2016

The Effect of Adolescent Girls' Drug use on Academic and Social Development

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COLLEGE OF EDUCATION

This is to certify that the doctoral study by

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Abstract

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MEd, Texas A&M University, 2006

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Abstract

Substance abuse, once primarily visible in the U.S. adolescent male population, is an increasing concern for the adolescent girls' population. Mental health challenges, behavioral problems, and academic failure are issues adolescent girls may encounter when they engage in substance abuse. The incidence and impact of drug use on female students' academic and social development at a large suburban school district was unknown. Vygotsky's social development theory and Bandura's social learning theory provided the framework for this cross-sectional survey study that addressed the relationships between adolescent girls' drug use and their academic performance and social development. Descriptive statistics and analysis of variance were used to examine data from the Dane County Youth Assessment Survey. The sample included the study district's adolescent girls' population consisting of 9,061 students. Results indicated significant relationships between girls' adolescent drug use and social development and academic performance. Increased drug use was related to lower social development and lower academic achievement. Results were used to develop an adolescent girls' drug prevention program that addressed the effects drugs have on adolescent girls' academic and social development. Implications for positive social change include providing a prevention program to the local district that may help inform adolescent girls so they can make healthier decisions in social settings.

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Dedication

To my extra-extra beautiful, extra-extra-ordinary, extra-extra patient, extra-extra kind, extra-extra intelligent, extra-extra supportive, extra-extra caring, extra-extra loving daughters, Counselor Cambrie Briggs and Dr. Chelsea Briggs. I cannot find enough words to express how much I appreciate every good fiber that God used to create your mind and body for me to experience. I am so happy that you chose me to be your mother. I am so very proud of all of the accomplishments you have achieved and not allowing living in a single parent environment to be a hindrance. Your hard work and diligence enabled you to miss the negative statistic list in the past, now, and in the future. Both of you continue to acquire more knowledge, which elevates you to a higher level of learning.

To my extraordinary role models and my examples of women with strength and wisdom, my mother and sister. To my courageous and goodhearted sister, Patricia Ann Miles, whom I have loved and admired since I was a little girl growing up in our small three bedroom house with nine other siblings, I will always admire your strength and caring heart that has helped touch everyone in your own special way. I love you for being a loving woman. My loving mother, who had a glowing and beautiful countenance that reigned from the crown of her head to the soles of her feet that I wish I inherited at birth from you, thank you for being an endless prayer warrior who lived your life with patience and strength daily. Thank you for camouflaging your challenges and demonstrating your strength in these three words: “I Am Ok.” Thank you, Mother, for being a

constant vision of strength of how to persevere in all situations. Thank you Mrs. Mary Ellen Miles.

To my new and wonderful husband, thank you for your love, patience, and support during my doctoral journey. You have truly given me a new beginning with your love. I truly appreciate your generous heart that you give to me and our family every day. I don't think an instrument has been designed to measure your generosity. Most of all I want to thank you for giving me your last name; it has a high-class sound when announced and will make Dr. Jackie Briggs-Vaughn sound very important. Thank you so much Donny Allen Vaughn.

To my awesome Pastors, Dr. Elmer Sunset Morgan and Mrs. Shirley Morgan, thank you for bringing a purifying teaching to my life that has taught me how to be a proud, positive, productive, professional disciple of Christ and to walk in God's favor continuously. I have developed tremendously in this teaching at an enormous rate that has empowered me to overcome so many obstacles and challenges. I truly appreciate my knowledge and understanding that I have received, am still receiving, and will continue to receive under your spiritual leadership.

To Aunt Debra, thank you for being a sophisticated and beautiful prayer warrior who fears nothing and no one. You have given me so much encouragement, assistance, and support in so many ways for so many years. I would be remiss if I did not stop and give you a special thank you for everything you have done, and especially for the sacrifices you made for Counselor Cambrie, Dr. Chelsea, and me for so many years. Thank you, Apostle Dr. Debra Allen for

your spiritual leadership, support, guidance, love, encouragement, and strong words of faith during my challenging experiences while completing this research study. You are my “Naomi” and I will be a strong supporter of you and your ministry as long as I have the breath of life from him.

To Him Be The Glory! Thank you, for your will being done in my life. I know this is just the beginning of my Lifelong Learning Journey. I made it through with You.

Acknowledgments

To my committee members, thank you for your knowledge, guidance, encouragement, support, and patience that you imparted to me on this doctoral journey. Dr. Don Jones, thank you for being a knowledgeable, resourceful, patient, and praying committee chair. Thank you for understanding when I experienced family and technology challenges that appeared to be continuously unbelievable. Thank you for igniting the inspiration in me to get back on the horse and keep riding until I completed my doctoral journey. Dr. Stephanie Bowlin, thank you for taking so much time to ensure that I understood and analyzed my data correctly, calling to check on my progress, and always encouraging me to keep my eyes on the prize, which was completion of my doctoral journey. Dr. Michelle Brown, thank you for willing to be my URR who filtered through my project study, collaborated with my committee members, and offered clear recommendations and revisions that put me on a path to make progress towards IRB approval and completion of my doctoral journal. Dr. Michelle Powell-Leake, thank you for accepting the role as my new methodologist. Your endless knowledge of data analysis has enhanced my understanding. I truly appreciate your patience and step-by-step process, which assisted me in the running of a complete analysis of archival data. You were truly an angel, and you were my "Ram In The Bush." You are truly a God sent Blessing to me. Keep on Shining "Philippian Lady."

