others to participate. Involvement builds respect and promotes good relationships with adults.

The researchers also mention that young people often respond best to messages about behavior change when they come from others who they feel are like them and with whom they share some common ground (Jessor, 1987; Maxwell, 2002).

Peer-led activities are therefore a successful way of engaging young people. Peer-led approaches to awareness raising and education worked well for such projects looking to influence the behaviors and perceptions of young people regardless of race, ethnicity or socioeconomic differences, including young people at risk of offending activity (Maxwell, 2002).

(iii) Active Risky Behavior and Health Disparities Interventions to the Youth: This literature review investigated why and how drug use and risky sexual behavior among youth are likely to occur, including, in the study youth's justice, delinquency prevention, and behavior change (Tonry, Farrington, Welsh, Lehti, Aromaa, Lynch, Levi, Reuter, Rickman & Smith, 2006). These are avenues that are ultimately a result of behavior problem, a value based on outcomes-oriented, youth and young development organizations in Chelsea, Revere and East Boston called Roca (Tonry, et. al, 2006). The Roca's mission was to promote justice through creating opportunities for young people to lead happy and healthy lives and it, Roca, pursued their mission with some of the most marginalized youth in the community as they worked with the youth to achieve self-sufficiency and enabled them live out of harm's way (Tonry, et. al, 2006).

According to Tonry et al., (2006). one in four children in the United States is an immigrant or the child of an immigrant, predominately from Latin America, and more than one-third live below the poverty line and working with this population poses many challenges, due to the diversity of the group and the challenging circumstances under which many of them live.

(iv) Health Behavior Methodology and Measurement: As social inequalities in health are increasingly growing in the U.S. and elsewhere around the world coupled with growing inequalities in income and wealth, a routine analysis using conceptually coherent and consistent measures of socioeconomic position in U.S. public health research and surveillance, however, have remained rare (Williams & Moss, 1997). The methodology used in the research is more than audit due to the fact that it measures what life changes occurred and what caused those life changes (Bowling, 2009)and evaluation are political activities; the context in which the inquirer operates are politicized; and personal experiences, perspective, and character of health disparities such as drug use and sexual behavior will enhance ability to conduct basic tests for reliability and validity and honest interpretation skills to collect, synthesize and validate any results of data (Di lorio, 2005).

Summary and Conclusions

In chapter 2, the discussion was on literature review that supported the existence of a wide gap in youth health behavior and racial differences. Youth sexual behavior, alcohol consumption, and drug use are risky activities that is presently occurring and is evidenced after an elaborate research from multiple database domains ranging from EBSCO, to ProQuest to include Nursing & Allied Health , to Ovid, SAGE interfaces,

Walden University Library, CDC website, CINAHL Plus, MEDLINE, PsycARTICLES, PsycBOOKS, PsycINFO, SocIndex, Academic Search Premier, ProQuest Dissertations and Theses, ProQuest Central, ProQuest Health and Medical Complete, ProQuest Psychology Journals, Science Journals, Social Science Journals and Health Sciences Collection.

In the literature review I evidenced validity through theoretical foundations that demonstrated understanding of teen behavior using approaches, such as REACH, participatory approaches, comprehensive development approaches, as vital tools or study design that is used by other groups to look into root core of socioeconomic status of these health discrepancies. The youth population is still likely to be in an endangerment of risky behavior associated with sexual behavior, drug use and alcohol consumption that likely threatened their health and possibly contributed to a high morbidity and mortality among them; hence, a more comprehensive, holistic and effective intervention may be required to help lower the danger among them and develop a more measurable strategy that control their behavior. Chapter 3 discussed methods of study, designs and rationale.

Chapter 3: Research Method

Introduction

The purpose of the study was to analyze the 2013 YRBSS data to determine whether a relationship existed between race and ethnicity and youth sexual behavior to include their risky activities.The preceding chapter focused on the literature on youth sexual behavior, alcohol and drug use, and how it has affected their lives as well as the prevalence of such unhealthy behavior. It is with clear indication that youth behavior and risky activities is a health risk and a problem that demonstrates critical and most efficient intervention.

In the literature review I also showed there is gap that require for continued research study to understand the ontology of beliefs and influences that guided youth behavior study. In this chapter, a detail research methodology used is discussed in this study to investigate, identify, describe, and analyze youth's proportional racial or ethnic background in relation to their sexual behavior, alcohol consumption and drug use. Secondary data from the CDC data bank was used and analyzed for outcome. The study was intended to effectively strategize ways to benefit youth health.

The chapter outlines research design and rationale, sample population and procedures, and recruitment. A special permission was granted for data accessibility through email from the CDC agency to use for research the 2013 YRBSS survey questionnaire data. The permission letter was published and attached to the appendix c page. CDC authenticated their data and all that was available passed through confidential and appropriate protocol of human research. In the analysis, an SPSS tool kit was used to

perform all the required analysis and reproduce additional tables and graphs. All the data reproduced information were cleaned by the tool and specifically selected for use of the study. In the process of data retrieval, importation of information was performed and embedded in the SPSS tool kit for a regression analysis using different questions that disseminated the dependent variables among the eight races/ethnicities included in the survey. All ethical procedures were followed by the CDC agency as the owner and collector of first-hand information.

Research Design and Rationale

In the study, variables that were used were independent variables that comprised of race/ethnicity, gender, and age while the independent variables were sexual behavior, alcohol consumption, and drug use. The study is designed to analyze the 2013 YRBSS survey responses from the initial CDC survey questionnaire, that had participants who were of school age from distinguished eight different diverse racial backgrounds in the United States, namely as American Indian / Alaskan Natives; Whites; Blacks or African Americans; Asians; Native Hawaiians and Pacific Islanders; Hispanics/ Latinos; Multiple-Hispanic race and Multiple-non Hispanics (Kann et al., 2013). The analysis was intended to show how likely youth behavior, alcohol use, and drug abuse relates to the racial backgrounds of those participants.

The study utilized secondary data that existed in the CDC website and are available to the general public. The study was in consistent with the initial study survey procedures and requirement and sought to identify problems that existed among the youth

participants, and possibly assist with intervention designs. The YRBS 2013 survey, provided data that was relevant with the study in the sense that the time period matched the study at that time when I started the dissertation paper concerning youth sexual behavior, alcohol use, and drug abuse and how it relates to ethnicity and their health. It was therefore important to utilize CDC website for a simple reason that all collection procedures were followed by them (CDC, 2013). Publicly available information from CDC was preferred as a source of study material, included also were reports, training manuals, presentations, workshop notes, web pages, evaluation papers, online audiovisual materials, and peer reviewed studies. It was appropriate since its availability was easy and covered a large amount of youths nationwide.

Methodology

The study materials were retrieved for the 2013 YRBSS survey questionnaire responses, a study that was initially conducted by the CDC YRBSS team. All responses were drawn by CDC from over 13583 teenage participants who were of school age, who formed eight different diverse racial backgrounds in the United States, namely as American Indian/Alaskan Natives; Whites; Blacks or African Americans; Asians; Native Hawaiians and Pacific Islanders; Hispanics/ Latinos; Multiple-Hispanic race and Multiple-non Hispanics (Kann et al. 2013). The analysis was intended to show how likely youth behavior, alcohol use, and drug abuse relates to the racial backgrounds of those participants.

The study design was a quantitative research study method, which focused on analysis of the 2013 YRBS survey found on CDC&P webpage, generally accessed. The study was guide was ontology in nature and form (Kann et al. 2013). While quantitative methods emphasizes on the objective measurements and numerical analysis of data collected through polls, questionnaires or surveys, it also focuses on gathering those numerical data and generalizing them across groups of people (Babbie, 2010). However, the ontological studies that believe things exist from premises which are supposed to derive from some sources other than observation, helped guided the study. Therefore, the study research is aligned with the purpose of this study, which is to investigate, identify and analyze past and present activities and behavior of youth related to racial and ethnicity and how it affects health disparities, the different variables sought and used in the study befits the description of quantitative research requirements as it dealt with numbers, logic and the objective, focusing on logic, numbers, and unchanging statistical data and detailed, convergent reasoning rather than divergent reasoning.

Population

Researchers Kann et al., (2013), the study by CDC was 13583 youths, between the age group of 12 and younger to 18 years and older. The population included both males and females. Of the 13583 reported participants, 13265 were recorded as valid cases while 318 were recorded as missing. The participants were from eight different diverse races and ethnic backgrounds that live in the United States namely as American Indian / Alaskan Natives; Whites; Blacks or African Americans; Asians; Native Hawaiians and Pacific Islanders; Hispanics/ Latinos; Multiple-Hispanic race and

Multiple-non Hispanics. Approval of study to investigate a racial disparity in sexual and drug use risk behavior among the youth using the Youth Risk Behavioral Surveillances System was obtained through the Institutional Review Board (IRB; Approval # 05-18-15-0125228) of each participating research partner prior to conducting sampling procedures.

Sampling and sampling Procedures

Secondary data was used. The data is archived in the CDC&P website that is available to the public. No informed consent was needed from the participant since that was already done in the initial stages by the CDC&P and this study did not have any direct contact with those that participated in the 2013 YRBS survey. However, I requested for consent to access data material which is available public as unnecessary formality and the permission to access was granted by CDC to use it in any way I deemed fit. The email response is posted in the appendix page for evidence. The CDC reports over 13500 participants as authenticated youth that took part in the survey and only approximately 300 as missing ones. In empirical research, power is critical to the generation of valid inferences, and is dependent upon factors related to the significance of the analysis, the magnitude of effect, and the sample size (Aberson, 2010). In determining sample size for multiple analyses, Hsu (1988) asserted the critical importance of ensuring a sample size for which all confidence intervals (a) correspond to the actual parameters of the study and (b) ensure high probability values.

According to CDC-MMWR report, (2013), the agency developed an appropriate YRBS assessment based on a review they first did that revealed some leading causes of morbidity and mortality among youths and adults. Six categories of health-risk behaviors

were determined to be responsible for the contribution to such morbidity and mortality causes with sexual behaviors; alcohol and other Drug use being found to be among those six health risk behaviors.

As a result, CDC agency, therefore requested each of the federal agencies responsible for improving or monitoring the incidence and prevalence of behavioral risks in each of those six categories to appoint a person to serve on YRBSS steering committee in 1989. In same year, CDC and steering committee members convened a 2-day workshop that identified priority behaviors and devise questions to measure those behaviors. Included to the committee were staffs from CDC's Division of Adolescent and School Health (CDC-MMWR, 2013).

A third version of YRBSS questionnaire was completed in 1990 and by spring of 1991, this questionnaire was used by 26 states and 11 large urban school districts to conduct YRBS and by CDC to conduct a national YRBS. The agency, CDC, then determined that biennial surveys would be sufficient to measure health-risk behaviors among students (CDC-MMWR, 2013). A review of existing empiric literature was done to assess cognitive and situational factors that might affect the validity of adolescent self-reporting of behaviors measured by the YRBSS questionnaire and the outcome found sexual behavior to be potentially influenced by both cognitive and situational factors, however, no standard existed to validate the behavior (CDC, 2013).

Procedures for Recruitment, Participation, and data Collection

The initial survey was collected and conducted by CDC. All participants voluntarily participated in the survey questionnaire. There were no additional consent required to conduct the analysis as all the survey questionnaire results were available on CDC public domain; however, the agency still provided me with consent to use their materials. The initial CDC research outcome was intended and designed with restricted information and privacy of those that were involved in that survey. The researcher then analyzed the survey responses using SPSS tool to achieve better and accurate outcome.

Instrumentation and operationalization of constructs

The study used an already existing survey form designed by the CDC for the YRBSS (Appendix A). The researcher partially did some adjustments to the survey to suit the purposes of this study.

The document data collection survey has two sections, document details and study details, and is mainly comprised of open-ended questions as well as closed questions. According to National Resource Center for Mental Health Promotion & Youth Violence Prevention (2016), Iinitiatives safe schools / healthy students was formed and its grantees use data-driven strategies, identify needs and gaps, prioritize needs, identify evidence-based practices, and implement strategies to achieve successful outcomes for children, families, schools, and communities. The initiative targets several specific outcomes:

- Decreasing the number of students who abuse substances

- Improving school climate
- Increasing the number of students who receive mental health services
- Reducing the number of students who are exposed to violence.

The independent variable for this study was race/ethnicity based on eight ethnic groups. The dependent variables were alcohol consumption, sexual behavior and drug use. Race is defined in this study as ethnicity that an individual feels a sense of family background or belonging.

Operationalization

Operationalization has the great advantage that it generally provides a clear and objective definition of even complex variables. It also makes it easier for other researchers to replicate a study and check for reliability (McLeod, 2008)**.** The use of both dependent variable and independent variables are used in the study to define and measure specifically how they apply to the study objectives. The dependent variable is the variable to be explained while the independent variable was presumed as the cause of the dependent variable. Changes in the independent variable cause changes in the dependent variable. Another way to think about this is to remember that the dependent variable depends on the independent variable**.** Therefore, according to McLeod, (2008) defining young participants in the study as aged between 9 and younger – 18 and older was operationalized.

In operationalization, participants were affected by: (i) their surroundings; (ii) the researcher's characteristics; (iii) the researcher's behavior, and (iv) their interpretation

of what was going on in the situation and in accordance to the principles of operationalization, experimenters should attempt to minimize these factors by keeping the environment as natural as possible, carefully following standardized procedures and that, different experimenters should be used to see if they obtain similar results (McLeod, 2008).

Data Analysis Plan

In order to test the research hypotheses, I used SPSS Statistical Standard version 21.0 [IBM 2013] to perform a statistical analysis on secondary data from the YRBSS. Only data that complied with new standards established by the Office of Management and Budget in 1997 (Office of Management and Budget, 1997) was used. Only relevant questions to the study were analyzed.

While previous research has examined the effects of setting (school versus home) (Kann, Brener, Warren, Collins, Giovano, 2002; Needle, McCubbin, Lorence and Hochhauser, 1983) and mode (paper-and-pencil instrument [PAPI] versus computer-assisted self-interview [CASI]) (Turner, Ku, Rogers, Lindberg, Pleck and Sonenstein, 1998; Hallfors, Khatapoush, Kadushin, Watson and Saxe, 2000), I decided to choose the YRBSS 2013 survey study, which assigned school classes randomly to one of four conditions in which mode and setting were varied systematically: school-based administration using PAPI, school-based administration using CASI, home-based PAPI administration, and home-based CASI administration (CDC, 2013).

Normality tests, such as Kolmogorov-Smirnov Tests and Tests of Homogeneity, Chi Square, were used to evaluate the distribution of the quantitative variables, since data

was not normally distributed. Further, descriptive statistics were used to describe the data. Also, besides the tables, there are figures for illustrations such as histograms to supporting the flow and inter-relation gaps. Demographics included age, gender and grade as variables to define the analysis. As stated earlier, race/ethnicity was used as independent variable, while alcohol, drugs and sexual behavior were used as dependent variables.

The research questions were:

- Is there a racial difference in alcohol use among the youth?
- Is there a racial difference in the number of sexual partners among the youth?
- Is there a racial difference in drug or alcohol use before sex among the youth?
- Is there a racial difference in condom use during sex among the youth?
- Is there a racial difference in contraceptive methods used during sex among the youth?

The null hypotheses were:

- There is no racial difference in alcohol use among the youth
- There is no racial difference in the number of sexual partners among the youth
- There is no racial difference drug or alcohol use before sex among the youth
- There is no racial difference condom use during sex among the youth

- There is not a racial difference in contraceptive methods use during sex among the youth

The assessment and evaluation report completeness, using SPSS tool for quantitative studies is available in Appendices E and F. The study analysis identified outcome that has relations to the rigor of the evaluation and completeness of the study report using the tests such as homogeneity, Kolmogorov-Smirnov, Chi-Square and Descriptive statistical tests using the SPSS. The reasons of using the 2013 YRBSS survey questionnaire particularly was due to fact that for the first time since the survey began, current behaviors such as cigarette smoking levels among high school students had dropped to 15.7 percent in that year. However, big challenges in reducing overall behavior were still very concerning trends (CDC, 2014).

Threats to Validity

Quantitative research is a means for testing objective theories by examining the relationship among variables (Polit and Hungler 2013). This positivist researcher believes in the concepts of objective reality (Jirojwong, Johnson, & Welch, 2014, p362). In phenomenological research the researcher must be honest and vigilant of their own perspectives, beliefs, and hypothesis (Starks & Trinidad, 2007).

To ensure validity for data collection, all survey (with consent) were obtained from multiple sources including a national school-based survey conducted by CDC as well as school-based state, territorial, tribal, and large urban school district surveys conducted by education and health agencies (CDC, 2013). All questionnaires followed a structured survey worksheet to aide in consistency between study participants and any

none English recording was transcribed from other languages to English. The survey questionnaire were then uploaded to SPSS version 2.0 (IBM, 2013) on a password protected computer for analysis. A systematic process of coding guided data analysis in which statements were analyzed and grouped into themes that represented the phenomena (Starks & Trinidad, 2007). *The following are the three main types of validity that are discussed in this study:*

1. External Validity: According to Persaud and Mamdani (2006), the identification of potential threats to external validity is prudent to the generalizability and overall integrity of research. External validity has the ability to generalize from the study to the reader's patients (Grimes and Schulz, 2002). Therefore, findings and evaluating threats to external validity reflects to the attempt of researchers bridging the gap between research findings and real-world application (Persaud and Mamdani, 2006). My study population target were youth from eight different races that live in the United States namely as American Indian / Alaskan Natives; Whites; Blacks or African Americans; Asians; Native Hawaiians and Pacific Islanders; Hispanics/ Latinos; Multiple-Hispanic race and Multiple-non Hispanics. The analysis categorically, selected only those who are 12 years old to 18 years old. The dissemination strategy included sending results to Center for Disease Control & Prevention; to the health departments and other institutions and also to other professionals for inclusion in their health and behavior resources (CDC, 2013). Upon approval of study recommendations, a submission to peer review publication will be considered. Since the authenticity of YRBSS questionnaire completed in 1990 through 1991, the questionnaire tool has been used by 26 states and 11 large

urban school districts to conduct CDC surveys at both national levels and local levels. Biennial surveys were sufficient to measure health-risk behaviors among students (CDC-MMWR, 2013) and that a review of existing empiric literature could be done to assess cognitive and situational factors that might affect the validity of adolescent self-reporting of behaviors measured by the YRBSS questionnaire and the outcome found on sexual behavior, to be potentially influenced by both cognitive and situational factors (CDC, 2013).

2. Internal Validity: In an effort to identify potential threats to the integrity of the relationship that exist between variables in my study, it was important to discuss potential threats within internal validity. Internal validity means that the study measured what it set out to measure (Grimes and Schulz, 2002). However, if a researcher possessed a working knowledge of inquiry, it might have affected or tainted perception. Outcomes that are innately held by researchers could result in experiment bias (Sackett, 1979).

3. Construct Validity: In the study, peer reviewed definitions and examples have been used and consistently stayed in-line with the study objectives and purpose. This minimized margins of interpretative errors. It is assumed that participants were honest in entirety and all procedures followed by CDC as credible.

Ethical Procedures

There were no actively involved participants in this study. The study was based on pre-existing secondary data from the 2013 YRBS survey archived on the CDC public data base. The survey questionnaire was conducted by the CDC (2013) focused on the youth as active participants at initial stages. All the participants were drawn from eight

different races across the nation. Setting of the survey was based on standard format, national format and from the middles schoolers. The participants included both males and female youths, ranging from the ages 9 years old and under to 18 years old and over. However, my study only discussed in depth only those that are 12 years to 18 years old. My proposal to do the study was approved by the Walden Institutional Review Board. Only publicly available documents that were found to be relevant to the study were included in this study. No confidential documents, individual patient records or private health information, was assessed as part of the collection. No informed consent was needed from any participant. The email request to utilize data from CDC was sent out and the entire communication in its entirety is posted in the appendix page for evidence. In CDC&P report, over 13,583 participants' authenticated youth took part in the survey and only 300 cases were reported as missing.

With respect to the APA guidelines, I strongly adhered to the ethical guidelines set forth by the Walden IRB and the IRBs of any other participating agency research partners.

Summary

In conclusion, the method design used is quantitative study methods and variety of SPSS statistical tests were used such as homogeneity, Kolmogorov-Smirnov tests and Chi-Square and Descriptive statistics were used as well. The research methods were preceded by literature review. This chapter expressed possible methods in investigation, identifying, and describing youth behavior and risky activities associated with it. The study sought all school age youth, males and females as dependent variable.

Data was retrieved from the CDC website, available in the YRBSS sections and analyzed for results. A quantitative method of study was used and the analyses focused the appropriate tests that would effectively provide results for intervention strategies to the youth health and provide a guide to YRBSS survey questionnaire team members for future surveys. Race, ethnicity and socioeconomic indifferences were referenced as the core reasons surrounding the study objectives. A SPSS Statistical Standard version 21.0 (IBM, 2013), was preferred for the statistical analyses performance for the study results. All the validity was observed as well as ethical procedures followed to authenticate the study trend. Chapter 4 reported data retrieved and the results from the analyses performed, with approval from Walden University IRB, dated 18th May 2015 under the IRB approval number 05-18-15-0125228.

Chapter 4: Results

Introduction

The purpose of the study was to test between race/ethnicity and youth sexual behavior (Tahlil & Michael, 2009), alcohol consumption and drug use. In the study analysis, I examined whether there is a difference in variables and predictor scored to the variables behavior.

To help determine the intended purpose of the research, the following research questions, hypotheses, and null hypotheses helped guide the study and tests:

RQ1: Is there a racial difference in alcohol use among the youth?

- H_0 1: There is no racial difference in alcohol use among the youth,
- $H_1$1: There is a racial difference in alcohol use among the youth

  RQ2: Is there a racial difference in the number of sexual partners among the youth?
- H_0 2: There is no racial difference in the number of sexual partners among the youth,
- H_1 2: There is racial difference in the number of sexual partners among the youth,

RQ3: Is there a racial difference in the proportion of drug or alcohol use before sex among the youth?

- H_0 3: There is no racial difference in the proportion of drug or alcohol use before sex among the youth,
- H_1 3: There is racial difference in the proportion of drug or alcohol use before sex among the youth,

RQ4: Is there a racial difference in the proportion of condom use during sex among the youth?

- H_0 4: There is no racial difference in the proportion of condom use during sex among the youth,
- H_1 4: There is no racial difference in the proportion of condom use during sex among the youth,

RQ5: Is there a racial difference in the use of contraceptive methods during sex among the youth?

- H_0 5: There is not a racial difference in the use of contraceptive methods during sex among the youth,
- H_1 5: There is a racial difference in the use of contraceptive methods during sex among the youth.

In this same Chapter 4, presentations for the study findings have been discussed at length, highlighting correlations between variables based on the 2013 YRBS survey questionnaire, participants, and their detailed sociodemographic characteristics as represented in the YRBSS survey questionnaire initially collected.

The outcome of the analysis helped produce tables such as, descriptive statistics; disclosed measures of central tendency and distribution of variables such as age, sex, ethnicity, sexual behavior and risky activity such as alcohol consumption and drug use among the participants. The statistical analysis used, tested the five research questions for the study, hypotheses, and null hypotheses. The results would be able to determine whether youth's sexual behavior; alcohol consumption, and drug use has been extremely

impacted by race and ethnicity scores; an association between race and youth alcohol consumption, drug use, and sexual behavior was sought using a standard multiple regression modelling, which determines whether independent and dependent variables predictors scored. A SPSS tool was utilized to provide all tables and to facilitate an optimized reader comprehension. Core of the chapter is followed by a full term summary of the same chapter 4 results before going to chapter 5.

Data Collection

The study deals with secondary data retrieved from the CDC data archive. Secondary data used for this study were drawn from the 2013 YRBSS survey questionnaire, which was conducted and administered to 13583 teenage youths in different school in the United States. These teenage youths represented eight different racial backgrounds as: American Indian / Alaskan Natives; Asians; Black or African American; Native Hawaiian/other PI; White; Hispanic / Latino; Multiple – Hispanic; and Multiple – Non-Hispanic (CDC, 2013). It was intended to assess their health awareness and measure their behavior on different categories as well as their risky activities. This YRBSS survey comprised 13583 youths' participants from eight different racial backgrounds as mentioned above, ranging between ages nine and under to eighteen years and over, and lived in the United States of America.

The data used in the study was publicly available in the CDC website domain; however, I requested a formal permission from both Walden University and The CDC to use this data for my own study. Both agencies, Walden University [through IRB approval number 05-18-15-0125228, dated on 18th May 2015] and CDC [granted by

CDC representative through an e-mail communication attached in Appendix B] allowed me to proceed with the study using CDC data. All participant in the survey comprised males and females in the age group nine years and younger to eighteen years and older. This sample was drawn from eight different racial or ethnic backgrounds: American Indian / Alaskan Natives; Asians; Black or African American; Native Hawaiian/other PI; White; Hispanic / Latino; Multiple – Hispanic; and Multiple – Non-Hispanic, within the United States.

A statistical package for the social sciences (SPSS) version II software package, licensed by IBM, was used for analysis purpose to import; sort: code: and run the final statistical outcome for multi-regression linear analysis rather than univariates analysis.

Treatment and Intervention Fidelity

Data were retrieved from the CDC data bank according the outline in Chapter 3 of this research design plan. In the process, there were difficulties encountered while using questions to replace dependent variables for analysis purpose. The outcomes were in table formats produced by SPSS according to information fed into the system.

Results

Nonparametric Test (Chi–square) was used in accordance with the five different research questions; null hypotheses and the hypotheses as well. The tables' outcomes have been used to answer research questions; hypothesis or null analysis, whichever takes precedence. The demographics of participants in the study comprised of 13,583 youths from eight different races or ethnic backgrounds; White participants; Blacks or African Americans; Hispanic / Latino; Multiple – Hispanic; Multiple - Non-Hispanic; Asians;

Native Hawaiian and Native / Indian Alaska who lived in United States. The participants were subdivided in two groups according to their gender male and female (male=51.2%, females=48.7%).

Table 1

A Sample of Descriptive Statistics Related to Race/ Ethnicity, and Gender

		Am Indian / Alaska Native	Asian	Black or African American	Native Hawaiian/other PI	White	Hispanic / Latino	Multiple - Hispanic	Multiple - Non-Hispanic	Total
What is your sex	Female	61	257	1497	61	2603	867	799	355	6500
	Male	60	234	1494	74	2844	867	862	326	6761
Total		121	491	2991	135	5447	1734	1661	681	13261
Percentages		0.91%	3.71%	22.55%	1.02%	41.08%	13.07%	12.53%	5.13%	100.00%
Percentages/ gender	Female	50.41	52.34	50.05	45.19	47.79	50.00	48.10	52.13	49.02
	Male	49.59	47.66	49.95	54.81	52.21	50.00	51.90	47.87	50.98
Total Percentage of gender		100	100	100	100	100	100	100	100	100

Table 1 showed ethnic distribution with White participants as having a majority and comprised 41.08 % of the surveyed sample. Blacks or African Americans constituted 22.55 % , Hispanic / Latino was 13.07%, Multiple – Hispanic 12.53% ,Multiple - Non-Hispanic , at 5.13%, Asians at 3.71%, Native Hawaiian at 1.02% and Indian Alaska at 0.91%.

Table 2

A Sample Table Describing Total Number of Respondents Based on the Independent Variable (Race/ Ethnicity)

			Race/Ethnicity								
			Am Indian / Alaska Native	Asian	Black or African American	Native Hawaiian/other PI	White	Hispanic / Latino	Multiple - Hispanic	Multiple - Non-Hispanic	Total
How old are you?		12 years old or younger	2	4	6	1	3	0	7	3	26
		% of 12<	7.69	15.38	23.08	3.85	11.54	0.00	26.92	11.54	100.00
	Percentage compared to other races										
	percentage within race	% of 12< within same race	1.65	0.82	0.20	0.74	0.06	0.00	0.42	0.44	0.20
		13 years old	0	1	4	0	7	2	1	2	17
		% of 13	0.00	5.88	23.53	0.00	41.18	11.76	5.88	11.76	100.00
	Percentage compared to other races										
	percentage within race	% of 13	0.00	0.20	0.13	0.00	0.13	0.12	0.06	0.29	0.13

	14 years old	11	55	293	18	467	201	201	89	1335
	% of 14	0.82	4.12	21.95	1.35	34.98	15.06	15.06	6.67	100.00
Percentage compared to other races										
percentage within race	% of 14	9.09	11.22	9.81	13.33	8.57	11.60	12.12	13.07	10.07
	15 years old	26	85	645	28	1271	417	374	187	3033
	% of 15	0.86	2.80	21.27	0.92	41.91	13.75	12.33	6.17	100.00
Percentage compared to other races										
percentage within race	% of 15	21.49	17.35	21.59	20.74	23.33	24.06	22.54	27.46	22.88
	16 years old	31	121	725	26	1309	393	380	163	3148
	% of 16	0.98	3.84	23.03	0.83	41.58	12.48	12.07	5.18	100.00
Percentage compared to other races										
percentage within race	% of 16	25.62	24.69	24.27	19.26	24.02	22.68	22.91	23.94	23.75
	17 years old	35	146	743	40	1447	434	413	156	3414

		% of 17	1.03	4.28	21.76	1.17	42.38	12.71	12.10	4.57	100.00
	Percentage compared to other races										
	percentage within race	% of 17	28.93	29.80	24.87	29.63	26.56	25.04	24.89	22.91	25.76
		18 years old or older	16	78	571	22	945	286	283	81	2282
		% of 18>	0.70	3.42	25.02	0.96	41.41	12.53	12.40	3.55	100.00
	Percentage compared to other races										
	percentage within race	% of 18>	13.22	15.92	19.12	16.30	17.34	16.50	17.06	11.89	17.22
Total			121	490	2987	135	5449	1733	1659	681	13255
Total	Percentage within race		0.91	3.70	22.53	1.02	41.11	13.07	12.52	5.14	100

Table 2 shows the number of survey respondents classified according to their ethnicity and age. From the table it is evident that the white race had the majority followed by the Black or African Americans. The Indians and Native Hawaiians showed very low frequencies. In terms of Age, the highest frequencies were indicated in ages between 15years and 17years.

Research Question 1: Was there a racial difference in alcohol use among the youth? Analysis related to RQ1, was done based on the following eight survey questions: (i) how many days did you drink alcohol? (ii) how old were you when you first drank alcohol?; (iii) how many days did you drink alcohol in the last 30 days?; (iv) how many days did you have at least 5 or more drinks in the last 30 days?; (v) what is the maximum number of drinks have you had in a row in the past 30 days?, (vi) how did you get alcohol in the past 30 days?, (vii) did someone give you alcohol in the past 30 days?, (viii) did you have your first drink before13 years old?

In this research question, I examined a correlation whether there was a racial difference in alcohol consumption among the youth. Table 3 shows descriptive statistics for each of the dependent variables categorized according to the questions mentioned above and how they relate to the independent variable (Race / Ethnicity). To test the dispersion of the data, a standard deviation was used and the reliability of the mean was tested by Standard Errors of Mean for each independent variable (Ethnicity) at different age brackets. The analyses consisted of cross tabulation and descriptive analysis which was done using the SPSS tool.

Table 3

A Sample Of Descriptive Statistics On Racial Difference In Alcohol Use Among Youth Based On The Question: How Old Were You When You First Drank Alcohol?

Race/Ethnicity		Never drank	Less8 drinks	less10 drinks	less12 drinks	less14 drinks	less16 drinks	above17 drinks
Am Indian / Alaska Native	Mean	0.2975	0.0909	0.0909	0.0909	0.1405	0.157	0.0744
	N	121	121	121	121	121	121	121
	Std. Deviation	0.45907	0.28868	0.28868	0.28868	0.34895	0.36534	0.26348
	Std. Error of Mean	0.04173	0.02624	0.02624	0.02624	0.03172	0.03321	0.02395
Asian	Mean	0.5153	0.0407	0.0367	0.0591	0.1405	0.1466	0.0468
	N	491	491	491	491	491	491	491
	Std. Deviation	0.50028	0.19787	0.18812	0.23598	0.34789	0.35411	0.21152
	Std. Error of Mean	0.02258	0.00893	0.00849	0.01065	0.0157	0.01598	0.00955
Black or African American	Mean	0.3525	0.0678	0.0571	0.0872	0.1737	0.1881	0.0521
	N	2993	2993	2993	2993	2993	2993	2993
	Std. Deviation	0.47783	0.25149	0.23214	0.28218	0.37895	0.39086	0.22231
	Std. Error of Mean	0.00873	0.0046	0.00424	0.00516	0.00693	0.00714	0.00406
Native Hawaiian/other PI	Mean	0.437	0.0148	0.0148	0.0889	0.2222	0.1704	0.0222
	N	135	135	135	135	135	135	135
	Std. Deviation	0.49787	0.12126	0.12126	0.28564	0.41729	0.37736	0.14795
	Std. Error of Mean	0.04285	0.01044	0.01044	0.02458	0.03591	0.03248	0.01273
White	Mean	0.3529	0.0501	0.0319	0.0848	0.2088	0.2123	0.0415
	N	5449	5449	5449	5449	5449	5449	5449

	Std. Deviation	0.47792	0.21817	0.17584	0.27859	0.40652	0.409	0.19941
	Std. Error of Mean	0.00647	0.00296	0.00238	0.00377	0.00551	0.00554	0.0027
Hispanic / Latino	Mean	0.2809	0.0704	0.0496	0.0842	0.2468	0.2013	0.0461
	N	1734	1734	1734	1734	1734	1734	1734
	Std. Deviation	0.44955	0.25582	0.21717	0.27777	0.43129	0.40106	0.20984
	Std. Error of Mean	0.0108	0.00614	0.00522	0.00667	0.01036	0.00963	0.00504
Multiple - Hispanic	Mean	0.2709	0.0795	0.0524	0.1084	0.2342	0.1975	0.0421
	N	1661	1661	1661	1661	1661	1661	1661
	Std. Deviation	0.44457	0.27055	0.22286	0.31094	0.42362	0.39821	0.20098
	Std. Error of Mean	0.01091	0.00664	0.00547	0.00763	0.01039	0.00977	0.00493
Multiple - Non-Hispanic	Mean	0.3363	0.0646	0.0455	0.0984	0.1924	0.1982	0.0411
	N	681	681	681	681	681	681	681
	Std. Deviation	0.47278	0.24602	0.2086	0.29805	0.39445	0.39897	0.1987
	Std. Error of Mean	0.01812	0.00943	0.00799	0.01142	0.01512	0.01529	0.00761
Total	Mean	0.3386	0.0608	0.0437	0.0881	0.2052	0.1995	0.0449
	N	13265	13265	13265	13265	13265	13265	13265
	Std. Deviation	0.47326	0.23904	0.20449	0.28338	0.40386	0.39962	0.20699
	Std. Error of Mean	0.00411	0.00208	0.00178	0.00246	0.00351	0.00347	0.0018

(Table continues)

Table 3 indicates that there were deviations from the sample mean, with the highest deviation being 0.5. This outcome implied that the data were more clustered around the means of each individual variable. This is also supported by the fact that the range of the data was minimal apart from the column (Never drank). The reason is due to the outliers that were observed for the data in the first column. The Standard error for the measure was generally small; an indication that the sample means used were more accurate.

To use any form of parametric test, a test on the dependent variables were performed to establish if the data was normally distributed using (*Kolmogorov-Smirnov test*) and also to check for the homogeneity of the variance Levene tests were performed.

To test for homogeneity of variances, Table 4 showed Levene's statistic at α = 0.05, 7 degrees of freedom .This homogeneity of variance was tested on the dependent variable which was the age at first drink.

Table 4

A Sample of Table Describing Homogeneity Test of Variance

	Levene Statistic	df1	df2	*p*
Never drank alcohol	58.456	7	13257	0
Lessthan8yrs	21.566	7	13257	0
Lessthan10yrs	25.962	7	13257	0
Lessthan12yrs	8.958	7	13257	0
Lessthan14yrs	37.343	7	13257	0
Lessthan16yrs	11.767	7	13257	0
Above17yrs	5.568	7	13257	0

Table 4 indicates the Test of Homogeneity of Variances output tests H_0: σ^2_{diff} = 0. The *p* value is statistically significant for all the different age groups. $P < 0.0001$ is less than α level for this test, we then reject H_0 which indicates that the variances are not equal and therefore homogeneity of variance assumption has not been met.

Table 5

A Sample Table Describing One-sample Kolmogorov-Smirnov Test

		Never drank alcohol	Less than 8yrs	Less than 10yrs	Less than 12yrs	Less than 14yrs	Less than 16yrs	Above 17yrs
N		13583	13583	13583	13583	13583	13583	13583
Normal Parameters[a,b]	Mean	0.3402	0.0612	0.0434	0.0883	0.204	0.1979	0.0447
	Std. Deviation	0.4738	0.23967	0.20385	0.28381	0.40299	0.39843	0.20663
Most Extreme Differences	Absolute	0.423	0.54	0.541	0.534	0.49	0.492	0.541
	Positive	0.423	0.54	0.541	0.534	0.49	0.492	0.541
	Negative	-0.258	-0.399	-0.416	-0.378	-0.306	-0.31	-0.414
Test Statistic		0.423	0.54	0.541	0.534	0.49	0.492	0.541
p (2-tailed)		.000[c]	.000[c]	.000[c]	.000[c]	.000[c]	.000[c]	.000[c]

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

Table 5 displays the results from Kolmogorov-Smirnov test which was performed to test for the normality of the variables. The output $p < 0.0001$, is statistically significant at $\alpha = 0.05$.The hypothesis for normality is rejected on "age at first drink" and are not approximately normally distributed; hence, the assumption for normality was not met.

Since the data did not conform to these conditions, a parametric test cannot be used; hence, the use of Chi-square test for categorical variables which is justified since the assumption for this test has been met.

Table 6

A Sample Of Table Describing Cross Tabulation of Race / Ethnicity Based On The Question: How Old When Participants First Drank Alcohol

			How old when first drank alcohol							
			Never drank alcohol	8 years old or younger	9 or 10 years old	11 or 12 years old	13 or 14 years old	15 or 16 years old	17 years old or older	Total
Race/Ethnicity	Am Indian / Alaska Native	Count	36	11	11	11	17	19	9	114
		Expected Count	39.4	7.1	5.1	10.2	23.9	23.2	5.2	114
	Percentage	*of Count*	0.80	1.36	1.90	0.94	0.62	0.72	1.51	0.88
	Percentage	*of Expected Count*	0.88	0.88	0.88	0.87	0.88	0.88	0.87	0.88
	Asian	Count	253	20	18	29	69	72	23	484
		Expected Count	167.1	30	21.6	43.5	101.3	98.4	22.1	484
	Percentage	*of Count*	5.63	2.48	3.10	2.48	2.53	2.72	3.87	3.72
	Percentage	*of Expected Count*	3.72	3.72	3.72	3.72	3.72	3.72	3.71	3.72
	Black or African American	Count	1055	203	171	261	520	563	156	2929
		Expected Count	1011.3	181.7	130.6	263	612.8	595.7	134	2929
	Percentage	*of Count*	23.49	25.15	29.48	22.35	19.10	21.28	26.22	22.51
	Percentage	*of Expected Count*	22.51	22.52	22.52	22.52	22.51	22.51	22.52	22.51
	Native Hawaiian/other PI	Count	59	2	2	12	30	23	3	131
		Expected Count	45.2	8.1	5.8	11.8	27.4	26.6	6	131
	Percentage	*of Count*	1.31	0.25	0.34	1.03	1.10	0.87	0.50	1.01
	Percentage	*of Expected Count*	1.01	1.00	1.00	1.01	1.01	1.01	1.01	1.01
	White	Count	1923	273	174	462	1138	1157	226	5353

		Expected Count	1848.2	332	238.6	480.6	1120	1089	244.8	5353
	Percentage	*of Count*	42.81	33.83	30.00	39.55	41.81	43.73	37.98	41.15
	Percentage	*of Expected Count*	41.14	41.14	41.14	41.15	41.15	41.15	41.14	41.15
	Hispanic / Latino	Count	487	122	86	146	428	349	80	1698
		Expected Count	586.3	105.3	75.7	152.4	355.3	345.3	77.7	1698
	Percentage	*of Count*	10.84	15.12	14.83	12.50	15.72	13.19	13.45	13.05
	Percentage	*of Expected Count*	13.05	13.05	13.05	13.05	13.05	13.05	13.06	13.05
	Multiple - Hispanic	Count	450	132	87	180	389	328	70	1636
		Expected Count	564.9	101.5	72.9	146.9	342.3	332.7	74.8	1636
	Percentage	*of Count*	10.02	16.36	15.00	15.41	14.29	12.40	11.76	12.57
	Percentage	*of Expected Count*	12.58	12.58	12.57	12.58	12.58	12.57	12.57	12.57
	Multiple - Non-Hispanic	Count	229	44	31	67	131	135	28	665
		Expected Count	229.6	41.2	29.6	59.7	139.1	135.2	30.4	665
	Percentage	*of Count*	5.10	5.45	5.34	5.74	4.81	5.10	4.71	5.11
	Percentage	*of Expected Count*	5.11	5.11	5.10	5.11	5.11	5.11	5.11	5.11
Total		Count	4492	807	580	1168	2722	2646	595	13010
		Expected Count	4492	807	580	1168	2722	2646	595	13010
Total Percentages		*Count*	100	100	100	100	100	100	100	100
		Expected Count	100	100	100	100	100	100	100	100

Table 6 displays different ethnicities and their ages at first drink. It shows the counts at each level and their respective expected count frequencies. The Table shows what percentage of race per the group within the ages at first drink. Since none of the expected count values is less than five, the test is justified.