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Section 1: The Problem

Introduction

Adolescent girls' substance abuse has shown a significant increase over the past decades. The National Center on Addiction and Substance Abuse (NCASA, 2011) reported the rate for drug use has increased since 2005 for girls. King and Vidourek (2011) conducted a study to investigate adolescents involved with drugs to measure their mental and physical health. The study results revealed that adolescent girls had increased risks of social impairments, which could have possibly led to negative and legal consequences for drug involvement, which in turn may have led them to be psychologically unhealthy, thus causing a high mortality rate as well as academic failure. According to Cotto et al. (2010), distinctive factors tend to be prevalent and contribute to adolescent girls' drug abuse. Gender, age, and type of substance use are factors that determine whether an adolescent will become a drug abuser (Cotto et al., 2010). Baker, Ashare, and Charvat (2009) found that contributing factors to substance abuse for adolescent girls living in welfare community groups included lack of adult supervision and easy access to drugs.

Adolescent girls who experienced low monitoring of their social interactions led to easy access to drugs that affected their social development and academic performance because of lack of adult supervision (Ford, 2010). The goal of this study was to examine the relationship between drug use of adolescent

girls' ages 12 to 18 years and the effect on their academic performance and social development. The results were used to develop an adolescent girls' drug prevention program that addressed the effect that drugs have on adolescent girls' academic and social development. Previous researchers studied contributing factors for substance abuse and how adolescent girls' academic progress and social abilities were impacted (Ford, 2010). Researchers also examined programs to address their needs (Rieckmann et al., 2011). A goal for this study was the development of a positive drug intervention and mentoring program that equips adolescent girls with leadership skills so they can become successful and productive women within their local, national, and global societies.

Definition of the Problem

The participants for this study were selected from the Clearwater School District, a suburban district in Wisconsin. This district was selected by the Dane County Youth Assessment research team. At the time of the study, Clearwater School District had a student population of 18,202 students who were White, African American, Bi/Multiracial, Hispanic, Asian, and Native American. Of the 18,202 students, 9,061 were females, and 9,141 were males. The socioeconomic status of these students ranged from the lowest status of economic poverty to upper class status. The targeted group consisted of adolescent girls between the ages of 12 and 18 years. The study addressed their involvement with drugs and the effect that drugs had on their social development and academic performance.

Clearwater School District participated in the 2009 Dane County Youth Assessment Survey, which had questions that targeted drug misuse of youth between the ages of 12 and 18 years. This study included archival data from this assessment to examine the relationship between adolescent girls' drug involvement and the effect it had on their academic performance and social development. The 2011 Youth Risk Behavior Surveillance reported 38.7% of youth reported using alcohol, 23.1% used marijuana, and 18.1% smoked cigarettes at school, which did not lead to a positive outcome for their health or academic success Centers for Disease Control report (as cited in Bradshaw, Wassdorp, Goldweber & Johnson, 2013). Drug use affected adolescents' social development skills, and adolescents who use drugs perform academically lower than their peers (National Center on Addiction and Substance Abuse, 2011). Adolescent girls experience challenges when transitioning from elementary school to middle school, middle school to a freshman campus, and a freshman campus to high school. Each transition between grade levels present different social challenges for these adolescent girls. They also experience other challenges such as adjusting to a variety of social settings that cause them to make uninformed decisions that endanger their health and safety (NCASA, 2011).

Grade level transitions caused adolescent girls to develop various relationships with new peers, new teachers, and uninvolved parents. These relationships (peer pressure) led to encounters with adolescents who possessed

different levels of maturity and have strong negative influences (Maurice & Friedlander, 1994). Maturity level and negative influences can contribute to a decline in adolescent girls' self-esteem for reasons such as too much emphasis placed on personal appearance. Adolescent girls also confront a freedom that introduces them to atypical behaviors such as defiance, skipping class, promiscuous sexual encounters, gang membership, incomplete class assignments, and drug experimentation (Richard, Trevino, Baker, & Valdez, 2010). Fetro, Rhodes, and Hey (2010) stated that these youth are involved in behaviors that endanger their health and academic achievement and ultimately lead to long-term consequences. Currently, these drug-using adolescent girls experience more discipline problems from gang association, peer pressure, truancy, low academic performance, health problems, increased sexual activity, and low school and parental involvement; these problems lead to isolation due to suspensions and alternative school placement (Renes & Strange, 2009). There are several factors that contributed to adolescent girls' involvement with drugs. According to Ford (2010), one prevalent factor for adolescent girls' drug misuse is the lack of relationship building with parents, peers, and school staff. Ford (2010) reported that the bonding, or lack thereof, between parents and adolescents or school and adolescents contributes to their decisions to use drugs. Positive relationship building among students, parents, and teachers is imperative for deterring substance abuse (Ford, 2010). Other factors that contribute to drug use include

gender identity, age, state of mind, medical problems, coping mechanisms, socioeconomic status, and academic challenges (Ford, 2010). This study contributed to the body of knowledge needed to address the drug misuse problem by examining the relationship between drug involvement, academic performance and social development among adolescent girls between the ages of 12 to 18 years within the Clearwater School District.