Table7

A Sample Of Table Describing Chi-Square Test

	Value	df	*p*
Pearson Chi-Square	260.343[a]	42	0
Likelihood Ratio	259.815	42	0
Linear-by-Linear Association	41.741	1	0
N of Valid Cases	13010		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.08.

Table 7 displays the results of the Pearson chi square test for independence. The test is for the hypotheses that were formulated as follows:

- $H_{0;}$ Ethnicity and age at first drink are independent.
- H_1: Ethnicity and age at first drink are dependent.

The results indicated a statistical significant relationship between the ethnicity and age at first drink. The Chi square test revealed that ($\chi^2 = 260.343$ with degrees of freedom DF = (r - 1) * (c - 1) = (8-1) (7-1) = 42 and ($p < 0.0001$). Hence, with the interpretation, [DF is the degree of freedom, r is the number of racial levels and c is the number of voting levels], conclusion can be made as there is sufficient evidence that indicates that ethnicity and age at first drink are dependent. Since the ($P < 0.0001$) is less than the significance level (0.05), the null hypothesis cannot be accepted. The white race emerged across the board with higher percentage in voting levels as 42.81% of count and 41.14% of expected count as never drank, 33.83.81% of count and 41.14% of expected count of drinking at 8 years or younger, 30.00% of count and 41.14% of expected count for 9 or

10 years old, 39.55% of count and 41.15% of expected count for 11 or 12 years old, 41.81% of count and 41.15% of expected count for 13 or 14 years old, 43.73% of count and 41.15% of expected count for 15 or 16 years old, and 37.98% of count and 41.14% of expected count for 17 years old or older. The least percentages were scored by the American Indian/ Alaskan Natives on the following levels of voting as 0.80% of count and 0.88% of expected count for never drank alcohol, 0.88% of expected count for 8 years old or younger, 0.88% of expected count for 9 or 10 years old, 0.94% of count and 0.87% of expected count for 11 or 12 years old, 0.62% of count and 0.88% of expected count for 13 or 14 years old, 0.72% of count and 0.88% of expected count for 15 or 16 years old, and 0.87% of expected count for 17 years old or older. However, Native Hawaiian/ or Pacific Islander[PI] scored the least on the following voting levels with 0.25% of count for 8 years old or younger, 0.34% of count for 9 or 10 years old, and 0.50% of count for 17 years old or older. Therefore, the conclusion supports the existence of a relationship between race and first drinking voting preference as dependent on ethnicity.

Table 8

A Sample Of Table Describing Number Of days In A Month That The Youth Drank Alcohol

Race/Ethnicity		No drink	One day	Two days	Less than 5 days	Less than 9 days	Less than 19 days	More than 20 days
Am Indian / Alaska Native	Mean	0.7273	0.0909	0.0248	0.0165	0.0083	0.0248	0.0083
	N	121	121	121	121	121	121	121
	Std. Deviation	0.44721	0.28868	0.15614	0.12803	0.09091	0.15614	0.09091
	Std. Error of Mean	0.04066	0.02624	0.01419	0.01164	0.00826	0.01419	0.00826
Asian	Mean	0.8717	0.0428	0.0285	0.0163	0.0081	0.0041	0.0041
	N	491	491	491	491	491	491	491
	Std. Deviation	0.33478	0.20254	0.1666	0.12673	0.08998	0.06376	0.06376
	Std. Error of Mean	0.01511	0.00914	0.00752	0.00572	0.00406	0.00288	0.00288
Black or African American	Mean	0.8333	0.0505	0.0321	0.0227	0.0063	0.005	0.0037
	N	2993	2993	2993	2993	2993	2993	2993
	Std. Deviation	0.37279	0.21891	0.17623	0.14903	0.07944	0.07063	0.06052
	Std. Error of Mean	0.00681	0.004	0.00322	0.00272	0.00145	0.00129	0.00111
Native Hawaiian/other PI	Mean	0.7926	0.0741	0.0444	0.0074	0.0074	0.0074	0
	N	135	135	135	135	135	135	135
	Std. Deviation	0.40696	0.26287	0.20685	0.08607	0.08607	0.08607	0
	Std. Error of Mean	0.03503	0.02262	0.0178	0.00741	0.00741	0.00741	0
White	Mean	0.746	0.074	0.0578	0.0541	0.0294	0.0083	0.0072
	N	5449	5449	5449	5449	5449	5449	5449
	Std. Deviation	0.43533	0.26173	0.2334	0.22631	0.16884	0.09051	0.08431
	Std. Error of Mean	0.0059	0.00355	0.00316	0.00307	0.00229	0.00123	0.00114
Hispanic /	Mean	0.7543	0.0877	0.0502	0.0323	0.0185	0.0063	0.0046

(Table Continues)

Latino	N	1734	1734	1734	1734	1734	1734	1734
	Std. Deviation	0.43061	0.28288	0.21836	0.17683	0.13463	0.07942	0.06779
	Std. Error of Mean	0.01034	0.00679	0.00524	0.00425	0.00323	0.00191	0.00163
Multiple – Hispanic	Mean	0.6972	0.0867	0.0572	0.0506	0.0205	0.0096	0.0151
	N	1661	1661	1661	1661	1661	1661	1661
	Std. Deviation	0.45962	0.28147	0.23228	0.21919	0.14164	0.0977	0.12179
	Std. Error of Mean	0.01128	0.00691	0.0057	0.00538	0.00348	0.0024	0.00299
Multiple - Non-Hispanic	Mean	0.7988	0.0734	0.0411	0.0367	0.0103	0.0073	0.0059
	N	681	681	681	681	681	681	681
	Std. Deviation	0.40117	0.26102	0.1987	0.18819	0.10094	0.08543	0.07647
	Std. Error of Mean	0.01537	0.01	0.00761	0.00721	0.00387	0.00327	0.00293
Total	Mean	0.7683	0.071	0.0485	0.0406	0.0194	0.0074	0.0068
	N	13265	13265	13265	13265	13265	13265	13265
	Std. Deviation	0.42191	0.25686	0.21493	0.19745	0.1381	0.08564	0.08209
	Std. Error of Mean	0.00366	0.00223	0.00187	0.00171	0.0012	0.00074	0.00071

Table 8 is a descriptive statistics for each of the dependent variables (Number of days they drank alcohol in a whole month) and how it correlates to the independent variable (race / ethnicity). There is an indication that there were small deviations from the sample mean with the highest standard deviation being 0.45. This outcome confirms that the data were more clustered around the means of each individual variable. In this case, there were no outliers in the data as assessed by the boxplots. The standard error for the means is generally small, which is an indication that the sample means used were more accurate.

Table 9

A Sample Of Table Describing Homogeneity Test Of Variance

	Levene Statistic	df1	df2	*p*
No drink	62.18	7	13257	0
One day	55.344	7	13257	0
Two days	4.077	7	13257	0
Less than 5 days	17.182	7	13257	0
Less than 9 days	26.523	7	13257	0
Less than 19 days	38.914	7	13257	0
More than 20 days	33.147	7	13257	0

Table 9 indicates the Test of Homogeneity of Variances output tests H0: $\sigma^2_{diff} = 0$. The p value is statistically significant for all the different number of days of drink in a month, as the $p < 0.0001$ is less than α level for this test, we then reject H_0 which indicated that the variances are not equal and therefore homogeneity of variance assumption has not been met.

Table 10

A Sample Of Table Describing One Sample Kolmogorov-Smirnov Test

		No drink	One day	Two days	Less than 5 days	Less than 9 days	Less than 19 days	More than 20 days
N		13583	13583	13583	13583	13583	13583	13583
Normal Parameters[a,b]	Mean	0.3117	0.1728	0.1619	0.0964	0.0842	0.0637	0.0741
	Std. Deviation	0.46321	0.37808	0.36837	0.29511	0.27773	0.2442	0.26188
Most Extreme Differences	Absolute	0.438	0.503	0.508	0.532	0.535	0.539	0.537
	Positive	0.438	0.503	0.508	0.532	0.535	0.539	0.537
	Negative	-0.25	-0.324	-0.33	-0.372	-0.381	-0.397	-0.389
Test Statistic		0.438	0.503	0.508	0.532	0.535	0.539	0.537
p. (2-tailed)		.000[c]	.000[c]	.000[c]	.000[c]	.000[c]	.000[c]	.000[c]

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

Table 10 shows the results from Kolmogorov-Smirnov test which was performed to test for the normality of the variables, and at an output $p < 0.0001$, which is statistically significant at $\alpha = 0.05$, the hypothesis for normality is rejected thus number of days of drink does not follow approximate Normal distribution hence the assumption for normality was not met.

Since the variables did not conform to the condition of normality and homogeneity of variance, Chi square test for independence is justified as illustrated in Table 11 and Table 12

Table 11

A Sample Of Table Describing Cross Tabulation Of Race/Ethnicity Based On The Question: How Many Days Youth Drank Alcohol In 30 Days?

			How many days drank alcohol in 30 days							
			0 days	1 or 2 days	3 to 5 days	6 to 9 days	10 to 19 days	20 to 29 days	All 30 days	Total
Race/ Ethnicity	Am Indian / Alaska Native	Count	67	18	6	4	2	2	2	101
		Expected Count	64.9	18.2	8.6	5.4	2.6	0.5	0.9	101
	Asian	Count	357	64	21	7	4	2	3	458
		Expected Count	294.2	82.5	38.8	24.3	11.7	2.4	4.1	458
	Black or African American	Count	1790	422	191	105	46	9	16	2579
		Expected Count	1656.7	464.4	218.4	137	65.9	13.3	23.2	2579
	Native Hawaiian/other PI	Count	90	21	6	3	1	0	1	122
		Expected Count	78.4	22	10.3	6.5	3.1	0.6	1.1	122
	White	Count	3186	906	475	317	149	28	42	5103
		Expected Count	3278	918.9	432.2	271.2	130.5	26.4	45.9	5103
	Hispanic / Latino	Count	983	319	126	82	37	7	10	1564
		Expected Count	1004.7	281.6	132.5	83.1	40	8.1	14.1	1564
	Multiple - Hispanic	Count	850	286	146	90	52	11	29	1464
		Expected Count	940.4	263.6	124	77.8	37.4	7.6	13.2	1464
	Multiple - Non-Hispanic	Count	390	126	46	30	16	3	5	616
		Expected Count	395.7	110.9	52.2	32.7	15.8	3.2	5.5	616
Total		Count	7713	2162	1017	638	307	62	108	12007
		Expected Count	7713	2162	1017	638	307	62	108	12007

Table 12

A Sample Of Table Describing Chi Square Test

	Value	df	*p*
Pearson Chi-Square	163.996[a]	42	0
Likelihood Ratio	167.029	42	0
Linear-by-Linear Association	66.576	1	0
N of Valid Cases	12007		

a. 9 cells (16.1%) have expected count less than 5. The minimum expected count is .52.

Assumption is that not 20% of the expected frequencies should be less than five. Table 12 indicates that only 16.1% < 20% has expected frequencies less than five so the use of Chi square test is justified.

Table11 displays different ethnicities and the number of drinks in a month; it shows the counts at each level and their respective expected frequencies.

Table 12 displays the results of the Pearson chi square test for independence. For this test the hypothesis that were formulated as follows

- $H_{0;}$ Ethnicity and number of drinks in a month are independent.
- H_1: Ethnicity and the number of drinks in a month are dependent.

The cross tabulated results for race /ethnicity using the YRBSS questionnaire, *how many days the youth drank alcohol in 30 days*, indicates there is a statistically significant relationship existing between the independent variable, ethnicity, and the dependent variable, age at first drink. Therefore a Chi square test that is used revealed that ($\chi^2 = 163.996$) with degrees of freedom as = (7-1) (8-1) = 42 and $p < 0.0001$. This outcome based on numbers from the table per races, the white race again is the leading in majority on counts and expected counts in all across the board followed by Blacks or African Americans. The least number of scorers are American Indians / Alaskan Natives that are also followed by the Asians as second least in all the seven scores or voting levels across the board. The conclusion is therefore valid as indicated that there are sufficient evidence to link ethnicity and the number of days in a month that the youth drank alcohol, are dependent on each other.

In *Figure 1* below, shows the frequencies of the number of youths that were involve in this survey classified from the youngest, 12 years and under to the 18 years and over, with a comparison to their gender.

Figure 2 indicates the number of youth who drank alcohol as categorized at different ages in relation to the number of days they drank alcohol in a month period.

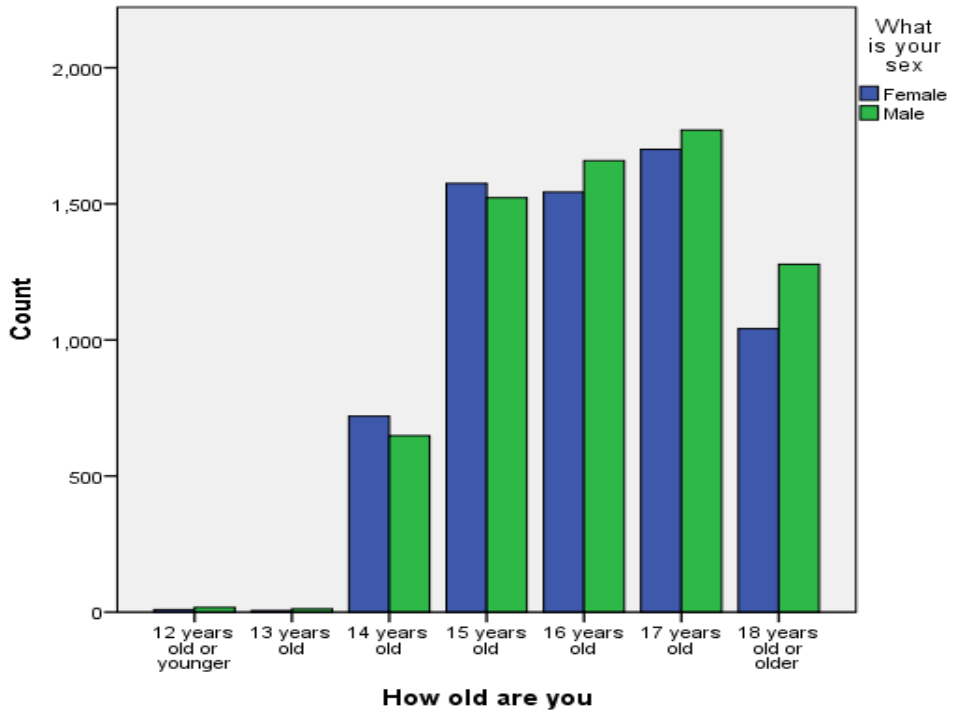

*Figure 1: A diagram showing f*requencies of the number of youths involve in the survey for 12 years and younger to 18 years and older in relation to their gender.

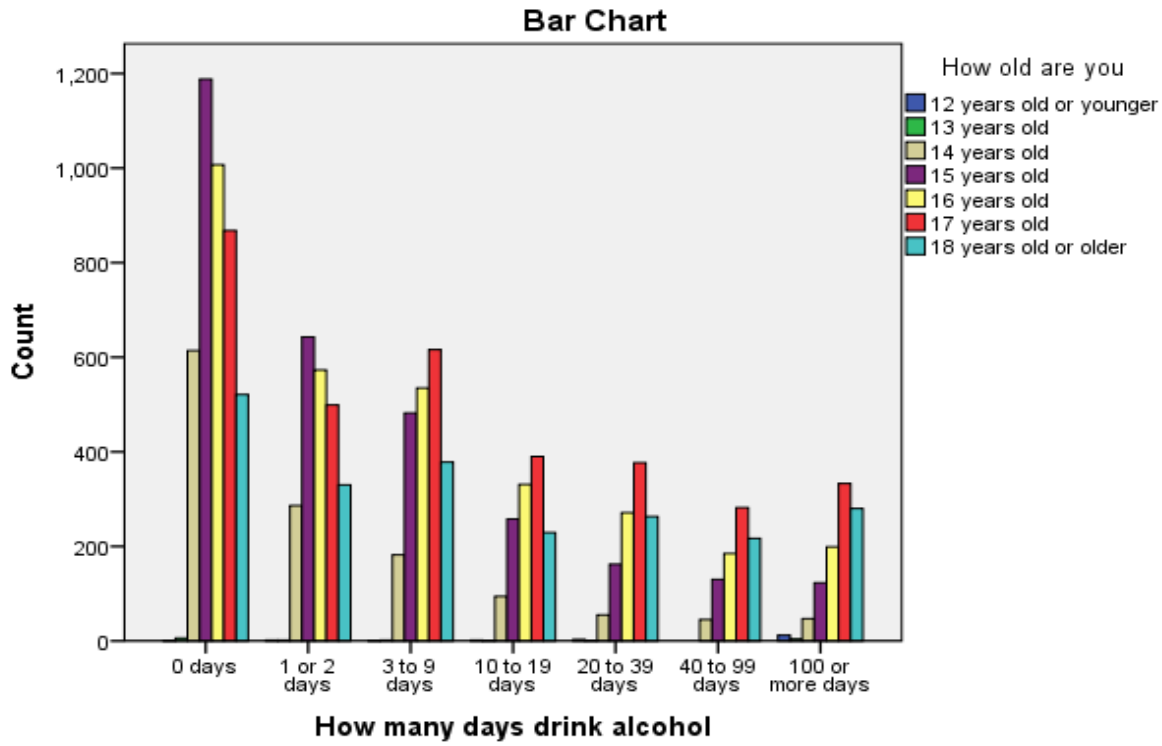

Figure 2: A diagram showing a number of day's youth drank alcohol.

In Figure 1 the frequency of the columns indicates that there were very few respondents who were below the age of 13 years. Majority of respondents were of the age of 14 years and above. Gender was balanced as there were no big variations in the sample sizes between the genders at each age bracket. Figure 2 indicates that majority of the respondents did not take alcohol and the ones who took alcohol were generally 14 years and above. It indicates that almost in all cases, those who were 17 years, had the highest frequency in relation to the number of days that they took alcohol.

Research Question 2. Was there a racial difference in the number of sexual partners among the youth? To address this question, the following factors were considered:

(i) if the respondent had ever had sexual intercourse and if so, age at first sexual intercourse

(ii) The number of sexual partners

At this stage, data was analyzed in different forms and by giving specific null hypothesis

- *Ho*: There is no racial difference in the age at first sex.

This research question revolved around the following survey questionnaire, that acted as dependent variables as well; (i) have you ever had sex; (ii) how many sex partners?; (iii) how many sex partners in the last three months?; (iv) how old were you at first sex?; (v) have you had sex with 4 and more people in life?; (vi) ever had sex before age 13?; (vii) ever had sex with 1 or more people in the last 3 months?