Rationale

This study was needed because the adolescent substance abuse gender gap between adolescent girls and boys is closing, according to the Office of National Drug Control Policy (ONDCP, 2007). According to ONDCP (2007), girls between the ages of 12 and 18 years abuse prescription drugs more than boys. Prescription drug abuse for girls is 9.9% versus boys at 8.2%. For pain relievers, girls have an 8.1% rate versus 7.0% for boys. For tranquilizers, girls have a 2.6% rate versus boys having a 1.9% rate. For stimulants, girls have a 2.6% rate versus boys having a 1.9% rate. Studies have been conducted on adolescent boys' substance abuse or adolescent boys and girls substance abuse combined, but limited data exists for girls. According to Dauber, Paulson, and Leiferman (2011) adolescent race and gender traits need more study to identify distinct characteristics that need to be addressed for that particular substance abuser.

The objective of this study was to analyze archival data to promote the development of an adolescent girls drug program to convey current information

about increased girls adolescent substance abuse, what influences adolescent girls to become substance abusers, and how substance abuse affects their social skills and academic performance. Adolescent substance abuse programs must have a component that addresses gender, background, and specific needs of adolescent girls (Sussman, 2011). This program should enhance students', peers', parents', and school staff's knowledge of adolescent girls drug use to help prepare these girls to observe warning signs of substance abuse. Through enhanced knowledge and skills, parents, peers, school staff, and community leaders can provide strong support systems and be proactive in preventing adolescent substance abuse (Mayberry, Espelage, & Koenig, 2009).

Adolescent girl substance abusers are sometimes overlooked because of bias views about their gender appearance are perceived as being sweet or innocent. Adolescent girl substance abusers often internalize emotions and problems, which leads to misbehavior and substance abuse instead of turning to parents or other family members to help them cope with problems (Webb, 2009). The National Survey on Drug Use and Health (NSDUH) (ONDCP, 2009a) reported that positive parental influence is an important factor in decreasing adolescent girls' drug use. This program allows parents an opportunity to acquire knowledge about the effects of drug misuse on adolescent girls, to enhance their parenting skills, and to build positive relationships with their adolescent girls. Parents have a significant role in the transition that occurs in an adolescent's life,

and they need specific parental qualities to increase their adolescent girls' self-esteem (Sawyer & Stevenson, 2008). School staff needs to acquire knowledge to increase their awareness of adolescent girls' drug misuse and its signs and symptoms. This program contains information that will have a positive impact by increasing adolescent girls' understanding of the influences of drug use and enhancing their thinking process and social interactions.

Evidence of the Problem at the Local Level

Adolescent girls' substance abuse problem does not exist only in Clearwater School District (Maxwell & Liu, 1998). Maxwell and Liu (1998) presented results from a survey of substance abuse that was conducted with Texas students in Grades 7-12 from various schools within 66 school districts. The study revealed a 64% increase for girls' substance abuse and 58% for boys. According to Maxwell and Liu (1998), the factors that led to substance abuse included exposure to peers using drugs, uninvolved parents at home, and a lack of positive school activities. Rodney and Mupier (2004) compared juvenile justice system girls to boys within Texas counties. The results indicated that girls involved with drugs and alcohol had more encounters with law enforcement.

Many adolescent drug users experience consequences that affect their physical, mental, and social abilities (ONDCP, 2009a). Substance abuse is a coping mechanism that allows adolescent girls to manage issues such as low self-esteem and sense of belonging. Adolescent girl drug users desire to fit in with the

crowd more than boys, and they have a higher depression rate than boys (2 to 1) (ONDCP, 2009a). Adolescent girl substance abusers are also more sexually active, which often leads to increased exposure to sexually transmitted diseases and adolescent pregnancy (ONDCP, 2009a).

According to previous studies on drug involvement problems, the design of drug prevention programs was geared toward generating measures for safe schools (Fetro et al., 2010). However, consistency has not been regularly implemented in all U.S. schools. Only a few studies revealed contributing drug factors that affect social development and academic performance with few solutions to alleviate the problem (Fetro et al., 2010). Oelsner, Lippold, and Greenberg (2011) addressed adolescents' academic performance with drug involvement by focusing on survey questions asking about grades received in school which revealed low academic performance. Currently, Clearwater School District does not have an adolescent girls' drug-prevention program to address the existing substance abuse issues or contributing factors for adolescent girls. Adolescent girls have different risk factors that contribute to them becoming substance abusers. Completion of more research to identify these risk factors will assist with developing substance abuse programs to address adolescent girls' gender-specific needs (Davis et al., 2004). Drug-prevention programs need to focus on particular factors such as socioeconomic status, gender, ethnicity, and age that influence adolescents to become involved with illicit drugs. This process will enable program developers to include explicit information to target specific needs (Guthrie, Low, & Low, 2000). More research is needed to design

school drug-prevention programs to enhance adolescent girls' social abilities and academic achievement (Froeschle, Smith, & Ricard, 2007).

Evidence of the Problem from the Professional Literature

Adolescent substance abuse continues to be a great concern for local, national, and global authorities (Substance Abuse and Mental Health Services Administration, 2011). The Substance Abuse and Mental Health Services Administration (2011) reported that 16.6% of youth ages 12-17 consume alcohol and 9.8% are involved with illicit drugs. Cultural and social norms affect the onset of adolescent substance abuse and vary among European, African, Hispanic, Native, and Asian American adolescents (Jackson & LeCroy, 2009). Chamberlain, Leve, and Smith (2006) found a relationship between academic failure, delinquency behavior, substance abuse, and mental/sexual health risks with adolescent girls as they entered middle school. The Ewing Marion Kauffman Foundation (2002) found that students in Grade 8 showed a high use of drugs between 1994 and1998; furthermore, there was a shift in Grade 10 between 1999 and 2001 that showed a high use of drugs. Cigarettes, alcohol, and marijuana were the substances most commonly used for coping mechanisms for those adolescents. This study also revealed that girls had a 2% higher drug use than boys. The 2007 Maryland Adolescent Survey (Maryland State Department of Education, 2008) indicated that girls and boys who began smoking marijuana

between the ages of 13 and 16 had a higher percentage of casual use of cigarettes and occasional marijuana use.

Adolescent girls' substance abuse has increased in many school districts, and this growth has also been shown on a national level. According to the National Survey on Drug Use and Health (ONDCP, 2009b), adolescent girls drug abuse has increased since 2002 for a variety of drugs. Girls between the ages of 12 and 17 have shown higher rates of smoking, drinking, and marijuana use than boys. Increased health risks for girls are prominent and have exceeded boys' health risks. Adolescent girls have surpassed boys with drug use and have begun closing the drug misuse gap (ONDCP, 2009b).

The time that an adolescent girl begins puberty is a significant factor for developing into a substance abuser, which may be connected to weight gain. Puberty includes not only body development but cultural changes, social development, and mental development that manifests differently in girls (Tanner-Smith, 2010). Consumption of alcohol has become prevalent in African American and White adolescent girls, which may lead them to become lifelong alcohol users (Dauber et al., 2011). Distinctive contributing factors are present with White adolescent influential factors include peers and school, and African American adolescent influential factors include negative family relationships (Dauber et al., 2011). Rural White and African American adolescent girls have become strong targets for the tobacco industry, and 60% of these smokers began smoking at age

14 (Huebner et al., 2006). Factors contributing to these rural adolescent smokers were (a) economic structure, (b) family structure, (c) parent-child communication and relationships, (d) peer acceptance, and (e) school relationships, with girls adolescents performing at or below a "D" average (Huebner et al., 2006).

Bachman et al. (2007) found that Hispanic girls involved with drugs received reprimands for behavioral issues such as suspensions or removal from their educational environments, which caused interruptions in their educational experience. These interruptions had an impact on their academic achievement, which led to high attrition rates. Beauvais, Jumper-Thurman, and Burnside (2008) found a significantly higher increase in drug use among adolescent American Indian female students in Grades 7-12 over the past 30 years. Native American youth had a higher chance of exposure to methamphetamine on the reservation, which increased their likelihood of dropping out of school (Beauvais et al., 2008). Barlow et al. (2010) found that Native American students tended to have a higher rate of adolescent pregnancy associated with alcohol, marijuana, cocaine, and methamphetamine abuse. Early exposure to drugs led to emotional and brain disorders, which prevented Native American adolescent girls from functioning in a structural setting (Barlow et al., 2010). In addition, Ndetei, Khasakhala, Ogencha-Quwor, and Kokonya (2009) found that adolescent girls with drug involvement issues experienced higher levels of psychiatric disorders than boys.

Definitions

For the purpose of this study, the following definitions were used:

Academic performance: how well an individual can meet a standard expectation on an assessment created by local or state educational authorities. The individual's knowledge and skills are measured using various instruments (Henry, 2010).

Adolescent: an individual who is at a transitional period of physical and mental development or an individual between youth and adult maturity. The age range for this individual is between 12 and 18 years. This transitional period varies in different social environments. Erickson's adolescent stage of development from 12 to 18 years was defined as a time when an individual transitioned from what is done to us to what we do (Harder, 2008). This individual also struggles with finding his or her identity, social interactions, and the battle of good versus evil and the battle of right versus wrong. A disassociation from family starts to develop, and peers relationships are significant (Harder, 2008).

Contributing factor: an agent that actively contributes to a result or process. A contributing factor has a strong influence on an individual's thoughts before the process begins. This agent is conducive or has an instrumental role while the process is developing and at the end. Two or more contributing factors can combine to become a positive or negative influence on an individual's decision and their ending result from choices made (Lopez, B. et al., 2009).

Drug involvement: to use an illegal substance or product other than food or water that will have an effect on an individual's mind and body function. One may be drawn into drug involvement by individuals who have little or extensive experience with drugs such as peers or family members (Lohmeier, Schmitt, & Frey, 2008). This product or substance will cause an individual to become addicted or form a habit to a drug, and intoxication may cause an individual to lose consciousness.

Drug misuse: the potential to abuse a prescription medication that has been prescribed to address a specific medical or mental condition. Medications commonly misused are sedatives, analgesics, stimulants, and antidepressants. These medications produce an intoxicating effect on an individual (Ford, 2010).

Social development: a pattern or process of change exhibited by individuals resulting from their interaction with other individuals. Erickson's social-emotional development stage five, learning identity versus identity diffusion, is a major adjustment for adolescents (Harder, 2008). This socialization phase involves minor to major delinquency experiences, self-esteem issues, and examples of who an adolescent might emulate. Vygotsky's (1934) social development theory stated that an individual's social interaction was imperative in socialization.

Substance abuse: a pattern of drug use leading to significant problems or distress such as failure to attend school. The drug affects an individual's mood, thought process,

physical appearance, and response time, which may impair judgment. Abuse of these drugs lead to defiance, criminal encounters with law enforcement, poor mental and psychological health, unwanted pregnancy, social deficits, and life-threatening situations or death (Sussman, 2011).