Table 13

A Sample Of Table Of Number Of Respondents On Key Question, Who Had Ever Had Sexual Intercourse/Race And Ethnicity

		Race/Ethnicity								
		Am Indian / Alaska Native	Asian	Black or African American	Native Hawaiian/other PI	White	Hispanic / Latino	Multiple - Hispanic	Multiple - Non-Hispanic	Total
Ever had sex	Yes	49	109	1740	58	2422	760	834	322	6294
	% other Races	0.78	1.73	27.65	0.92	38.48	12.07	13.25	5.12	100.00
	% within Race	46.23	23.49	63.00	45.31	45.59	46.09	53.46	49.09	49.81
	No	57	355	1022	70	2890	889	726	334	6343
	% other Race	0.90	5.60	16.11	1.10	45.56	14.02	11.45	5.27	100.00
	% within Race	53.77	76.51	37.00	54.69	54.41	53.91	46.54	50.91	50.19
Total		106	464	2762	128	5312	1649	1560	656	12637
Total %		0.84	3.67	21.86	1.01	42.04	13.05	12.34	5.19	100

The outcomes in Table 13 indicate that the number of respondents who had sex stood at 49.8% irrespective of Race/Ethnicity.

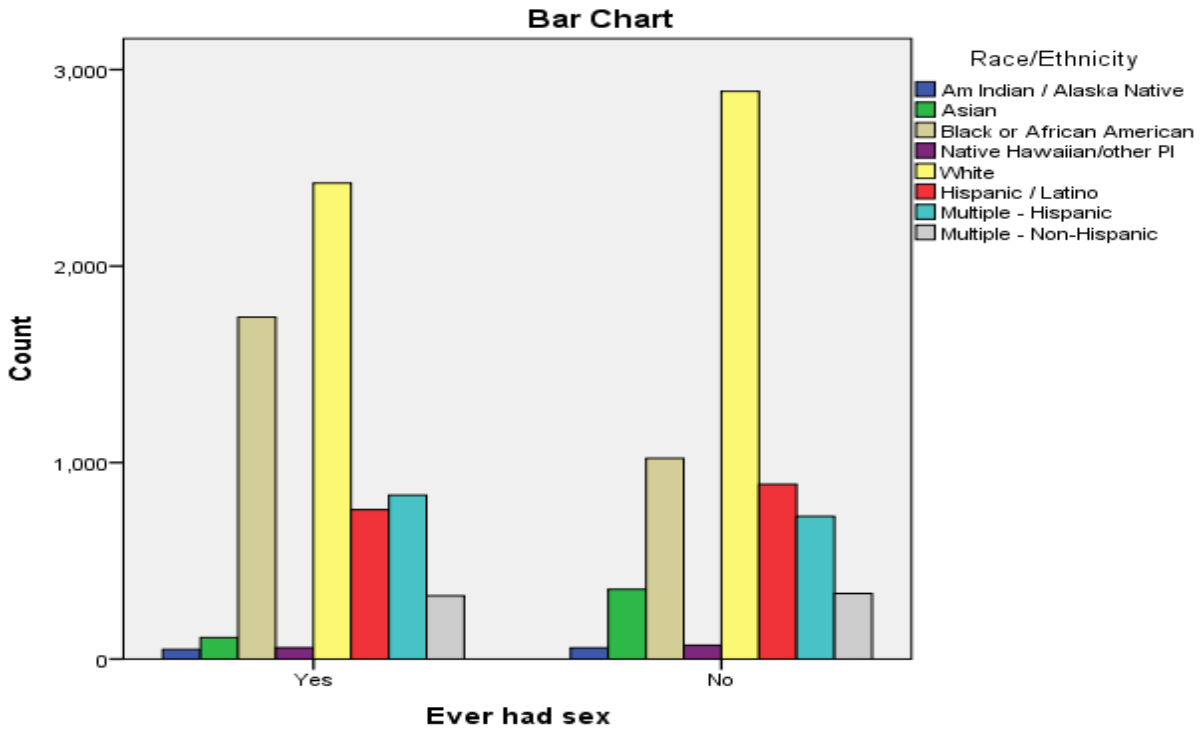

Figure 3. *A sample diagram representing significant number of respondents who have had sex*

Figure 3 is a diagrammatic representation showing a significant number of respondents as have had sex. Therefore, the question that needed to be investigated is; did race play a role on the outcome?

Table 14

A Sample Of Table Showing Cross Tabulations Statistics On Race And Age At First Sexual Intercourse

			How old at first sex								
			Never had sex	11 years old or younger	12 years old	13 years old	14 years old	15 years old	16 years old	17 years old or older	Total
Race/Ethnicity	Am Indian / Alaska Native	Count	57	8	4	4	6	15	9	3	106
		% within Race/Ethnicity	53.80%	7.50%	3.80%	3.80%	5.70%	14.20%	8.50%	2.80%	100.00%
		% within How old at first sex	0.90%	1.80%	1.00%	0.50%	0.40%	1.00%	0.80%	0.50%	0.80%
		% of Total	0.50%	0.10%	0.00%	0.00%	0.00%	0.10%	0.10%	0.00%	0.80%
	Asian	Count	357	6	4	12	23	26	18	20	466
		% within Race/Ethnicity	76.60%	1.30%	0.90%	2.60%	4.90%	5.60%	3.90%	4.30%	100.00%
		% within How old at first sex	5.60%	1.30%	1.00%	1.60%	1.60%	1.80%	1.50%	3.40%	3.70%
		% of Total	2.80%	0.00%	0.00%	0.10%	0.20%	0.20%	0.10%	0.20%	3.70%
	Black or African American	Count	1022	199	186	258	396	313	265	118	2757
		% within Race/Ethnicity	37.10%	7.20%	6.70%	9.40%	14.40%	11.40%	9.60%	4.30%	100.00%
		% within How old at first sex	16.10%	44.60%	45.00%	33.50%	27.80%	21.40%	22.50%	19.90%	21.80%
		% of Total	8.10%	1.60%	1.50%	2.00%	3.10%	2.50%	2.10%	0.90%	21.80%
	Native Hawaiian/other PI	Count	69	5	1	7	15	11	13	5	126
		% within Race/Ethnicity	54.80%	4.00%	0.80%	5.60%	11.90%	8.70%	10.30%	4.00%	100.00%
		% within How old at first sex	1.10%	1.10%	0.20%	0.90%	1.10%	0.80%	1.10%	0.80%	1.00%

	% of Total	0.50%	0.00%	0.00%	0.10%	0.10%	0.10%	0.10%	0.00%	1.00%
White	Count	2885	101	85	258	518	641	553	265	5306
	% within Race/Ethnicity	54.40%	1.90%	1.60%	4.90%	9.80%	12.10%	10.40%	5.00%	100.00%
	% within How old at first sex	45.60%	22.60%	20.60%	33.50%	36.30%	43.90%	46.90%	44.80%	42.00%
	% of Total	22.90%	0.80%	0.70%	2.00%	4.10%	5.10%	4.40%	2.10%	42.00%
Hispanic / Latino	Count	884	36	49	94	181	175	140	86	1645
	% within Race/Ethnicity	53.70%	2.20%	3.00%	5.70%	11.00%	10.60%	8.50%	5.20%	100.00%
	% within How old at first sex	14.00%	8.10%	11.90%	12.20%	12.70%	12.00%	11.90%	14.50%	13.00%
	% of Total	7.00%	0.30%	0.40%	0.70%	1.40%	1.40%	1.10%	0.70%	13.00%
Multiple - Hispanic	Count	724	61	57	99	208	214	122	74	1559
	% within Race/Ethnicity	46.40%	3.90%	3.70%	6.40%	13.30%	13.70%	7.80%	4.70%	100.00%
	% within How old at first sex	11.40%	13.70%	13.80%	12.90%	14.60%	14.60%	10.30%	12.50%	12.40%
	% of Total	5.70%	0.50%	0.50%	0.80%	1.60%	1.70%	1.00%	0.60%	12.40%
Multiple - Non-Hispanic	Count	334	30	27	38	80	66	59	21	655
	% within Race/Ethnicity	51.00%	4.60%	4.10%	5.80%	12.20%	10.10%	9.00%	3.20%	100.00%
	% within How old at first sex	5.30%	6.70%	6.50%	4.90%	5.60%	4.50%	5.00%	3.50%	5.20%
	% of Total	2.60%	0.20%	0.20%	0.30%	0.60%	0.50%	0.50%	0.20%	5.20%
Total	Count	6332	446	413	770	1427	1461	1179	592	12620
	% within Race/Ethnicity	50.20%	3.50%	3.30%	6.10%	11.30%	11.60%	9.30%	4.70%	100.00%
	% within How old at first sex	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	% of Total	50.20%	3.50%	3.30%	6.10%	11.30%	11.60%	9.30%	4.70%	100.00%

Of the survey question “How old were you when you had sexual intercourse for the first time?” the responses were limited to “Never had sex” “younger than 11 years” “12 years old” “13 years old” “14 years old” “15 years old” “16 years old and “17 years old or older” voting.

Approximately 106 American Indian / Alaskan Natives responded to this survey question with 53.8% answered, never had sex; 7.5% had sex when 11 years old or younger; 3.8% had sex when they were 12 years old; 3.8% had first sex at 13 years; 5.7% had first sex at 14 years; 14.2% had first sex at 15 year; 8.5% had first sex at 16 years old and 2.8% had their first sex when they were 17 years old or older.

Asian participants in this survey questions were 466, 76.6% of them answered as never had sex; 1.3% had first sex when 11 years old or younger; 0.9% had first sex at 12 years old; 2.6% had first sex at 13 years old; 4.9% had first sex at 14 years old; 5.6% had first sex at 15 year; 3.9% had first sex at 16 years old and 4.3% had their first sex when they were 17 years old or older.

Blacks or African Americans were 2757 youth participants for the same question, 37.1% answered as never had sex; 7.2% had first sex at 11 years old or younger; 6.7% had first sex at 12 years old; 9.4% had first sex at 13 years old; 14.4% had first sex at 14 years old; 11.4% had first sex at 15 year; 9.6% had first sex at 16 years old and 4.3% had their first sex at 17 years old or older.

Native Hawaiian/other PI were 126 youths in total that answered same question, 54.8% answered as never had sex; 4.0% had first sex at 11 years old or younger; 0.8%

had sex at 12 years old; 5.6% had first sex at 13 years old; 11.9% had first sex at 14 years old; 8.7% had first sex at 15 year; 10.3% had first sex at 16 years old and 4.0% had first sex at 17 years old or older.

White youth participants were 5306 for the same survey question, 54.4% responded as never had sex; 1.9% had first sex at 11 years old or younger; 1.6% had first sex at 12 years old; 4.9% had first sex at 13 years old; 9.8% had first sex at 14 years old; 21.1% had first sex at 15 year; 10.4% had first sex at 16 years old and 5.0% had their first sex at 17 years old or older.

Hispanic / Latino were 1645 in total and 53.7% responded as never had sex; 2.2% had first sex at 11 years old or younger; 3.0% had sex at 12 years old; 5.7% had first sex at 13 years old; 11.0% had first sex at 14 years old; 10.6% had first sex at 15 year; 8.5% had first sex at 16 years old and 5.2% had their first sex at 17 years old or older.

For the multiple – Hispanic race, 1559 youths participated in answering the same survey question: 46.4% responded as never had sex; 3.9% had first sex at 11 years old or younger; 3.7% had first sex at 12 years old; 6.4% had first sex at 13 years old; 13.3% had first sex at 14 years old; 13.7% had first sex at 15 year; 7.8% had first sex at 16 years old and 4.7% had their first sex at 17 years old or older.

For the multiple – non-Hispanic race, 652 youths participated in answering that question: 51.0% responded as never had sex; 4.6% had first sex at 11 years old or younger; 4.1% had first sex at 12 years old; 5.8% had first sex 13 years old; 12.2% had

first sex at 14 years old; 10.1% had first sex at 15 year; 9.0% had first sex at 16 years old and 3.2% had their first sex at 17 years old or older.

In overall, of the eight races that were represented by the respondents, 50.2% responded with never had sex answer; 3.5% had first sex at 11 years old or younger; 3.3% had sex at 12 years old; 6.1% had first sex at 13 years old; 11.3% had first sex at 14 years old; 11.6% had first sex at 15 year; 9.3% had first sex at 16 years old and 4.7% had their first sex at 17 years old or older.

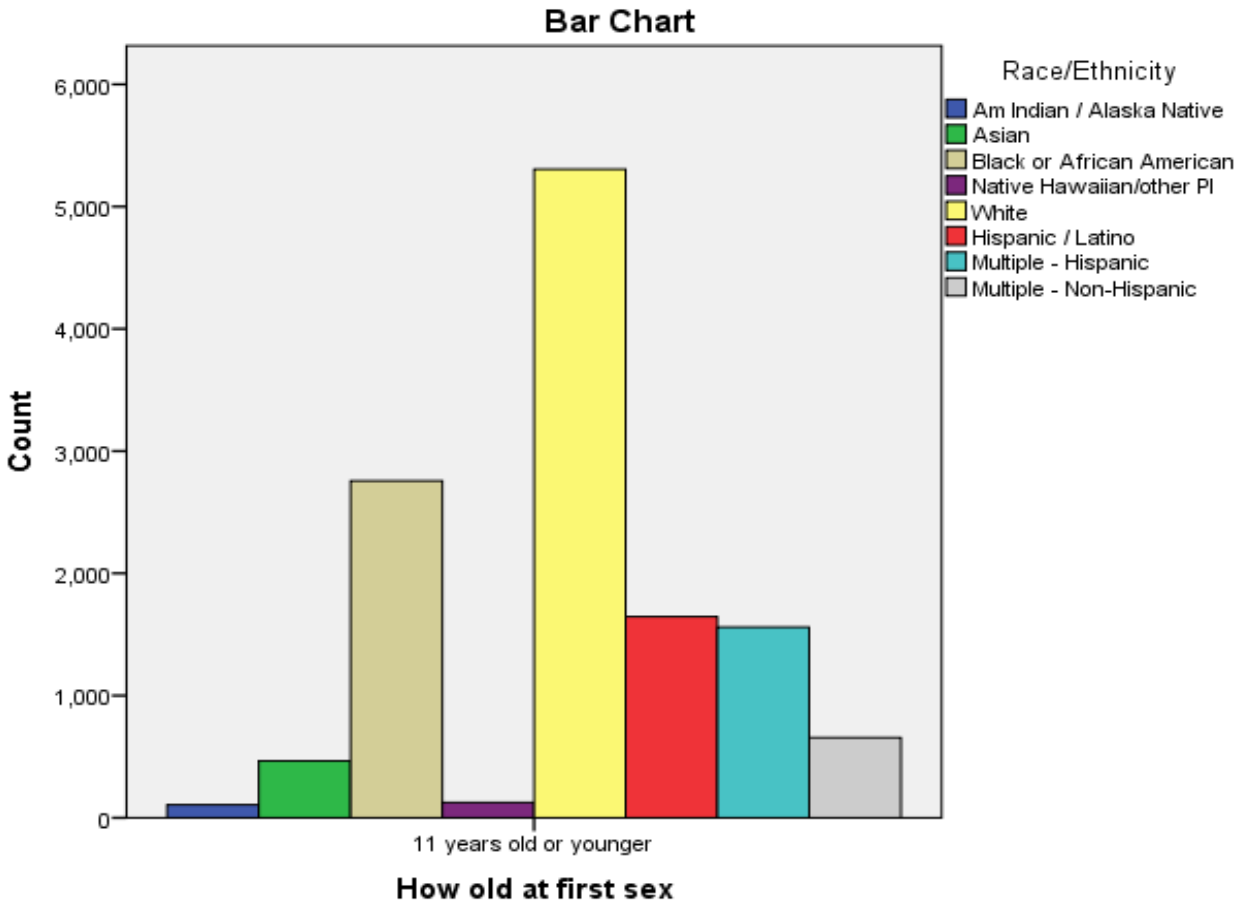

*Figure 4. A sample diagram of f*requency of variables; race/ethnicity and sexual behavior

Table 15

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	708.828[a]	49	0
Likelihood Ratio	693.784	49	0
Linear-by-Linear Association	0.029	1	0.865
N of Valid Cases	12620		

a. 5 cells (7.8%) have expected count less than 5. The minimum expected count is 3.47.

Table 15 displays the results of the Pearson chi square test for independence. The Pearson chi square indicated a .000 of the asymptotic which was less than .05, implying a significant relationship between race/ethnicity and age at first sex. For this test the hypothesis that were formulated as follows

- $H_{0;}$ Ethnicity and Age at first Sex are independent.
- H_1: Ethnicity and Age at First Sex are dependent.

The tabulated results indicate that there is statistically significant relationship between the ethnicity and age at first sex. The Chi square test revealed that (X^2 = 708.828) with degrees of freedom = 49 and $p < 0.0001$. Hence conclusion can be made as there is sufficient evidence that indicates that Ethnicity and age at first sex are dependent i.e. the age at first sex is dependent on Ethnicity.

Table 16

A Sample Table to Show Descriptive Statistics on Ethnicity and Number of Sexual Partners

Race/Ethnicity		Nil	One	Two	Three	Four	Five	Six and more
Am Indian / Alaska Native	Mean	0.4711	0.124	0.0992	0.0331	0.0496	0.0165	0.0826
	N	121	121	121	121	121	121	121
	Std. Deviation	0.5012	0.33091	0.30014	0.17953	0.21799	0.12803	0.27649
	Std. Error of Mean	0.0456	0.03008	0.02729	0.01632	0.01982	0.01164	0.02514
Asian	Mean	0.7251	0.1079	0.0346	0.0143	0.0183	0.0143	0.0305
	N	491	491	491	491	491	491	491
	Std. Deviation	0.4469	0.31062	0.18301	0.11867	0.13428	0.11867	0.17227
	Std. Error of Mean	0.0202	0.01402	0.00826	0.00536	0.00606	0.00536	0.00777
Black or African American	Mean	0.3405	0.133	0.1022	0.0912	0.0565	0.0431	0.149
	N	2993	2993	2993	2993	2993	2993	2993
	Std. Deviation	0.4739	0.33961	0.30301	0.28796	0.23086	0.20312	0.35616
	Std. Error of Mean	0.0087	0.00621	0.00554	0.00526	0.00422	0.00371	0.00651
Native Hawaiian/other PI	Mean	0.5185	0.163	0.1111	0.0593	0.0074	0.0148	0.0741
	N	135	135	135	135	135	135	135

	Std. Deviation	0.5015	0.37071	0.31544	0.23699	0.08607	0.12126	0.26287
	Std. Error of Mean	0.0432	0.03191	0.02715	0.0204	0.00741	0.01044	0.02262
White	Mean	0.5298	0.1687	0.0844	0.0567	0.0356	0.025	0.0727
	N	5449	5449	5449	5449	5449	5449	5449
	Std. Deviation	0.4992	0.37448	0.27804	0.2313	0.18531	0.15601	0.25962
	Std. Error of Mean	0.0068	0.00507	0.00377	0.00313	0.00251	0.00211	0.00352
Hispanic / Latino	Mean	0.5092	0.1822	0.09	0.0513	0.0294	0.0167	0.0681
	N	1734	1734	1734	1734	1734	1734	1734
	Std. Deviation	0.5001	0.38615	0.28621	0.22073	0.16901	0.12827	0.25191
	Std. Error of Mean	0.012	0.00927	0.00687	0.0053	0.00406	0.00308	0.00605
Multiple - Hispanic	Mean	0.4371	0.1752	0.106	0.0578	0.0397	0.0223	0.0975
	N	1661	1661	1661	1661	1661	1661	1661
	Std. Deviation	0.4962	0.38025	0.30788	0.23343	0.1954	0.14762	0.29677
	Std. Error of Mean	0.0122	0.00933	0.00755	0.00573	0.00479	0.00362	0.00728
Multiple - Non-Hispanic	Mean	0.4875	0.1483	0.091	0.0617	0.0382	0.0279	0.0954
	N	681	681	681	681	681	681	681
	Std. Deviation	0.5002	0.35567	0.28788	0.24074	0.19177	0.16481	0.29405
	Std. Error of Mean	0.0192	0.01363	0.01103	0.00923	0.00735	0.00632	0.01127
Total	Mean	0.4772	0.1594	0.0908	0.0624	0.0394	0.0272	0.0921
	N	13265	13265	13265	13265	13265	13265	13265

	Std. Deviation	0.4995	0.3661	0.28729	0.24193	0.19444	0.16271	0.28921
	Std. Error of Mean	0.0043	0.00318	0.00249	0.0021	0.00169	0.00141	0.00251

In Table 16, it is indicated that there were few deviations from the sample mean with the highest deviation being 0.5 in the column of nil partners. This implied that data were more clustered around the means of each individual variable hence there were no severe variations within the data set. The standard error for the mean is generally small, which support the fact that the sample means used were very accurate.

Table 17

A Sample Table To Show Test Of Homogeneity Of Variance

	Levene Statistics	df1	df2	*p*
Nil	171.933	7	13257	0
One	24.622	7	13257	0
Two	19.631	7	13257	0
Three	41.384	7	13257	0
Four	22.749	7	13257	0
Five	24.419	7	13257	0
More than 6	100.245	7	13257	0

Table 17 indicates the Test of Homogeneity of Variances output tests H_0: $\sigma^2_{diff} = 0$. The *p* value is statistically significant for all the variables. $P < 0.0001$ is less than α level for this test, we then reject H_0 which implies that the variances are not equal and therefore homogeneity of variance assumption has not been met.

Table 18

A Sample Table to Show One-Sample Kolmogorov-Smirnov Test

		Nil	One	Two	Three	Four	Five	More than Six
N		13583	13583	13583	13583	13583	13583	13583
Normal Parameters[a,b]	Mean	0.4772	0.1587	0.0897	0.0621	0.0397	0.0273	0.092
	Std. Deviation	0.4995	0.36537	0.28572	0.24141	0.19522	0.163	0.28897
Most Extreme Differences	Absolute	0.353	0.509	0.534	0.539	0.541	0.539	0.533
	Positive	0.353	0.509	0.534	0.539	0.541	0.539	0.533
	Negative	-0.33	-0.332	-0.377	-0.398	-0.419	-0.433	-0.375
Test Statistic		0.353	0.509	0.534	0.539	0.541	0.539	0.533
Asymp. Sig. (2-tailed)		.000[c]	.000[c]	.000[c]	.000[c]	.000[c]	.000[c]	.000[c]

Table 18 displays the results from Kolmogorov-Smirnov test, which was performed to test, the normality of the variables. From the output $P < 0.0001$ which is statistically significant at $\alpha = 0.05$.The hypothesis for Normality is rejected thus the number of sexual partners are not approximately normally distributed; hence the assumption for normality was not met. Based on these two crucial assumptions, that has not been met, prompted the use of Chi-square test for categorical variables.

Table 19

Sample Of Table Showing Cross tabulation Of Race/Ethnicity Versus Number Of Sex Partners

			How many sex partners							
			Never had sex	1 person	2 people	3 people	4 people	5 people	6 or more people	Total
Race/Ethnicity	Am Indian / Alaska Native	Count	57	15	12	4	6	2	10	106
		Expected Count	53.3	17.8	10.1	7	4.4	3	10.3	106
	Asian	Count	356	53	17	7	9	7	15	464
		Expected Count	233.4	78	44.4	30.5	19.3	13.3	45.1	464
	Black or African American	Count	1019	398	306	273	169	129	446	2740
		Expected Count	1378.5	460.6	262.2	180.3	113.7	78.6	266.1	2740
	Native Hawaiian/other PI	Count	70	22	15	8	1	2	10	128
		Expected Count	64.4	21.5	12.2	8.4	5.3	3.7	12.4	128
	White	Count	2887	919	460	309	194	136	396	5301
		Expected Count	2666.9	891.1	507.3	348.8	219.9	152.1	514.8	5301
	Hispanic / Latino	Count	883	316	156	89	51	29	118	1642
		Expected Count	826.1	276	157.1	108.1	68.1	47.1	159.5	1642
	Multiple - Hispanic	Count	726	291	176	96	66	37	162	1554
		Expected Count	781.8	261.2	148.7	102.3	64.5	44.6	150.9	1554
	Multiple - Non-Hispanic	Count	332	101	62	42	26	19	65	647

	Expected Count	325.5	108.8	61.9	42.6	26.8	18.6	62.8	647
Total	Count	6330	2115	1204	828	522	361	1222	12582
	Expected Count	6330	2115	1204	828	522	361	1222	12582

Table 20

A Sample Table Showing A Chi Square Test

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	594.109[a]	42	0
Likelihood Ratio	588.905	42	0
Linear-by-Linear Association	58.567	1	0
N of Valid Cases	12582		

a. 3 cells (5.4%) have expected count less than 5. The minimum expected count is 3.04.

Table 19 displays different ethnicities and number of sexual partners. It shows the counts at each level and their respective expected frequencies. Since only 5.4% of the expected values are less than 5, the test is justified. Table 20 displays the results of the Pearson chi square test for independence. For these test the hypothesis that were formulated as follows

- $H_{0;}$ Ethnicity and the number of sexual partners are independent.
- H_1: Ethnicity and the number of sexual partners are dependent.

These results indicate that there is statistically significant relationship between the ethnicity and number of sexual partners. The Chi square test revealed that (X^2 = 594.109) with degrees of freedom = (7-1) (8-1) = 42 and ($p < 0.0001$). Hence conclusion can be made as there is sufficient evidence that indicates that ethnicity and the number of sexual partners youth chooses to have are dependent. Again in this test, the white race is

at its highest across the board in both the counts and expected counts. The white race dominates other races by the counts of sex partners and so these results, compared to variations and flows from other races other races; I can say that the choice to have as many or as few sexual partners is influenced by race and ethnicity

Research Question 3. *Was there a racial difference in the proportion of drug or alcohol use before sex among the youth?*

Similar tests were run to establish the proportion of drug and alcohol use before sex by the various races. The analysis was based on the survey questionnaire: (i) d*id you use alcohol or (ii) drugs at your last sexual intercourse?* The hypothesis was as H_0: There was racial difference in the proportion of drug and alcohol use before sex:

Table 21 indicated the number of respondents according to their ethnicity and the proportion for those who used alcohol before sex. This is further illustrated by a diagrammatic representation in *Figure 5.*

Table 21

A Sample of Table That Correctly Shows the Number of Respondents According to Their Ethnicity

		Am Indian / Alaska Native	Asian	Black or African American	Native Hawaiian/other PI	White	Hispanic / Latino	Multiple - Hispanic	Multiple - Non-Hispanic	Total
Of current sex, used alcohol last time	No	11	19	274	4	403	103	157	47	1018
	Yes	24	54	960	37	1425	415	440	178	3533
Total		35	73	1234	41	1828	518	597	225	4551

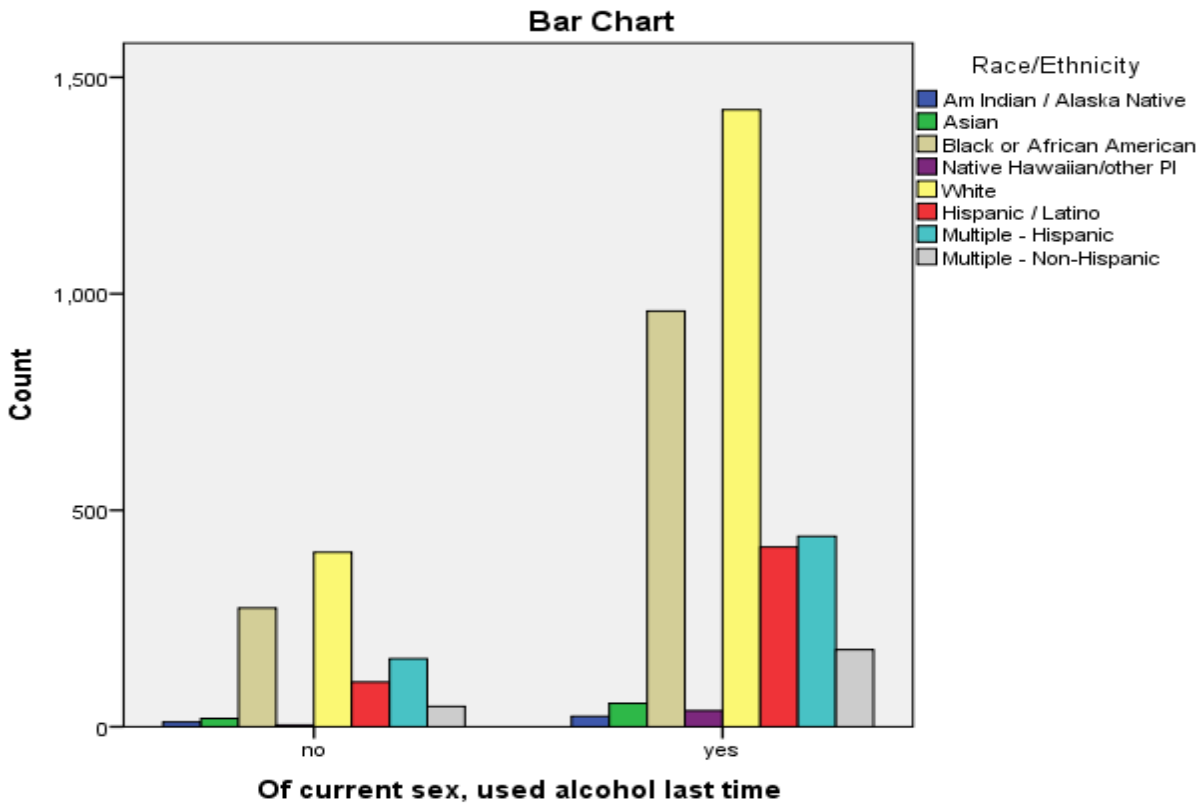

Figure 5. A diagram to represent youth that used alcohol in their last sexual Intercourse

Table 22 shows the descriptive analysis of the respondent by their ethnicity in relation to those who used alcohol at last sex and those who did not.

Table 22

A Sample Of Descriptive Statistics For Different Races In Correlation To Use Of Alcohol Before Any Sexual Intercourse

Race/Ethnicity		Never had sex	Yes	No
Am Indian / Alaska Native	Mean	0.4628	0.1157	0.2893
	N	121	121	121
	Std. Deviation	0.50069	0.3212	0.4553
Asian	Mean	0.7251	0.0448	0.1772
	N	491	491	491
	Std. Deviation	0.44694	0.20709	0.38222
Black or African American	Mean	0.3395	0.1089	0.4698
	N	2993	2993	2993
	Std. Deviation	0.4736	0.31159	0.49917
Native Hawaiian / other PI	Mean	0.5037	0.0444	0.3852
	N	135	135	135
	Std. Deviation	0.50185	0.20685	0.48845
White	Mean	0.5269	0.0952	0.3496
	N	5449	5449	5449
	Std. Deviation	0.49932	0.29358	0.47689
Hispanic / Latino	Mean	0.5087	0.0755	0.3616
	N	1734	1734	1734
	Std. Deviation	0.50007	0.26435	0.4806
Multiple - Hispanic	Mean	0.4329	0.1174	0.3811
	N	1661	1661	1661
	Std. Deviation	0.49562	0.32199	0.4858

Multiple - Non-Hispanic	Mean	0.486	0.0925	0.3744
	N	681	681	681
	Std. Deviation	0.50017	0.28996	0.48434
Total	Mean	0.4749	0.0962	0.3769
	N	13265	13265	13265
	Std. Deviation	0.49939	0.29487	0.48464

Table 22 gives an indication that there were small deviations from the sample mean with the highest deviation being 0.50185 in the column of 'never had sex'. There were many points clustered around the means of each individual variable; hence, no big variations within the data set. The Standard error for the means was generally small, which support the fact that the sample means used were very accurate.

Table 23

A Sample Test Table of Homogeneity Of Variance Based On The Question: Did You Use Alcohol/Drugs At Your Last Sexual Intercourse?

Levene Statistic	df1	df2	*p*
44.927	7	12567	0

Table 23 indicates the Test of Homogeneity of Variances output tests H_0: $\sigma^2_{diff} = 0$. The p value is statistically significant for the number who used alcohol /drugs before sex. $P < 0.0001$ is less than α level for this test, we then reject H_0 which indicates that the variances are not equal and therefore homogeneity of variance assumption has not been met.

Table 24

A Sample Table Showing One Sample Kolmogorov-Smirnov Test for Sexually Active Youth Who Used Alcohol In Their Last Sexual Intercourse

		Of current sex, used alcohol last time
N		4635
Normal Parameters[a,b]	Mean	1.78
	Std. Deviation	0.417
Most Extreme Differences	Absolute	0.48
	Positive	0.295
	Negative	-0.48
Test Statistic		0.48
Asymp. Sig. (2-tailed)		.000[c]

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

Table 24 displays the results from Kolmogorov-Smirnov test which was performed to test for the normality of the variables. From the output $P < 0.0001$ which is statistically significant at $\alpha = 0.05$.The hypothesis for Normality is rejected thus the number who used alcohol /drugs before sex are not approximately normally distributed, hence the assumption for Normality was not met. The use of Chi-square test for categorical variables is therefore justified since the assumptions for this test have been met.

Table 25

A Sample Table Showing Cross Tabulation on Race/Ethnicity Based On The Question: Did You Use Alcohol/Drugs At Your Last Sex?

			Did you use alcohol/drugs @ last sex			Total
			Never had sex	Yes	No	
Race/Ethnicity	Am Indian / Alaska Native	Count	56	14	35	105
		Expected Count	52.6	10.7	41.7	105
	Asian	Count	356	22	87	465
		Expected Count	232.9	47.2	184.9	465
	Black or African American	Count	1016	326	1406	2748
		Expected Count	1376.5	278.8	1092.6	2748
	Native Hawaiian/other PI	Count	68	6	52	126
		Expected Count	63.1	12.8	50.1	126
	White	Count	2871	519	1905	5295
		Expected Count	2652.3	537.3	2105.4	5295
	Hispanic / Latino	Count	882	131	627	1640
		Expected Count	821.5	166.4	652.1	1640
	Multiple - Hispanic	Count	719	195	633	1547
		Expected Count	774.9	157	615.1	1547
	Multiple - Non-Hispanic	Count	331	63	255	649
		Expected Count	325.1	65.9	258.1	649
Total		Count	6299	1276	5000	12575
		Expected Count	6299	1276	5000	12575

Table 26

A Sample Table Showing Chi Square Test

	Value	df	*p*
Pearson Chi-Square	393.682[a]	14	0
Likelihood Ratio	403.204	14	0
Linear-by-Linear Association	13.517	1	0
N of Valid Cases	12575		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 10.65.

Table 25 displays different ethnicities and the number who used alcohol /drugs before sex. It shows the counts at each level and their respective expected frequencies. Since none (0.0%) of the expected values is less than 5, the test is justified. Table 26 displays the results of the Pearson chi square test for independence. For these test the hypothesis that were formulated as follows:

- $H_{0;}$ Ethnicity and the number who used alcohol /drugs before sex are independent
- H_1: Ethnicity and the number who used alcohol /drugs before sex are dependent.

These results indicated that there is statistically significant relationship between the ethnicity and the number who used alcohol /drugs before sex. The Chi square test revealed that (X^2 = 393.682) with degrees of freedom = (8-1) (3-1) = 14 and ($p < 0.0001$). In conclusion, I found evidence that relates ethnicity and the number of youth who use alcohol / drugs before their sexual activities. According to Chi square test, the null

hypothesis is dismissed and there is clear indication s from the cross tabulations that the three levels of voting (never used alcohol, yes, and no) are varied at different numbers per eight different races with White race at the lead, then followed by Black race, then Hispanic, then Multiple Hispanic, followed by Multiple Non-Hispanic with the very least scorers being America Indian or Alaskan Natives, Asians, native Hawaiians or /PI who scores least different and alternately. By looking at the results, it is evident to relate sex as a dependent of Ethnicity.

***Research Question 4*:** the research question 4 stated, *was there a racial difference in the proportion of condom use during sex among the youth?*

The analysis was based on the survey questionnaire: o*f current sexually active youth, who used condom last time they had sexual intercourse?* Table 27 shows the number of respondents according to their ethnicity and those who used condoms during sex. This also gives a diagrammatic representation in Figure 6. The hypothesis to be investigated states *there is racial difference in the proportion of condom use during sexual intercourse among the youth.*

Table 27

A Sample Table Showing Number Of Respondents Who used Condoms Based On Race/Ethnicity.

		Am Indian / Alaska Native	Asian	Black or African American	Native Hawaiian/ other PI	White	Hispanic / Latino	Multiple - Hispanic	Multiple - Non-Hispanic	Total
Of current sex, used condom last time	Yes	16	43	793	24	1002	300	337	138	2653
	No	18	30	405	16	807	214	253	87	1830
Total		34	73	1198	40	1809	514	590	225	4483

This data shows that approximately 60% of the youth participants used condoms during their last sexual intercourse, irrespective of their race.

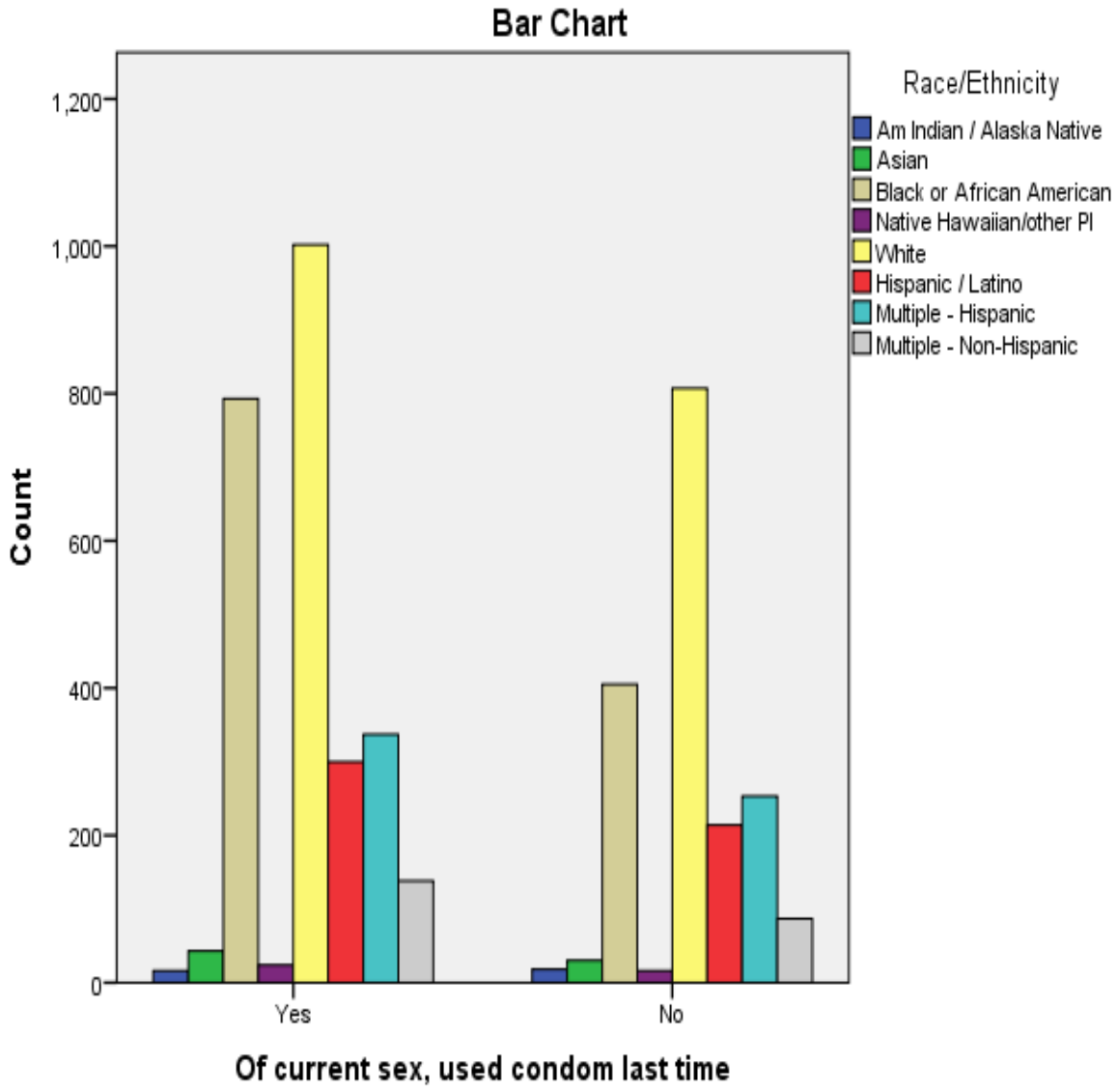

*Figure 6: A diagram showing u*se of condoms within race/ethnic background of users

Table 28

A Sample Of Table Of Descriptive Statistics Representing Youth That Used Condoms Based On Their Races/Ethnicity

Race/Ethnicity		TRUE	FALSE
Am Indian / Alaska Native	Mean	0.1322	0.1488
	N	121	121
	Std. Deviation	0.34015	0.35733
	Std. Error of Mean	0.03092	0.03248
Asian	Mean	0.0876	0.0611
	N	491	491
	Std. Deviation	0.28297	0.23976
	Std. Error of Mean	0.01277	0.01082
Black or African American	Mean	0.265	0.1353
	N	2993	2993
	Std. Deviation	0.44138	0.34212
	Std. Error of Mean	0.00807	0.00625
Native Hawaiian/other PI	Mean	0.1778	0.1185
	N	135	135
	Std. Deviation	0.38375	0.32442
	Std. Error of Mean	0.03303	0.02792

White	Mean	0.1839	0.1481
	N	5449	5449
	Std. Deviation	0.38743	0.35523
	Std. Error of Mean	0.00525	0.00481
Hispanic / Latino	Mean	0.173	0.1234
	N	1734	1734
	Std. Deviation	0.37837	0.32901
	Std. Error of Mean	0.00909	0.0079
Multiple - Hispanic	Mean	0.2029	0.1523
	N	1661	1661
	Std. Deviation	0.40227	0.35944
	Std. Error of Mean	0.00987	0.00882
Multiple - Non-Hispanic	Mean	0.2026	0.1278
	N	681	681
	Std. Deviation	0.40226	0.33406
	Std. Error of Mean	0.01541	0.0128
Total	Mean	0.2	0.138
	N	13265	13265
	Std. Deviation	0.40002	0.34487
	Std. Error of Mean	0.00347	0.00299

Table 28 indicates that there were small deviations from the sample means with the highest deviation being .44138 in the column of *True*. There were many points

clustered around the means of each individual variable; hence, there were no significant variations within the data set. The Standard error for the means is significantly small, which support the fact that the sample means used were accurate. In order to choose on appropriate test for analysis, Levene test for homogeneity of variances and Kolmogorov-Smirnov test was performed for normality of variables. The results are displayed in Table 29 and Table 30.