Significance

Today's adolescents are exposed to more negative social interactions with their peers. Peer influence is a strong risk factor for adolescent substance abuse (Scull, Kupersmidt, Parker, Elmore, & Benson, 2010). Adolescents also seek to build social relationships because they value their peers' friendships. Adolescent peer pressure is very prevalent among middle school students (Scull et al., 2010). The National Center on Addiction and Substance Abuse (2011) stated that an adolescent's brain is not fully developed, and involvement with drugs causes brain impairments that affect higher-level thinking for decision-making and memorization, and also causes poor judgment, excitability, and negative social interaction, which may lead to negative sexual encounters. James, Kristjansson, and Sigfusdottir (2010) conducted a study with Icelandic adolescents that revealed cigarette smoking, alcohol, and caffeine had negative effects on sleep habits and academic achievement. Results showed that 27.7% of adolescents had smoked, 56.1% had drunk alcohol, 58% had used both at least once, and 75.8% used caffeine daily. The study showed that illicit substance abuse and caffeine had a strong effect on sleep habits and academic achievement (James et al., 2010).

The goal of the study examined the relationship between adolescent girls' involvement with drugs and the effect of drug misuse on their academic performance and social development. Archival data from the Dane County Youth Assessment Survey was analyzed to determine the relationship between drug involvement and adolescent girls' social development and academic performance. The results of this study were used to develop a positive mentoring program that enhances adolescent girls' knowledge about drug influences and drug use effects on academic performance, and equips adolescent girls to achieve maximum success for social change. Program components consist of teachers, parents, school counselors, educated health care professionals, law enforcement officials, licensed counselors, and other community leaders who have knowledge to educate these adolescent girls. The program provides services to enhance adolescent girls' knowledge about drug abuse effects and drug use resistance to promote their academic performance and social development. Courses for parents and staff enhance their knowledge of drug effects and the components of adolescent girls' drug prevention program. Maurice and Friedlander (1994) stated that teachers and adults play a key role in encouraging these youth to express their concerns about substance abuse and guiding them in the social decision-making process.

Guiding/Research Questions

Previous studies have focused mainly on adolescent boys' substance abuse because of a preconceived view of boys being more involved with substance misuse (Tanner-Smith, 2010). Adolescent girls' substance abuse has moved to the

forefront, and little is known about its development; a study of this emerging issue is needed. Girls have different underlying causes for becoming substance abusers, and the outcome from girls' substance abuse is different from boys' substance abuse (Tanner-Smith, 2010). Previous studies have focused on adolescent boys' involvement with drugs, and more research is needed on adolescent girls' involvement in drugs. There are various factors that contribute to adolescent girls' drug involvement that negatively affect their academic performance and social interactions (Tanner-Smith, 2010).

The purpose of this study was to identify the relationship between adolescent girls' drug involvement and the effect on their social development and academic performance. The guiding questions and hypotheses for this study are as follows:

1. What is the frequency of self-reported drug use of adolescent girls between the ages of 12 and 18 years?
2. What is the relationship between drug use and the social development of adolescent girls?
3. What is the relationship between drug use and the academic performance of adolescent girls?

$H_0$1: There is no significant relationship between drug use and social development of adolescent girls.

H_a1: There is a significant relationship between drug use and social development of adolescent girls.

H_02: There is no significant relationship between drug use and academic performance of adolescent girls.

H_a2: There is a significant relationship between drug use and academic performance of adolescent girls.

Review of the Literature

Adolescent girls in the past were not generally regarded as being substance abusers, smokers, or alcohol drinkers. Therefore, researchers have not targeted that group of individuals because they had no apparent problems to address (Bodinger-deUriarte & Austin, 1999). Adolescent girls' illicit drug behavior was unacknowledged due to perceived stereotypical gender norms. National surveys have brought these hidden girls acts to the forefront. Now, these surveys are showing risk factors and influences on adolescent girls' drug misuse (Bodinger-deUriarte & Austin, 1999). Conway and Vermette (2006) discussed the movie *Thirteen,* which presented a vivid interpretation of the challenges encountered by some middle school female students with no preparation for middle school encounters, little monitoring, and introduction to increased promiscuous behavior. One 13-year-old girl entered into a social environment that turned her from the progressive academic road that she was on and lured her down a destructive path that included skipping school, using drugs, drinking

alcohol, and participating in sexual activities. An unstable family environment, negative peer influence, a single parent, single parent who was also a recovering drug abuser, a negative relationship with a friend of the family, and low income were all contributing factors to her behavior change (Conway & Vermette, 2006).

Adolescents' perceptions of social norms affect their decision-making processes. As their environment becomes more exposed to deviant behavior, their thoughts about good and not-so-good choices are distorted. Age, gender, peers, family structure, community, and social status have a bearing on the type of social misbehavior and substance abuse that affect adolescents (Lee, Akers, & Marian, 2004). Even though social norms vary across cultures, races, and individuals, social learning plays a key role in enhancing or preventing certain behaviors. The social learning theory that has been implemented in previous drug preventions as a deterrent can still be used as a preventive method to decrease adolescent substance abuse (Slobada, Cottler, Hawkins, & Pentz, 2009). Empowering youth to resist negative encounters by incorporating social learning theory as a skill to have an impact on influences from peers, family, and community can reduce the substance abuse rate (Slobada et al., 2009).

Theoretical Framework

The theoretical framework for this study was based on Vygotsky's (1934) social development theory and Bandura's (1977) social learning theory. This study addressed the relationship between adolescent girls' drug involvement and

the effect of this drug involvement had on their social development and academic performance.