Table 29

Sample Table to Test Homogeneity of Variances Based On The Youth Who Used Condoms In Their Last Sexual Intercourse

Did you use condom @ last sex

Levene Statistic	df1	df2	*p.*
32.3	7	12480	0

Table 29 indicates the Test of Homogeneity of Variances output tests H_0: $\sigma^2_{diff} = 0$. The *p* value is statistically significant for the number who used condoms. $p < 0.0001$ is less than α level for this test, we then reject H_0 which implies that the variances are not equal and therefore homogeneity of variance assumption has not been met.

Table 30

A Sample Table Showing One Sample Kolmogorov-Smirnov Test

		Of current sex, used condom last time
N		4565
Normal Parameters[a,b]	Mean	1.41
	Std. Deviation	0.491
Most Extreme Differences	Absolute	0.389
	Positive	0.389
	Negative	-0.294
Test Statistic		0.389
Asymp. Sig. (2-tailed)		.000[c]

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

Table 30 displays the results from Kolmogorov-Smirnov test which was performed to test for the normality of the variables. From the output $P < 0.0001$ which is statistically significant at $\alpha = 0.05$.The hypothesis for Normality is rejected thus the number of youths who used condom at last sex are not approximately normally distributed; hence the assumption for Normality was not met. Since the data did not conform to these conditions, Chi-square test for categorical variables which is justified since the assumption for this test has been met.

Table 31

A Sample of Cross Tabulation Table Reflecting Race / Ethnicity And Which Youth Used Condom At Their Last Sexual Intercourse.

			Did you use condom @ last sex			Total
			Never had sex	Yes	No	
Race/Ethnicity	Am Indian / Alaska Native	Count	57	25	23	105
		Expected Count	53.2	32.3	19.6	105
	Asian	Count	356	69	39	464
		Expected Count	234.9	142.6	86.5	464
	Black or African American	Count	1019	1140	546	2705
		Expected Count	1369.4	831.3	504.3	2705
	Native Hawaiian/other PI	Count	69	35	22	126
		Expected Count	63.8	38.7	23.5	126
	White	Count	2878	1394	995	5267
		Expected Count	2666.4	1618.7	981.9	5267
	Hispanic / Latino	Count	885	466	281	1632
		Expected Count	826.2	501.6	304.2	1632
	Multiple - Hispanic	Count	725	506	310	1541
		Expected Count	780.1	473.6	287.3	1541
	Multiple - Non-Hispanic	Count	333	203	112	648
		Expected Count	328	199.2	120.8	648
Total		Count	6322	3838	2328	12488
		Expected Count	6322	3838	2328	12488

Table 32

A Sample Table Of Chi Square Test For Race/Ethnicity And Which Youth Used Condoms At Their Last Sexual Intercourse.

	Value	df	*p*
Pearson Chi-Square	402.962[a]	14	0
Likelihood Ratio	408.127	14	0
Linear-by-Linear Association	3.148	1	0.076
N of Valid Cases	12488		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 19.57.

Table 31 displays different ethnicities and the different opinions on use of condom. It shows the counts at each level and their respective expected frequencies. Since none (0.0%) of the expected values is less than 5 the test is justified. Table 32 displays the results of the Pearson chi square test for independence. For these test the hypothesis that were formulated as follows

- $H_{0;}$ Ethnicity and the different opinions on use of condom are independent.
- H_1: Ethnicity and the different opinions on use of condom are dependent.

These results indicate that there is statistically significant relationship between the ethnicity and the different opinions on condom use. The Chi square test revealed that (χ^2 = 402.962 with degrees of freedom = (3-1) (8-1) = 14 and ($p < 0.0001$). According to Chi square test, the null hypothesis is dismissed and there is clear indication s from the cross tabulations that the three levels of voting (never had sex, yes, and no based on the questionnaire, did you use condoms?) are varied at different numbers per eight different races with Black race at the lead, then followed by Multiple Hispanic race, Native Hawaiian, then Asians, then Multiple Hispanic,

then Whites, then Hispanic, with the very least scorers being America Indian or Alaskan Natives. By looking at the results, it is evident shown that condom use is dependent on Ethnicity.

***Research Question 5*:** The research question 4 stated, *was there relationship in the proportion of condom use during sex and uses of alcohol before sex among the youth?*

The analysis was based on the survey questionnaire: o*f current sexually active youth, who used condom last time they had sexual intercourse?*

All the variables did not meet the assumptions for the normality and homogeneity of dependent variable, as observed from the above tests; hence, the use of Chi-square test for categorical variables was justified since the assumption for the tests were met. The non-parametric tests were performed to establish any existing relationship between the three categorical variables. (Had sex ever, use of condom during sex and use of alcohol before sex). The findings were summarized in Tables 33, 34, and 35.

Table 33

A Sample Table to Establish Relationship Between Three Categorical Variables (had sex ever, use of condom during sex and use of alcohol before sex).

Had sex ever		Did you use alcohol/drugs at your last sexual intercourse?	Did you use condom at your last sexual intercourse?
1	Mean	2.8	2.38
	N	6368	6261
	Std. Deviation	0.403	0.485
2	Mean	1	1
	N	6437	6463
	Std. Deviation	0	0
Total	Mean	1.89	1.68
	N	12805	12724
	Std. Deviation	0.942	0.768

Table 34

A Sample of Cross Tabulation Table to Show the Youths That Used Alcohol/Drugs at Their Last Sexual Intercourse and Those That Used Condoms at Their last Sexual Intercourse

			Did you use condom @ last sex			Total
			Never had sex	Yes	No	
Did you use alcohol/drugs @ last sex	Never had sex	Count	6437	0	0	6437
		Expected Count	3264.9	1979.1	1193	6437
	Yes	Count	0	720	557	1277
		Expected Count	647.7	392.6	236.7	1277
	No	Count	0	3182	1795	4977
		Expected Count	2524.4	1530.2	922.4	4977
Total		Count	6437	3902	2352	12691
		Expected Count	6437	3902	2352	12691

Table 35

A Sample Table Showing Chi Square Test for the Two Variables Condom Use vs. Alcohol and Drugs Use at Last Sexual Intercourse

	Value	df	*p*
Pearson Chi-Square	12741.124[a]	4	0
Likelihood Ratio	17615.2	4	0
Linear-by-Linear Association	9096.107	1	0
N of Valid Cases	12691		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 236.66.

Table 34 displayed cross tabulation for the youth that used alcohol/drugs at their last sexual intercourse versus those that used condoms at their last Sexual Intercourse and Table 35 displays the results of the Pearson chi square test for independence. None (0.0%) of the expected values is less than 5; hence, the x^2 test is justified. For these test the following hypotheses that were formulated as follows

- $H_{0;}$ Alcohol use and Condom use by the youth are independent.
- H_1: Alcohol use and Condom use by the youth are dependent.

These results indicate that there is statistically significant relationship between Alcohol use and Condom use by the youth. The Chi square test revealed that (X^2 = 12741.124) with degrees of freedom = (3-1) (3-1) = 4 and ($p < 0.0001$). Looking at the test table that established a relationship between categorical variables from the questionnaire had sex ever, use of condom during sex, and use of alcohol before sex

levels of voting, it is with strong evidence to conclude that alcohol use and condom use by the youth are dependent at each other. They share same relationship and they trigger each other. Condom use is dependent on alcohol use during sex among the youth. The table also goes ahead to enumerate by quantity which voting levels are at their highest and which ones are at the least effect; however, they both the categorical variables are intersected on numbers. Hence, there is evidence to say a close relationship exist between them.

Evidence of Quality. As had been discussed previously for the study to be credible and to make contributions to the existing literature in the field of youth health, it was dependent on the quality of credible data retrieved from CDC website, data analysis, and verification of findings. The goal of the ontological research focused on experiences in the youths' risky activities and their sexual behavior. Therefore, in order to ensure this study was credible, confirmable, and dependable certain procedures were strictly adhered to throughout data retrieval and analysis.

Process for Credibility. The YRBSS survey questionnaire is uniquely based on third party independent assurance from surveillances from credible participants; however, they are verified by the CDC research team. The YRBSS is a known and authenticated entity by the CDC that gathered data through surveys from samples of students in grades 9-12 from national, state, territorial, tribal government, and local schools system levels. Even though response is collected from individual participants without any coerce and bias, the survey is based on uncorroborated self-reports (CDC, 2013), which is a limitation.

Measure for Confirmability. To ensure confirmability, all the imported data are from very relevant source and materials use is authenticated by the CDC. The questions from the survey questionnaire is analyzed using SPSS tool, with the YRBSS monitors majorly six categories of priority health-risk behaviors among youths that may or contribute to their unintentional injuries and violence, including suicidal behavior, sexual behaviors, unintended pregnancies, and sexually transmitted diseases, including HIV infection, alcohol and other drug use, tobacco use, unhealthy dietary behaviors, and inadequate physical activity among the youth. This study, therefore, conforms to credibility of the selected surveys questionnaire that provided contextual and detailed data relevant to the study intent. The Youth Risk Behavior Surveillance System (YRBSS) is a national survey developed and sponsored by the Centers for Disease Control and Prevention that measures the prevalence of risk behaviors among students in grades 9–12. In 2011, the survey was administered in 47 states, six U.S. territories, two tribal governments, and 22 local jurisdictions (CDC, 2013).

Course for Dependability. The procedure to ensure dependability was confirmed by retrieving a nationally recognized credible data from the CDC source. The CDC agency is well known entity with a website that is used by millions worldwide as credible source for any research material, especially health matters and surveillances. Permission to access material in its website was granted for to me by the agency representative who is authorized for the safe keeping and re-publishing of such data. The consenting documentation from CDC has been published and attached in the Appendix B of this study research.

Summary

Reviewing the data analyses, there are a number of significant findings that have been observed from the study. The data exhibited small deviations from the sample, implying that data were more clustered around the means of each individual variable.

The analyses outcomes were used to answer individual research questions, hypothesis, and for null hypothesis, whichever was found relevant to that outcome. The demographics of participants in the study comprised of school age of grades 9-12, males and females of approximately 13583 youths in their 9 and under -18 and over years old, drawn from eight different races of ethnic backgrounds living in the United States of America.

In the descriptive analyses of the frequencies, there were few respondents who appeared to be below the age of 13 years old with majority being of 14 years and above. The study results, in those descriptive statistics, indicated that those who took alcohol, were generally 14 years old and above, 99% of the respondent who had had sex, did so as early as ages below 11 years.

Appropriate test for the analysis of the data was determined to be non-parametric tests since the null hypothesis were more general and more based on assumptions and are valid for both non-normally distributed data and normally distributed (Public Health Action Support Team [PHAST], 2011). The non-parametric analysis involved testing for

the homogeneity of variances of the dependent variables and also to test for the normality of the dependent variables.

In addition, a Levene test was used to determine if there exists homogeneity of variances among the dependent variables; however, Kolmogorov- Smirnov test was the best option performed to test for normality of variables because of the large sample size used for in the study.

In the all five research questions, the main aim were to examine if any relationship existed between ethnicity of the sampled participants and other dependent variables which included, number of days of alcohol use among the youth, age at first drink, the number of drinks in a month, age at first sex, number of sexual partners, the number of those who used alcohol /drugs before sexual activity, the different opinions on use of condom before sexual activities, and whether alcohol use and condom use during sex by the youth are dependent. The Levene's statistic at $\alpha = 0.05$, and 7 degrees of freedom tested Homogeneity of Variances with the null hypothesis H_0: $\sigma^2_{diff} = 0$ and *p* value ($P < 0.0001$) was less than α level for all the dependent variables. Therefore, *P* value was is evidently statistically significant for all the dependent groups; hence, the null hypothesis was rejected for all variables implying that none of the variables had homogeneous variances.

Looking at the Kolmogorov-Smirnov test which was also performed at $\alpha = 0.05$ with test for the normality of the variables, the output showing, $P < 0.0001$, is also statistically significant for all the dependent variables. So, the hypothesis for Normality is

also rejected for all cases implying that the dependent variables were not approximately normally distributed; hence the assumption for Normality was not met.

Since and because data did not conform to these conditions, Non parametric Test (Chi –square) test for independence had to be used in reference to the five different research questions. The Chi square test was found more appropriate because it was able to test independence between the available categorical variables present in the analyses. The use of the test is also justified because the assumption of not more than 20% of the expected frequencies was below 5.

All the chi- square tests that were conducted revealed a statistically significant relationship between ethnicity and all other dependent variables. Based on the test that were conducted at $\alpha = 0.05$, the *P* value was < 0.0001 and therefore all percentages and numerical differences between individual level of voting scores among different eight ethnic groups were found to hold sufficient evidence that indicated dependency between Ethnicity and all other variables.

On the same note, the results for the analyses investigation of the relationship between Ethnicity and age at first drink were dependent; hence the conclusion age of youth at first drink is dependent on Ethnicity. Other results outcomes from the analyses show results of investigation of the relationship between Ethnicity and the amount of drinks in a month. Using the tests, it was evident that the number of drinks in a month was dependent also on ethnicity, age at first sex was also dependent on Ethnicity, same to the number of sexual partners the youths chooses to have was as well dependent on ethnicity, the number of those that used alcohol /drugs before sex was also found to be

dependent on ethnicity as well and so is to use of condom. In investigating the relationship between alcohol use and condom use by the youth, the study results indicated a significant evidence to reject the null hypothesis; hence, use of condom during sex and alcohol during sexual intercourse among the youth use were found to be dependent.

Chapter 5 therefore offers an interpretation of the study findings, limitation, recommendations, social change implications and experiences based on the collection of sample and analyses performed.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of the study was to test the potential association between race/ethnicity and youth sexual behavior, alcohol consumption and drug use. Data were taken from the CDC's YRBSS. The study result was intended to show whether there is a relationship between the youths' risky behavior (alcohol consumption, drug use, and sexual behavior) and their racial or ethnic backgrounds.

According to CDC (2013), young people aged 15–24 years acquire half of all new STDs and 1 in 4 of the sexually active adolescent, both females and males, contract STD (chlamydia or HPV) compared to older adults. The 2013 YRBSS questionnaire brings social and health awareness through surveys to many youths nationwide (CDC, 2013).

Although drug use among teenagers is considered to have declined between late 1990s to mid-late 2000s, a new report shows an increase in the recent past (National Institute of Drug Abuse, 2014). Drinking and drug used have endangered adolescents in occasionally in multiple ways (Johnson, O'malley, Mlech, Bachman, and Schulenberg, 2015). In 2009 alone, over 23 million persons aged 12 or older needed treatment for an illicit drug or alcohol abuse problem, with 60 percent of those admitted were White, 21 percent were African-American, and 14 percent were Hispanic or Latino, 2.3 percent were American Indian or Alaska Native, and 1 percent were Asian/Pacific Islander (National Institute of Drug Abuse; National Institute of Health & U.S Department of Health and Human Services, 2011).

Among many definitions, high-risk behaviors are those that can have adverse effects on the overall development and well-being of youth, or that might prevent them from future success and development (Rosario and Pohlmeier, 2014). To reduce sexual behavior and risky activities among youth, it is advisable to engage schools and other youth-serving organizations in activities that will help young people adopt lifelong attitudes and behaviors that would be able to support their health and well-being, including behaviors that would reduce their risk for HIV, other STDs, and unintended pregnancies (CDC, 2011).

Interpretation of the Findings

Demographics

Demographic data for US youth of eight races who took part in the 2013 YRBSS included age, gender, ethnicity, and education backgrounds (see Table 1 & Figure 4). Over three quarters of the youth (*n* = 13,261) were reported as valid cases for the survey, with only 318 found missing from four states California, Missouri, Nevada, and Pennsylvania, because their data were not weighted (Brener, et al, 2003). Responders were predominantly White (40%), followed by Black/African American (22.0 %), Hispanic / Latino (13%), Multiple-Hispanic (12.5%), Multiple -Non-Hispanic (5%), Asian (3.6%), Native Hawaiian (1%), and American Indian/ Native Alaskan (0.9%).

Behavior

Greater differences between expected and actual data produced a larger Chi-square value in the outcomes. Since the Chi-square value were larger in most of the outcomes, the greater the probability that a significant difference existed. In using non-

parametric tests in all the five research questions, hypothesis, and null hypothesis, dependent variables were divided in questionnaire forms across the research questions while the independent variable constantly remained as race and ethnicity. The data distribution was evaluated using Kolmogorov-Smirnov test as checked for the homogeneity of the variance using Levene tests. In the *RQ1, Was there a racial difference in alcohol use among the youth?* The following questions retrieved from the YRBSS data were analyzed to determine dependent variables, how many days did you drink alcohol, how old were you when you first drank alcohol, how many days did you drink alcohol in the last 30 days. In conclusion for *RQ1,* the frequencies varied among different races as required and within gender and age categories as illustrated by figure 1 and figure 2, recording a few number of respondents from below age 13 while majority are from age 14 years and above. Gender is shown as was balanced and that those who were 17 years, had the highest frequencies.

Since the hypotheses of ethnicity and age at first drink were both used as independent and dependent in RQ1 chi square, the statistical significance in relationship between the ethnicity and age at first drink showed sufficient evidence that indicated ethnicity and age at first drink are both dependent on another. White race were higher in percentages at all voting levels of counts for 9 or 10 years old and within the counts for 11 or 12 years old as well. This provided impressions of dominancy among that race on that behavior as compared to all other races. The least percentages scores were American Indian/ Alaskan Natives for behavior on 8 year olds, 9 or 10 years old, 11 or 12 years old, 13 or 14 years old, and 17 years old or older counts. However, Native Hawaiian/ or

Pacific Islander[PI] also scored the very least as well among 8 year olds, 9 or 10 year olds, and 17 year olds or older. Hence, it is authentic to interpret that race and first drinking were dependent and an influence on another as well.

In RQ2, the analysis has been measured based on, having sex and with how many sex partners as dependent variables. The comparison duration time was based within the last three months before the survey date. An emphasis was placed on how old the participants were at the first sex and if they have had sex with 4 or more people in their life. Finally, the study also inquires if they ever had sex before age 13. The analyses results showed great significance in the number of respondents who mentioned that they have had sex. The observation was derived from the two formulated hypothesis; ethnicity and age of first sex are independent and ethnicity and age at first sex are dependent. The results interpreted high significance in relationship and it is true there is a relationship between ethnicity and age at first sex. The evidence exist to support that first sex was a dependent on ethnicity, with White race dominating across the board followed by Blacks or African Americans race. As for the number of sexual partners among the youth, the standard error for the mean was generally small which was interpreted to support the sample means accuracy and; hence, ethnicity and the number of sexual partners that youth chose to have were dependent .

In RQ3, the hypothesis H_1 and the null hypothesis H_0, there was racial difference in the proportion of drug and alcohol use before sex; there wasn't a racial difference in the proportion of drug and alcohol use before sex respectively, showed interpretations of youth that used alcohol in their last sexual Intercourse. The three voting levels; never had

sex, yes, and no, with different eight races indicated small deviations on sample means with the highest being 0.50185 in the column for 'never had sex'. Otherwise, many points clustered around the means of each individual variable with Standard error for means becoming generally small, interpreting that sample means used were accurate. A rejection for $H_{0,}$ supported that the variances were not equal and so Chi Square test dismissed the null hypothesis as well. An indication of the three levels of voting (never used alcohol, yes, and no) per the cross tabulations results from the eight different races, interpreted as evidently related sex and ethnicity as dependent on each other, with White race at the lead, followed by Black race, Hispanic, Multiple Hispanic, Multiple Non-Hispanic and with the very least scorers being America Indian or Alaskan Natives, Asians, native Hawaiians or /PI. The interpretation confirms the dependency of the independent variable and dependent variable as an influence of each other.

In *RQ4*, the H_0 that was formulated for the enhancement of the analysis in two parts as follows:

- $H_{0;}$ Ethnicity and the different opinions on use of condom are independent.
- H_1: Ethnicity and the different opinions on use of condom are dependent

The study results were statistically significant at $\alpha = 0.05$, with a Chi Square test embracing the interpretation that condom use by the youth were dependent on ethnicity of those youth. The Chi square test results indicated $\chi 2 = 402.962$ with degrees of freedom as = (3-1) (8-1) = 14 and $p < 0.0001$, which dismissed the null hypothesis qualifying for the dependency.

In RQ5: Was there relationship in the proportion of condom use during sex and uses of alcohol before sex among the youth? The analysis was based on one YRBSS survey questionnaire: Of current sexually active youth, who used condom last time they had sexual intercourse? This RQ5 is similar to RQ4 because both of seek answers for contraception use among the youth using condoms. The data that contained other forms of contraception such as birth control measures among females are reported missing from the SPSS and therefore, analysis could not be done on that part. Since all variables did not meet the assumptions for the normality and homogeneity of dependent variable, a Chi-square test for categorical variables was justified to use and the non-parametric tests performed established an existence of relationship between categorical variables levels (had sex ever, use of condom during sex and use of alcohol before sex). The Chi square test of (X^2 = 12741.124 with degrees of freedom = [3-1] [3-1] = 4 and ($p < 0.0001$) indicated a strong view of a statistically significant relationship existed between alcohol use and condom use by the youth. It is with strong evidence to interpret that alcohol use and condom use by the youth are dependent at each other. They share same relationship and they trigger each other.

Limitations of the Study

Limitations of this study depended mostly on initial limitations experienced by CDC at the initial phase of data collection. Although study report demonstrated data were of acceptable quality, (Brener, et al. 2003), a national, state, territorial, tribal, and large urban school district only applied to youths who attended school and not those that did not, therefore, all views from the general youth population were not comprehensively

represented. Limitations at the initial survey were based on uncorroborated self-reports and not all states agreed to participate in the every survey (CDC, 2013), were found relevant to the analyses studies as well.

Sources according to Brener, et al (2003) shared same views with CDC, (2013), survey was only given to youth who were in school, but ignored youth who had dropped out of school or are in juvenile detention facilities or mental hospitals and are at higher risk for suicide than those who are in school. Raw data was collected, observed and taken into considerations by the YRBSS team even though chances of underreporting or over reporting of behaviors could not have been determined (Brener, et al, 2003).

Since it is a cross sectional as well, there were difficulties to determine temporal relationship between exposure and outcome and could have excess prevalence from long duration cases. Also as a limitation, cross sectional is unable to measure incidences and associations identified maybe difficult to interpret and susceptible to bias due to low response and misclassifications due to recall bias (Hennekens & Burling, 1987).

Recommendations

In light of the study outcomes and interpretations, the recommendations for future research depended upon the gap that exists on this study type. The following various factors plays a huge role in considering recommending change among youth to better their lives:

1) *Decrease Risk factors that could increase behavior:* To enable a healthy youth population, more effective intervention measures must be in place to assist in the reduction of high risk factors among young people to avoid increase of odd (Healthy Vermonters, 2016). Children become of high risk behavior while increasing the protective factors that buffer children from the full impact of such risk factors and other life stressors, a goal of every family, school, and youth serving community organization (Healthy Vermonters, 2016). Some recommendations on healthy measures and suggestions according to Healthy Vermonters (2016) included:

- increase pro-social bonds
- teach "life" skills, such as refusal, negotiation, and decision-making skills
- set and enforce clear expectations for behavior
- provide caring and support
- set high expectations for success
- provide opportunities for meaningful involvement

In relevance to the above suggestions, it is therefore important to try and make a model for the youth in the United States to have easy access of paraphernalia such as condoms, like they do in other countries (de Graaf, Kruijer, van Acker, & Meijer, 2011)and more so, with focus on certain races. Adolescent sexuality is complex, multidimensional phenomenon and can consist of attitudes, values, behavior, knowledge, and relationships (Diamond & Savin-Williams, 2009; Rotosky, Galliher, Welsh & Kawaguchi, 2000), this idea defines the need to effective prevention methods.

2) *Discourage sexual activities if not encourage total abstinence among the growing early ages of the youth due to STD and STIs:* The study literature reviews indicated young people of different racial backgrounds aged 15–24 years acquired half of all new STDs and that, 1 in 4 sexually active of those adolescents, both females and males, contracted STD, such as chlamydia or human papillomavirus (HPV) compared with older adults (CDC, 2014). The theoretical and conceptual structure of problem-behavior theory is both complex and comprehensive spread and ideas and beliefs throughout a population (Jessor, 1998). In other views, every person should have the opportunity to attain his or her full health potential and there is a clear need to scale up prevention research efforts tailored for this subgroup and other diverse groups (CDC, 2013). These studies failed to associate all these behaviors to a comprehensive and diverse racial background among the youth living in the United States, especially on urban youth, who have sexual intercourse with men; have high prevalence of HIV infection (CDC, 2011). These arguments therefore prompts for need to discuss into further the gap that is lucking so as to build a better future to healthy and youthful community. It is eminent that people get involved and enforce healthiness.

3) *Bridge the Gap between Intentionality and Behavior.* As early as the 1970s, the relation between personality characteristics such as extraversion and sexual behaviors among late adolescents received attention (Barnes & Malamuth, 2014, citing Eysenck, 1976). This study has attempted to address the gaps in the literature review. It is evident that a wide gap in the youth sexual, alcohol and drug use behavior in comprehensive relation to their racial background are lacking, especially, on relationship of their sexual

risk-taking behavior, their alcohol and drug use to their racial backgrounds and that adolescent relationships are frequently brief, with a median duration of a romantic relationship among male adolescents and failure to use a condom is just due to lifetime substance-use scale or, alternatively, with age at initiation of alcohol (Santelli, Lindberg, Abma, McNeely & Resnick, 2000). Studies on relationship between alcohol, drug use and sexual risk taking have not examined the impact of lifetime use and current use simultaneously (Halpern & Hallfors, Bauer, Iritani, Waller & Cho, 2004: Santelli, et. al, 2000). It is therefore my belief without a doubt that a more practicable and efficient interventions should be in place that will target races to implement knowledge, skills and abilities to making better youth behavior.

Implications

Positive Social Change

In the analyses process for the CDC 2013 YRBSS study surveys, findings among the youth participants who were diversely represented from eight different ethnicities living in the U.S. found that this populations' health is underscored in many studies and according to National Institute of Health and Institute of Medicines, (2009), a social change paradigm require youth to immediately take an action to change. The study recommended awareness, adaptability, responsibility, and potentiality to assist the youth population with their unfolding experiences, elements of self- esteem and that teen health and behavior should be highly promoted and not simply be a placement of advertisements. Most adverts that are communicated on youth programs should have Messaging strategies that are more than merely sell the features of a product; but depicts

a lifestyle that adolescents can learn from and aspire to achieve. In doing the social change paradigm, advertising and marketing strategies should be on campaigns that strive for high brand awareness and affinity among teens (Wong et al., (2004).

As the question remain, and replication is needed, and if not essentially changed to go through behavior for a change in social norms (Riley et al., 2017), public health leaders must prioritize goals to a more efficient and catering program able to provide life changing information to youth by education, providing health officials, public figures, involve parents, and the youth themselves to build them to be strong advocates themselves for health education and promotion, exemplify the highest ethical principles and standards of practice on all professionals and disciplines whose primary purpose is health education, prevention and promotion (American Public Health Association, 2016). Society should change ideologies and beliefs and be pragmatic and have measurable lifestyles. Therefore, it is with concern to secure the rest of the population's social change structures and work to build a healthy youth community in the U.S.

Conclusion

Based on the five RQs analyses, this study results justified and dismissed all the null hypotheses that were related to the RQs themselves. A non-parametric statistical analyses used clearly enabled the conclusion by rejecting them all; hence, the interpretation that dependent variables and independent variables in this study were found to be dependent on each other and therefore various dependent variables are incentivized by race and ethnicity.

However, there were limitations in the study experienced by CDC initially at the time of data collection. They were overcome and never stopped data collection even though some meager reports were found to be missing. They did not stop the study to vouch for recommendations that would enhance the lives of the youth. There is an existence of health gap among the youth health and behavior and therefore, this study has come up with stronger recommendations to establish a healthier and meaningful youth behavior. Some of the recommendations such as building a stronger and a more effective intervention process for the youth focusing deeply on ethnicity is highly vital and some of these opinions from different researcher could be borrowed to help as building blocks to a healthier youth. They include, decreasing risk factors that could increase behavior, discouraging sexual activities, if not, encourage total abstinence among the growing early ages of the youth due to STD and STIs, and finally bridging the gap between intentionality and behavior.

In conclusion, if the study recommendations are implemented, an undivided positive change would be vividly realized among the youth using different societal agents of change such as educators, health officials, public figures, parents, and the youth themselves.

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Appendix A

2013 National Youth Risk Behavior Survey

Form Approved OMB No.: 0920-0493 Expiration Date:

2013 National Youth Risk Behavior Survey

This survey is about health behavior. It has been developed so you can tell us what you do that may affect your health. The information you give will be used to improve health education for young people like yourself.

DO NOT write your name on this survey. The answers you give will be kept private. No one will know what you write. Answer the questions based on what you really do.

Completing the survey is voluntary. Whether or not you answer the questions will not affect your grade in this class. If you are not comfortable answering a question, just leave it blank.

The questions that ask about your background will be used only to describe the types of students completing this survey. The information will not be used to find out your name. No names will ever be reported.

Make sure to read every question. Fill in the ovals completely. When you are finished, follow the instructions of the person giving you the survey. Public reporting burden for this collection of information is estimated to average 45 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: CDC Reports Clearance Officer, 1600 Clifton Road, MS D-74, Atlanta, GA 30333, ATTN:PRA (0920-0493)

Thank you very much for your help.

2013 national YRBS

DIRECTIONS
Use a #2 pencil only.
Make dark marks.
Fill in a response like this: A B ■ D
If you change your answer, erase your old answer completely.

1. How old are you?

A. 12 years old or younger
B. 13 years old
C. 14 years old
D. 15 years old
E. 16 years old
F. 17 years old
G. 18 years old or older

2. What is your sex?

A. Female
B. Male

3. In what grade are you?

A. 9th grade
B. 10th grade
C. 11th grade
D. 12th grade
E. Ungraded or other grade

4. Are you Hispanic or Latino?

A. Yes
B. No

5. What is your race? **(Select one or more responses.)**

A. American Indian or Alaska Native
B. Asian
C. Black or African American
D. Native Hawaiian or Other Pacific Islander
E. White

6. How tall are you without your shoes on?
Directions: Write your height in the shaded blank boxes. Fill in the matching oval below each number.

Example

Height	
Feet	**Inches**
5	**7**
3	**0**
4	**1**
	2
6	**3**
7	**4**
	5
	6
	7
	8
	9
	10
	11

Height	
Feet	**Inches**
5	**7**
3	**0**
4	**1**
5	**2**
6	**3**
7	**4**
	5
	6
	7
	8
	9
	10
	11

7. How much do you weigh without your shoes on?

Directions: Write your weight in the shaded blank boxes. Fill in the matching oval below each number.

Example		
Weight		
Pounds		
1	5	2
	0	0
1	1	1
2	2	
3	3	3
	4	4
		5
	6	6
	7	7
	8	8
	9	9
	10	10

Weight		
Pounds		
1	5	2
0	0	0
1	1	1
2	2	2
3	3	3
	4	4
	5	5
	6	6
	7	7
	8	8
	9	9
	10	10

The next 5 questions ask about safety.

8. **When you rode a bicycle** during the past 12 months, how often did you wear a helmet?

A. I did not ride a bicycle during the past 12 months

B. Never wore a helmet

C. Rarely wore a helmet

D. Sometimes wore a helmet

E. Most of the time wore a helmet

F. Always wore a helmet

9. How often do you wear a seat belt when **riding** in a car driven by someone else?

A. Never

B. Rarely

C. Sometimes

D. Most of the time

E. Always

10. During the past 30 days, how many times did you **ride** in a car or other vehicle **driven by someone who had been drinking alcohol**?

A. 0 times

B. 1 time

C. 2 or 3 times

D. 4 or 5 times

E. 6 or more times

11. During the past 30 days, how many times did you **drive** a car or other vehicle **when you had been drinking alcohol**?

A. I did not drive a car or other vehicle during the past 30 days

B. 0 times

C. 1 time

D. 2 or 3 times

E. 4 or 5 times

F. 6 or more times

12. During the past 30 days, on how many days did you **text or e-mail** while **driving** a car or other vehicle?

A. I did not drive a car or other vehicle during the past 30 days

B. 0 days

C. 1 or 2 days

D. 3 to 5 days

E. 6 to 9 days

F. 10 to 19 days

G. 20 to 29 days

H. All 30 days

The next 11 questions ask about violence-related behaviors.

13. During the past 30 days, on how many days did you carry **a weapon** such as a gun, knife, or club?

A. 0 days

B. 1 day

C. 2 or 3 days

D. 4 or 5 days

E. 6 or more days

14. During the past 30 days, on how many days did you carry **a gun**?

A. 0 days

B. 1 day

C. 2 or 3 days

D. 4 or 5 days

E. 6 or more days

15. During the past 30 days, on how many days did you carry a weapon such as a gun, knife, or club **on school property**?

A. 0 days

B. 1 day

C. 2 or 3 days

D. 4 or 5 days

E. 6 or more days

16. During the past 30 days, on how many days did you **not** go to school because you felt you would be unsafe at school or on your way to or from school?

A. 0 days

B. 1 day

C. 2 or 3 days

D. 4 or 5 days

E. 6 or more days

17. During the past 12 months, how many times has someone threatened or injured you with a weapon such as a gun, knife, or club **on school property**?

A. 0 times

B. 1 time

C. 2 or 3 times

D. 4 or 5 times

E. 6 or 7 times

F. 8 or 9 times

G. 10 or 11 times

H. 12 or more times

18. During the past 12 months, how many times were you in a physical fight?

A. 0 times

B. 1 time

C. 2 or 3 times

D. 4 or 5 times

E. 6 or 7 times

F. 8 or 9 times

G. 10 or 11 times

H. 12 or more times

19. During the past 12 months, how many times were you in a physical fight in which you were injured and had to be treated by a doctor or nurse?

A. 0 times

B. 1 time

C. 2 or 3 times

D. 4 or 5 times

E. 6 or more times

20. During the past 12 months, how many times were you in a physical fight **on school property**?

A. 0 times

B. 1 time

C. 2 or 3 times

D. 4 or 5 times

E. 6 or 7 times

F. 8 or 9 times

G. 10 or 11 times

H. 12 or more times

21. Have you ever been physically forced to have sexual intercourse when you did not want to?

A. Yes

B. No

22. During the past 12 months, how many times did someone you were dating or going out with physically hurt you on purpose? (Count such things as being hit, slammed into something, or injured with an object or weapon.)

A. I did not date or go out with anyone during the past 12 months

B. 0 times

C. 1 time

D. 2 or 3 times

E. 4 or 5 times

F. 6 or more times

23. During the past 12 months, how many times did someone you were dating or going out with force you to do sexual things that you did not want to do? (Count such things as kissing, touching, or being physically forced to have sexual intercourse.)

A. I did not date or go out with anyone during the past 12 months

B. 0 times

C. 1 time

D. 2 or 3 times

E. 4 or 5 times

F. 6 or more times

The next 2 questions ask about bullying. Bullying is when 1 or more students tease, threaten, spread rumors about, hit, shove, or hurt another student over and over again. It is not bullying when 2 students of about the same strength or power argue or fight or tease each other in a friendly way.

24. During the past 12 months, have you ever been bullied **on school property**?

A. Yes

B. No

25. During the past 12 months, have you ever been **electronically** bullied? (Count being bullied through e-mail, chat rooms, instant messaging, websites, or texting.)

    A. Yes

    B. No

The next 5 questions ask about sad feelings and attempted suicide. Sometimes people feel so depressed about the future that they may consider attempting suicide that is, taking some action to end their own life.

26. During the past 12 months, did you ever feel so sad or hopeless almost every day for **two weeks or more in a row** that you stopped doing some usual activities?

    A. Yes

    B. No

27. During the past 12 months, did you ever **seriously** consider attempting suicide?

    A. Yes

    B. No

28. During the past 12 months, did you make a plan about how you would attempt suicide?

    A. Yes

B. No

29. During the past 12 months, how many times did you actually attempt suicide?

A. 0 times

B. 1 time

C. 2 or 3 times

D. 4 or 5 times

E. 6 or more times

30. **If you attempted suicide** during the past 12 months, did any attempt result in an injury, poisoning, or overdose that had to be treated by a doctor or nurse?

A. **I did not attempt suicide** during the past 12 months

B. Yes

C. No

The next 10 questions ask about tobacco use.