Bandura's Social Learning Theory

Bandura's (1977) social learning theory is based on modeling how people learn from others by observing what they will and will not do. This modeling includes observing attention factors, retention coding, reproduction capabilities, and motivation to replicate behavior. This observation influences an individual's environment, development, interaction, and thinking process. Social learning theory is used to examine individuals who have roles that can influence adolescents' positive or negative decisions. Adolescents who engage in deviant behavior create a drug misuse social learning behavior that attracts their peers to become involved with drinking alcohol, smoking marijuana, and using nonmedical prescription drugs and other illicit drugs (Ford, 2008). For example, peer modeling of marijuana abuse influences other adolescents to participate in this unhealthy activity. Adolescents then believe that marijuana abuse is an acceptable social learning practice (Walker, Neighbors, Rodriguez, Stephens, & Roffman, 2011).

Social learning theory was used to observe a group of Korean adolescents (Eunyoung, Dae-Hoon, & Minwoo, 2010). Eunyoung et al. (2010), parents and peers have a strong influence on adolescents' decisions to play a part in a substance abuse society. Furthermore, only a small elevated difference was

revealed between parental influences versus peer influences, but both influences were shown to impact adolescent drug involvement (Eunyoung et al., 2010). Family social learning environments where alcohol is consumed and where strong connections within the family are not present contribute to adolescent alcohol abuse. A low family bond gives adolescents the feeling that they are not cared for and causes them to experience a lack of control and search other avenues for need fulfillment. Thus, they seek support from peers who are involved with alcohol or other substances (Ennett et al., 2008).

Samek and Rueter (2011) stated sibling relationships consist of different combinations such as older sister and younger sister, older brother and younger brother, or mixed older and younger brothers and sisters. Each sibling relationship has the potential to be positive or negative, depending on the older sibling's age and behavior. Positive older peers can build a social learning environment that can influence their younger adolescent siblings' unacceptable behavioral outcome and assist with diverting substance abuse. Older peers who cultivate close and encouraging relationships with their younger peers appeared to be good role models for these adolescents (Samek & Rueter, 2011). Additionally, religious social learning communities that build a strong base within a religious setting consisting of parents, peers, and individuals with a religious foundation of values and actions create positive benefits to detour adolescent drug involvement. Community members are able to encourage adolescents to resist drug

involvement and increase self-worth by being positive influences and showing care and concern for adolescents' social interactions or behavior displayed in certain social settings outside of the home environment (Gryczynski & Ward, 2011).

Vygotsky's Social Development Theory

Vygotsky (1934) placed a strong emphasis on the effect society has on development and how it precedes cognitive development. Vygotsky's social development theory states that a child's mental process is developed within social interactions that help him or her adapt by observing a skillful learner. A positive family environment is imperative for the social development process because it assists with preventing adolescent delinquent behavior. As an adolescent acclimates within alluring misbehavior social settings, he or she needs guidance, direction, support, and supervision by meaningful family members who have good social norms (Kiriakidis, 2010). Families, communities, and schools are important systems that play a vital role in the social development of an adolescent. Responsibilities of these systems are to provide role modeling that enables adolescents in the selection of peers and positive encouragement (Ojanen, 2010). The 2006 Trinidad and Tabogo Youth Survey was designed from the 2006 Arizona Youth Survey, which included risk and protective measures from the CTC Youth Survey. The Trinidad and Tabogo Youth Survey is consistent with the 2006 Arizona Youth Survey, which revealed an increased delinquent behavior

in adolescents due to underdeveloped communities with no safety and social development practices. Underdeveloped societies compel adolescents to become involved in aberrant substance abuse behavior and join gangs for safety, which exposed them or led them to a substance abuse environment (Maguire, Wells, & Katz, 2011).

The social development model showed how Mexican American adolescents engaged in developing defiant behavior while adjusting from elementary to middle school social status. Family values and traditions that were protective factors for diverting deviant behavior diminished as adolescents continued to build relationships with deviant peers in environments outside of family and school settings (Roosa et al., 2011). Families who place emphasis on positive sibling relationships have the potential to build favorable adolescent social development (Stormshak, Bullock, & Falkenstein, 2009). Older siblings with abilities to build strong relationships and create positive thoughts have a unique power to maintain continuity for younger siblings that deters them from substance-use inquisitiveness. These siblings are also capable of setting examples of how to maintain self-control and resist emotional outbursts in certain social environments (Stormshak et al., 2009).

Contributing Factors that Influence Adolescent Girls Drug Use

Renes and Strange (2009) studied adolescent girls between the ages of 12 and 15 and found that various factors are connected to girls drug use. These

factors include gender identity, peer relationships, and parental relationships. These girls also displayed low social development and a belligerent nature when drug involvement occurred. Drapela and Mosher (2007) used the social development model to show attachments that adolescents had to parents who used drugs. This parental attachment caused a close and detrimental social interaction to increase between the parent and the adolescent. Adolescents perceived this social interaction as rewarding and began to emulate deviant behavior, which led to their substance abuse. Mason, Mennis, and Schmidt (2010) stated that urban adolescents build their social networks around peers who have great influence or have tobacco and substance abuse behavior. Gender is imperative to this substance abuse network because there has been an increase in girl participants because of their vulnerability and anxiousness to fit in with their peers. Adolescent girls tend to be self-conscious about social relationships and vulnerable to substance abuse social networks. Mason et al. (2010) made recommendations for a social approach to address substance abuse social networks that are continuously growing among youth. Saint-Jean (2010) stated that Hispanic acculturation dictates specific societal gender roles for girls and boys. Acculturation expectations cause high stress levels and vulnerability in adolescent girls and impacts their self-esteem and tendency to experiment with drugs. In order for these girls to function in social settings, Hispanic acculturation needs to change so drug use can diminish (Saint-Jean, 2010).

NCASA (2003) revealed adolescent girls are vulnerable and have particular reasons why they become involved with smoking, drinking, and drug use. Similar contributing factors existed with these girls even though they lived in different environments but still posed a great harm for all of them. These detrimental factors include adolescent friends' involvement with drugs, depression, sexual or physical abuse, peer influences, pubertal changes, poor mental health, uninterested parents, dysfunctional family experiences and expectations, parental friend drug abusers, community conditions, and low school involvement (NCASA, 2003). The family design and lack of drug knowledge of family members has an effect on adolescents becoming involved with drugs and alcohol. Parents and siblings, who smoke, drink alcohol, or use marijuana influenced an adolescent's choices for substance abuse (Vakalahi, 2002). Dutch adolescents with positive family interactions and parents' ability to communicate with their children about alcohol had lower adolescent alcohol use. Early enhancement of parental knowledge about substance misuse and the ability to communicate this information to adolescents about alcohol use and the negative effects of illicit substances on an adolescent's mind and development are imperative to deter adolescents from becoming involved with alcohol (Van der Vorst, Burk, & Engels, 2011).

Wainright and Patterson (2006) found that parental partnerships whether same sex or opposite sex, had the same influence on adolescent substance abuse.

Wainright and Patterson also found family involvement and engagement were significant factors that influenced adolescents' choices to use drugs or alcohol. Adolescent girls who become involved in substance abuse experienced more behavior disorder in their families, health, social adaptation, and school functions, and the appearance of this disorder requires more treatment (Tarter, Kirisci, Mezzich, & Patton, 2011). Role fulfillment for adolescent girls is different, and expectations for gender are different in family upbringing. High expectations from family can be very stressful and can contribute to substance abuse (Hsieh & Hollister, 2004).

Lohmeier et al. (2008) examined factors that influenced adolescent drug involvement. Factors included peers, socialization, family members, and the correlation of adolescents' behavior and attitude with conflict. This conflict produced aggression and was found to be a link to drug involvement. Factors influencing drug involvement also included internal and external conflicts that adolescents encountered while they were experiencing mental and physical changes; internal and external conflicts led to drug-related risk-taking behavior to help adolescents cope with developmental changes. Other factors that adolescent girls encountered such as family members' rejection of sexual encounters involving gay, lesbian, and bisexual orientations contributed to gender identity challenges that led to substance abuse (Padilla, Crisp, & Rew, 2010). Page, Dennis, and Lindsay (2011) used data from a Global School-Based Student

Health Survey of adolescents from the Philippines, China, Chile, and Namibia to show the relationships that existed between adolescents' substance abuse and global psychosocial distress factors. These adolescents also experienced similar or same contributing factors to drug involvement such as influences from peers, social recognition, family members, and environmental exposure. Common substances used by adolescents included alcohol, smoking, and other drugs (Page et al., 2011). Additionally, this study showed Namibian and Chilean girls had the highest drinking rate (Page et al., 2011). An uprising health issue identified for adolescent girls is the battle with being over-or-underweight due to poor self-image; this poor self-image resulted in drug misuse and sexual misbehavior to cope with self-body images (Denoth, Siciliando, Iozzo, Fortunato, & Molinaro, 2011). In addition, adolescent girls who are overweight and are addicted to cigarette smoking are usually exposed to parents who smoke (Hussaini, Nicholson, Shera, Stettler, & Kinsman, 2011). Nicotine addiction for these girls led to low school performance (Hussaini et al., 2011). Adolescent girls who experience low self-esteem about body weight also tend to become heavy smokers (Kaufman, 2008).

Adolescent girls who become smokers are influenced more by their peers than boys because of desires to fit in with the social crowd (Mercken, Snijders, Steglich, Vertianen, & de Vries, 2010). Adolescent girls build strong associations with older peers in order to receive illicit substances like alcohol and drugs. Social

involvement with older peers leads to other risky behaviors such as early sexual encounters, various delinquent behaviors, and poor academic attainment (Boislard & Poulin, 2011). Adolescent girls who use alcohol or, smoke cigarettes and marijuana tend to have early sexual encounters that led to pregnancy or other health concerns (Cavazos-Rehg et. al, 2011). Girls who have histories of being victims of sexual abuse as children are strongly prone to substance abuse (Amstadter et al., 2011). Environments where adolescents were victims or exposed to violent circumstances where their mental thought processes was affected, gave an alluring and interesting image of substance abuse to them.

The Office of National Drug Control Policy (2006) reported that substance abuse has become very prevalent in adolescent girls, this increase has caused depression, unplanned pregnancy, hindered puberty processes, effects on thinking, and judgment abilities. Adolescent girls who have been diagnosed with mental health disorders, anxiety disorders, or post-traumatic stress disorders (PTSD) have increased tendencies to be substance abusers (Deas, St. Germaine, & Upadhyaya, 2006). Mental disorders are associated with elevated suicidal attempts, misbehavior conduct, and increased rates of illegal issues with adolescent girls' drug involvement (Deas et al., 2006). A study conducted by Johnston, O'Malley, Bachman, and Schulenberg (2010b) found girls in Grade 8 had higher annual drug use and higher alcohol intoxication than boys due to the advanced maturity of girls over boys, which was a contributing factor that influenced them to become

more sociable with older males. A very detrimental factor for adolescent girls' development is when they become passionately involved with older boys, which can cause them to become more depressed and frequent users of illicit substances (Haydon & Halpern, 2010). Depression evolved from adolescent girls holding their emotional problems and personal issues within, thus leading them to illegal substance usage (Haydon & Halpern, 2010).