31. Have you ever tried cigarette smoking, even one or two puffs?

A. Yes

B. No

32. How old were you when you smoked a whole cigarette for the first time?

A. I have never smoked a whole cigarette

B. 8 years old or younger

C. 9 or 10 years old

D. 11 or 12 years old

E. 13 or 14 years old

F. 15 or 16 years old

G. 17 years old or older

33. During the past 30 days, on how many days did you smoke cigarettes?

A. 0 days

B. 1 or 2 days

C. 3 to 5 days

D. 6 to 9 days

E. 10 to 19 days

F. 20 to 29 days

G. All 30 days

34. During the past 30 days, on the days you smoked, how many cigarettes did you smoke **per day**?

A. I did not smoke cigarettes during the past 30 days

B. Less than 1 cigarette per day

C. 1 cigarette per day

D. 2 to 5 cigarettes per day

E. 6 to 10 cigarettes per day

F. 11 to 20 cigarettes per day

G. More than 20 cigarettes per day

35. During the past 30 days, how did you **usually** get your own cigarettes? (Select only **one** response.)

A. I did not smoke cigarettes during the past 30 days

B. I bought them in a store such as a convenience store, supermarket, discount store, or gas station

C. I bought them from a vending machine

D. I gave someone else money to buy them for me

E. I borrowed (or bummed) them from someone else

F. A person 18 years old or older gave them to me

G. I took them from a store or family member

H. I got them some other way

36. During the past 30 days, on how many days did you smoke cigarettes **on school property**?

A. 0 days

B. 1 or 2 days

C. 3 to 5 days

D. 6 to 9 days

E. 10 to 19 days

F. 20 to 29 days

G. All 30 days

37. Have you ever smoked cigarettes daily, that is, at least one cigarette every day for 30 days?

A. Yes

B. No

38. During the past 12 months, did you ever try **to quit** smoking cigarettes?

A. I did not smoke during the past 12 months

B. Yes

C. No

39. During the past 30 days, on how many days did you use **chewing tobacco, snuff, or dip**, such as Redman, Levi Garrett, Beechnut, Skoal, Skoal Bandits, or Copenhagen?

A. 0 days

B. 1 or 2 days

C. 3 to 5 days

D. 6 to 9 days

E. 10 to 19 days

F. 20 to 29 days

G. All 30 days

40. During the past 30 days, on how many days did you smoke **cigars, cigarillos, or little cigars**?

A. 0 days

B. 1 or 2 days

C. 3 to 5 days

D. 6 to 9 days

E. 10 to 19 days

F. 20 to 29 days

G. All 30 days

The next 6 questions ask about drinking alcohol. This includes drinking beer, wine, wine coolers, and liquor such as rum, gin, vodka, or whiskey. For these questions, drinking alcohol does not include drinking a few sips of wine for religious purposes.

41. During your life, on how many days have you had at least one drink of alcohol?

A. 0 days

B. 1 or 2 days

C. 3 to 9 days

D. 10 to 19 days

E. 20 to 39 days

F. 40 to 99 days

G. 100 or more days

42. How old were you when you had your first drink of alcohol other than a few sips?

A. I have never had a drink of alcohol other than a few sips

B. 8 years old or younger

C. 9 or 10 years old

D. 11 or 12 years old

E. 13 or 14 years old

F. 15 or 16 years old

G. 17 years old or older

43. During the past 30 days, on how many days did you have at least one drink of alcohol?

A. 0 days

B. 1 or 2 days

C. 3 to 5 days

D. 6 to 9 days

E. 10 to 19 days

F. 20 to 29 days

G. All 30 days

44. During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours?

A. 0 days

B. 1 day

C. 2 days

D. 3 to 5 days

E. 6 to 9 days

F. 10 to 19 days

G. 20 or more days

45. During the past 30 days, what is the largest number of alcoholic drinks you had in a row, that is, within a couple of hours?

A. I did not drink alcohol during the past 30 days

B. 1 or 2 drinks

C. 3 drinks

D. 4 drinks

E. 5 drinks

F. 6 or 7 drinks

G. 8 or 9 drinks

H. 10 or more drinks

46. During the past 30 days, how did you **usually** get the alcohol you drank?

A. I did not drink alcohol during the past 30 days

B. I bought it in a store such as a liquor store, convenience store, supermarket, discount store, or gas station

C. I bought it at a restaurant, bar, or club

D. I bought it at a public event such as a concert or sporting event

E. I gave someone else money to buy it for me

F. Someone gave it to me

G. I took it from a store or family member

H. I got it some other way

The next 3 questions ask about marijuana use. Marijuana also is called grass or pot.

47. During your life, how many times have you used marijuana?

A. 0 times

B. 1 or 2 times

C. 3 to 9 times

D. 10 to 19 times

E. 20 to 39 times

F. 40 to 99 times

G. 100 or more times

48. How old were you when you tried marijuana for the first time?

A. I have never tried marijuana

B. 8 years old or younger

C. 9 or 10 years old

D. 11 or 12 years old

E. 13 or 14 years old

F. 15 or 16 years old

G. 17 years old or older

49. During the past 30 days, how many times did you use marijuana?

A. 0 times

B. 1 or 2 times

C. 3 to 9 times

D. 10 to 19 times

E. 20 to 39 times

F. 40 or more times

The next 10 questions ask about other drugs.

50. During your life, how many times have you used **any** form of cocaine, including powder, crack, or freebase?

A. 0 times

B. 1 or 2 times

C. 3 to 9 times

D. 10 to 19 times

E. 20 to 39 times

F. 40 or more times

51. During your life, how many times have you sniffed glue, breathed the contents of aerosol spray cans, or inhaled any paints or sprays to get high?

A. 0 times

B. 1 or 2 times

C. 3 to 9 times

D. 10 to 19 times

E. 20 to 39 times

F. 40 or more times

52. During your life, how many times have you used **heroin** (also called smack, junk, or China White)?

A. 0 times

B. 1 or 2 times

C. 3 to 9 times

D. 10 to 19 times

E. 20 to 39 times

F. 40 or more times

53. During your life, how many times have you used **methamphetamines** (also called speed, crystal, crank, or ice)?

A. 0 times

B. 1 or 2 times

C. 3 to 9 times

D. 10 to 19 times

E. 20 to 39 times

F. 40 or more times

54. During your life, how many times have you used **ecstasy** (also called MDMA)?

A. 0 times

B. 1 or 2 times

C. 3 to 9 times

D. 10 to 19 times

E. 20 to 39 times

F. 40 or more times

55. During your life, how many times have you used **hallucinogenic drugs**, such as LSD, acid, PCP, angel dust, mescaline, or mushrooms?

A. 0 times

B. 1 or 2 times

C. 3 to 9 times

D. 10 to 19 times

E. 20 to 39 times

F. 40 or more times

56. During your life, how many times have you taken **steroid pills or shots** without doctor's prescription?

A. 0 times

B. 1 or 2 times

C. 3 to 9 times

D. 10 to 19 times

E. 20 to 39 times

F. 40 or more times

57. During your life, how many times have you taken a **prescription drug** (such as OxyContin, Percocet, Vicodin, codeine, Adderall, Ritalin, or Xanax) without a doctor's prescription?

A. 0 times

B. 1 or 2 times

C. 3 to 9 times

D. 10 to 19 times

E. 20 to 39 times

F. 40 or more times

58. During your life, how many times have you used a needle to inject any **illegal** drug into your body?

A. 0 times

B. 1 time

C. 2 or more times

59. During the past 12 months, has anyone offered, sold, or given you an illegal drug **on school property**?

A. Yes

B. No

The next 7 questions ask about sexual behavior.

60. Have you ever had sexual intercourse?

A. Yes

B. No

61. How old were you when you had sexual intercourse for the first time?

A. I have never had sexual intercourse

B. 11 years old or younger

C. 12 years old

D. 13 years old

E. 14 years old

F. 15 years old

G. 16 years old

H. 17 years old or older

62. During your life, with how many people have you had sexual intercourse?

A. I have never had sexual intercourse

B. 1 person

C. 2 people

D. 3 people

E. 4 people

F. 5 people

G. 6 or more people

63. During the past 3 months, with how many people did you have sexual intercourse?

A. I have never had sexual intercourse

B. I have had sexual intercourse, but not during the past 3 months

C. 1 person

D. 2 people

E. 3 people

F. 4 people

G. 5 people

H. 6 or more people

64. Did you drink alcohol or use drugs before you had sexual intercourse the **last time**?

A. I have never had sexual intercourse

B. Yes

C. No

65. The **last time** you had sexual intercourse, did you or your partner use a condom?

A. I have never had sexual intercourse

B. Yes

C. No

66. The **last time** you had sexual intercourse, what **one** method did you or your partner use to **prevent pregnancy**? (Select only **one** response.)

A. I have never had sexual intercourse

B. No method was used to prevent pregnancy

C. Birth control pills

D. Condoms

E. An IUD (such as Mirena or ParaGard) or implant (such as Implanon or Nexplanon)

F. A shot (such as Depo-Provera), patch (such as Ortho Evra), or birth control ring (such as NuvaRing)

G. Withdrawal or some other method

H. Not sure

The next 5 questions ask about body weight.

67. How do **you** describe your weight?

A. Very underweight

B. Slightly underweight

C. About the right weight

D. Slightly overweight

E. Very overweight

68. Which of the following are you trying to do about your weight?

A. **Lose** weight

B. **Gain** weight

C. **Stay** the same weight

D. I am **not trying to do anything** about my weight

69. During the past 30 days, did you **go without eating for 24 hours or more** (also called fasting) to lose weight or to keep from gaining weight?

A. Yes

B. No

70. During the past 30 days, did you **take any diet pills, powders, or liquids** without a doctor's advice to lose weight or to keep from gaining weight? (Do **not** count meal replacement products such as Slim Fast.)

A. Yes

B. No

71. During the past 30 days, did you **vomit or take laxatives** to lose weight or to keep from gaining weight?

A. Yes

B. No

The next 9 questions ask about food you ate or drank during the past 7 days. Think about all the meals and snacks you had from the time you got up until you went to bed. Be sure to include food you ate at home, at school, at restaurants, or anywhere else.

72. During the past 7 days, how many times did you drink **100% fruit juices** such as orange juice, apple juice, or grape juice?
(Do **not** count punch, Kool-Aid, sports drinks, or other fruit-flavored drinks.)

A. I did not drink 100% fruit juice during the past 7 days

B. 1 to 3 times during the past 7 days

C. 4 to 6 times during the past 7 days

D. 1 time per day

E. 2 times per day

F. 3 times per day

G. 4 or more times per day

73. During the past 7 days, how many times did you eat **fruit**? (Do **not** count fruit juice.)

A. I did not eat fruit during the past 7 days

B. 1 to 3 times during the past 7 days

C. 4 to 6 times during the past 7 days

D. 1 time per day

E. 2 times per day

F. 3 times per day

G. 4 or more times per day

74. During the past 7 days, how many times did you eat **green salad**?

A. I did not eat green salad during the past 7 days

B. 1 to 3 times during the past 7 days

C. 4 to 6 times during the past 7 days

D. 1 time per day

E. 2 times per day

F. 3 times per day

G. 4 or more times per day

75. During the past 7 days, how many times did you eat **potatoes**?

(Do **not** count french fries, fried potatoes, or potato chips.)

A. I did not eat potatoes during the past 7 days

B. 1 to 3 times during the past 7 days

C. 4 to 6 times during the past 7 days

D. 1 time per day

E. 2 times per day

F. 3 times per day

G. 4 or more times per day

76. During the past 7 days, how many times did you eat **carrots**?

A. I did not eat carrots during the past 7 days

B. 1 to 3 times during the past 7 days

C. 4 to 6 times during the past 7 days

D. 1 time per day

E. 2 times per day

F. 3 times per day

G. 4 or more times per day

77. During the past 7 days, how many times did you eat **other vegetables**?

(Do **not** count green salad, potatoes, or carrots.)

A. I did not eat other vegetables during the past 7 days

B. 1 to 3 times during the past 7 days

C. 4 to 6 times during the past 7 days

D. 1 time per day

E. 2 times per day

F. 3 times per day

G. 4 or more times per day

78. During the past 7 days, how many times did you drink a **can, bottle, or glass of soda or pop**, such as Coke, Pepsi, or Sprite? (Do **not** count diet soda or diet pop.)

A. I did not drink soda or pop during the past 7 days

B. 1 to 3 times during the past 7 days

C. 4 to 6 times during the past 7 days

D. 1 time per day

E. 2 times per day

F. 3 times per day

G. 4 or more times per day

79. During the past 7 days, how many **glasses of milk** did you drink? (Count the milk you drank in a glass or cup, from a carton, or with cereal. Count the half pint of milk served at school as equal to one glass.)

A. I did not drink milk during the past 7 days

B. 1 to 3 glasses during the past 7 days

C. 4 to 6 glasses during the past 7 days

D. 1 glass per day

E. 2 glasses per day

F. 3 glasses per day

G. 4 or more glasses per day

80. During the past 7 days, on how many days did you eat **breakfast**?

A. 0 days

B. 1 day

C. 2 days

D. 3 days

E. 4 days

F. 5 days

G. 6 days

H. 7 days

The next 6 questions ask about physical activity.

81. During the past 7 days, on how many days were you physically active for a total of **at least 60 minutes per day**? (Add up all the time you spent in any kind of physical activity that increased your heart rate and made you breathe hard some of the time.)

A. 0 days

B. 1 day

C. 2 days

D. 3 days

E. 4 days

F. 5 days

G. 6 days

H. 7 days

82. On how many of the past 7 days did you do exercises to **strengthen or tone your muscles**, such as push-ups, sit-ups, or weight lifting?

A. 0 days

B. 1 day

C. 2 days

D. 3 days

E. 4 days

F. 5 days

G. 6 days

H. 7 days

83. On an average school day, how many hours do you watch TV?

A. I do not watch TV on an average school day

B. Less than 1 hour per day

C. 1 hour per day

D. 2 hours per day

E. 3 hours per day

F. 4 hours per day

G. 5 or more hours per day

84. On an average school day, how many hours do you play video or computer games or use a computer for something that is not school work? (Count time spent on things such as Xbox, PlayStation, an iPod, an iPad or other tablet, a smartphone, YouTube, Facebook or other social networking tools, and the Internet.)

A. I do not play video or computer games or use a computer for something that is not school work

B. Less than 1 hour per day

C. 1 hour per day

D. 2 hours per day

E. 3 hours per day

F. 4 hours per day

G. 5 or more hours per day

85. In an average week when you are in school, on how many days do you go to physical education (PE) classes?

A. 0 days

B. 1 day

C. 2 days

D. 3 days

E. 4 days

F. 5 days

86. During the past 12 months, on how many sports teams did you play? (Count any teams run by your school or community groups.)

A. 0 teams

B. 1 team

C. 2 teams

D. 3 or more teams

The next 6 questions ask about other health-related topics.

87. Have you ever been taught about AIDS or HIV infection in school?

A. Yes

B. No

C. Not sure

88. Have you ever been tested for HIV, the virus that causes AIDS? (Do **not** count tests done if you donated blood.)

A. Yes

B. No

C. Not sure

89. When you are outside for more than one hour on a sunny day, how often do you wear sunscreen with an SPF of 15 or higher?

A. Never

B. Rarely

C. Sometimes

D. Most of the time

E. Always

90. During the past 12 months, how many times did you use an indoor tanning device such as a sunlamp, sunbed, or tanning booth? (Do **not** count getting a spray-on tan.)

A. 0 times

B. 1 or 2 times

C. 3 to 9 times

D. 10 to 19 times

E. 20 to 39 times

F. 40 or more times

91. Has a doctor or nurse ever told you that you have asthma?

A. Yes

B. No

C. Not sure

92. On an average school night, how many hours of sleep do you get?

A. 4 or less hours

B. 5 hours

C. 6 hours

D. 7 hours

E. 8 hours

F. 9 hours

G. 10 or more hours

This is the end of the survey. Thank you very much for your help.

2013 YRB

Appendix B

Email Permission to use Research Instrument

Response to your question about the YRBS

Inbox

Kinchen, Steve (CDC/OID/NCHHSTP) <sak1@cdc.gov> 1/2/15

to me, Shari

Hello,

Thank you for your question about the YRBS. The answer to your question is on our web site at www.cdc.gov/yrbss. Go to the FAQ (Frequently Asked Question) page.

I hope that this is helpful. Please let me know if you have any other questions about the YRBS.

Sincerely -

Steve Kinchen

---------- Original Email ----------

From: null

To: cdcinfo@cdc.gov

Date: 2014-12-26 15:34:43

Subject: CDC-INFO: Inquiry

Subject: Survey Tools; Risk Behavioral Surveillance System tool From: General Public

Email Address: william.okello@waldenu.edu Your Question: My name is William

Okello. I am a Ph.D. student in Public Health at Walden University and am writing dissertations that investigate disparities in health and risks behavior among different racial, ethnic, and socioeconomic group of youth. I am therefore requesting for permission to use the CDC Youth Risk Behavioral Surveillance System tool to help me achieve my goal. Let me know if this is possible. Thanks. William Okello Optional Information Contact: Name: William Okello Title: Student Phone: 910 578 2710 Email: william.p.okello@gmail.com Address: P O Box 20282 Winston Salem, NC 27120

William Okello <william.okello@waldenu.edu> 1/7/15

To Steve, Shari

Hi Steve,

Thanks for the response. I did go to the link that you asked me to go to but could not find what I wanted. I am seeking for permission to use your data for research purposes. I know where the data is and all I need is permission to use it for my school work.

Thanks again.

Kinchen, Steve (CDC/OID/NCHHSTP) <sak1@cdc.gov> 1/8/15

To me, Shari

The data posted on our site is in the public domain. You may use it as you like. No permission is needed.

Thanks!

Steven A. Kinchen

Team Leader, Data Management and Analysis Team

Division of Adolescent and School Health

Centers for Disease Control and Prevention

Phone: 404-718-8141

Email: sak1@cdc.gov

From: William Okello [mailto:william.okello@waldenu.edu]

Sent: Wednesday, January 07, 2015 8:07 PM

To: Kinchen, Steve (CDC/OID/NCHHSTP)

Cc: Shanklin, Shari (CDC/OID/NCHHSTP)

Subject: Re: Response to your question about the YRBS

William Okello <william.okello@waldenu.edu> 1/13/15

To Steve, Shari

Mr. Kinchen,

Thank you so much for the response.

Click here to Reply, Reply to all, or Forward

0.1 GB (0%) of 30 GB used Manage Program Policies Powered by Google

Last account activity: 0 minutes ago

Detail

Appendix C

Administrative Letter Authorizing Study

IRB Materials Approved - William Okello

Inbox

IRB <IRB@waldenu.edu> 5/18/15

To me, Vincent

Dear Mr. Okello,

This email is to notify you that the Institutional Review Board (IRB) confirms that your doctoral capstone entitled, "An Investigation of racial disparities in sexual and drug use risk behavior among the youth using the Youth Risk Behavioral Surveillances System," meets Walden University's ethical standards. Since this project will serve as a Walden doctoral capstone, the Walden IRB will oversee your capstone data analysis and results reporting. Your IRB approval number is 05-18-15-0125228.

This confirmation is contingent upon your adherence to the exact procedures described in the final version of the documents that have been submitted to IRB@waldenu.edu as of this date. This includes maintaining your current status with the university and the oversight relationship is only valid while you are an actively enrolled student at Walden University. If you need to take a leave of absence or are otherwise unable to remain actively enrolled, this is suspended.

If you need to make any changes to the project staff or procedures, you must obtain IRB

approval by submitting the IRB Request for Change in Procedures Form. You will receive confirmation with a status update of the request within 10 business days of submitting the change request form and are not permitted to implement changes prior to receiving approval. Please note that Walden University does not accept responsibility or liability for research activities conducted without the IRB's approval, and the University will not accept or grant credit for student work that fails to comply with the policies and procedures related to ethical standards in research.

When you submitted your IRB materials, you made a commitment to communicate both discrete adverse events and general problems to the IRB within 1 week of their occurrence/realization. Failure to do so may result in invalidation of data, loss of academic credit, and/or loss of legal protections otherwise available to the researcher. Both the Adverse Event Reporting form and Request for Change in Procedures form can be obtained at the IRB section of the Walden website:

http://academicguides.waldenu.edu/researchcenter/orec

You are expected to keep detailed records of your capstone activities for the same period of time you retain the original data. If, in the future, you require copies of the originally submitted IRB materials, you may request them from Institutional Review Board.

Both students and faculty are invited to provide feedback on this IRB experience at the link below:

http://www.surveymonkey.com/s.aspx?sm=qHBJzkJMUx43pZegKlmdiQ_3d_3d

Sincerely,

Libby Munson

Research Ethics Support Specialist

Office of Research Ethics and Compliance

Email: irb@waldenu.edu

Fax: 626-605-0472

Phone: 612-312-1283

Office address for Walden University:

100 Washington Avenue South, Suite 900

Minneapolis, MN 55401

Information about the Walden University Institutional Review Board, including instructions for application, may be found at this link:

http://academicguides.waldenu.edu/researchcenter/orec

Click here to Reply, Reply to all, or Forward.