Early Maturity

Pubertal onset can be early, immediate, or delayed depending on the adolescents' developmental life phase. When puberty begins, the worth of the parent-child relationship significantly impacts an adolescent's choice to use drugs as a coping mechanism for the pubertal onset (Shelton & Van Den Bree, 2010). Late-maturing adolescent girls who have poor parent-child relationships had increased usage of alcohol and cigarettes, and early maturing girls can have an increase in alcohol use (Shelton & Van Den Bree, 2010). Puberty can sometimes facilitate adolescent girls' substance abuse because some girls experience early body maturity, which can often cause them to have a poor image and identity. A poor self-body image caused early maturing girls to seek out relationships with older adolescents who are known substance abusers (Tanner-Smith, 2010). During adolescent girls' body changes, the emergence of depression is at a much higher rate than adolescent girls, which can also be a precursor to substance abuse (Mason, Hitchings, & Spoth, 2007). Adolescent girls' puberty development

encompasses certain social expectations from parents and peers due to their outward maturity. Early onset of puberty caused internal conflicts because their brains are underdeveloped, and this new self-identity led them to make immature decisions, which led to alcohol usage (Faden & Ruffin, 2010). Promiscuous girls' sexuality, puberty, and deviant behavior with peers caused an increase in substance usage (Hipwell, Stepp, Keenan, Chung, & Loeber, 2011). Dutch adolescent girls evolved in the pubertal process had mental challenges that led to indecisive social thoughts, mood swings, and breakage of rules to engage in sexual activity and substance abuse (Oldenhinkel, Verhulst, & Ormel, 2011).

Gender Identity

Fletcher, Bonell, and Rhodes (2009) studied eight female and seven male students between the ages of 14 and 15 and found that a gender gap existed between male and female students. Fletcher et al. (2009) stated adolescent girls used drugs as a solution for finding their identity and equality. High-achieving girls from low socio-economic backgrounds had a tendency to use drugs as management tools for building relationships and finding identities in high-performing learning environments (Fletcher et al., 2009). Adolescent girls experienced more depression within unstable family structures or environments that did not assist with building an identity or belonging. Family environments such as a single-parent homes and/or poor parental involvement and awareness, tended to have a negative effect that caused delinquency and alcohol abuse

(Wang, Dishion, Stormshak, & Willet, 2011). Adolescent girls between the ages of 12 and 17 that engaged in bisexual and other sexual encounters with same-gender individuals had a higher substance abuse usage than sexual encounters with opposite sex partners. Another study reported a high substance existence among bisexual relationships for adolescents (Corliss et al., 2010).

Parental and Family Relationships

Adolescent girls substance abuse doubled its growth rate compared to adolescent boys substance abuse (girls, 120% and males, 51%), and girls had higher arrest rates than males during the years of 1993 to 2002 (Huh, Tristan, Wade, & Stice, 2006). This increase in substance abuse and arrest rates was due to lack of parental control and support. These factors also contributed to girls' substance abuse and law enforcement encounters (Huh et al., 2006). Parental knowledge of substance use was imperative for hindering adolescent girls' substance abuse. Parental monitoring or drug use awareness in this study had more of an effect on decreasing African American males' substance abuse, than decreasing an effect on African American females' substance abuse (Tebes et al., 2011).

Lopez, V. et al. (2009) study showed that 8 of the 18 incarcerated adolescent girls used drugs with their parents in order to build relationships. These girls sought out more attention from their fathers. They also observed their parents using drugs to help cope with problems, which influenced them to display

similar behavior Lopez, V. et al. (2009). Girls of parental substance abusers had higher risks of becoming substance abusers and encountered social, health, and educational challenges (Dehn, 2010). Adolescent girls who are born to mothers with a history of depression or mood swing disorders were candidates for anxiety and substance abusers. They developed substance abuse disorders that led to an increased depressive state of mind a few years later. Girls with a history of substance abuse have increased possibilities of depression (13.24 origin) stemming from abusing drugs more so than boys who experienced depression leading to substance abuse (Gallerani, Garber, & Martin, 2010).

Parental divorce was a very devastating experience that led to adolescent misconduct due to restructuring of the family environment. When adolescent girls' parents divorce and the custodial parent remarried, this led adolescent girls to become substance abusers (Paxton, Valois, & Wanzer, 2007). Family conflict and adolescent girls' substance abuse had connections that caused girls to internalize their problems. This internalization led to depression, apprehension, and isolation (Skeer, McCormick, Normand, Mimiaga, Buka, & Gilman, 2011). Kelly et al. (2011) found that adolescent girls had longevity of alcohol use when they have dysfunctional family situations like those that occur because of parental separation.

Foster and Homeless Environments

Thompson and Auslander (2011) in their study of foster care adolescents found that adolescent girls in this setting had a high number of incidents of alcohol and marijuana usage that caused them to engage in persistent sexual misbehavior that increased their probability of becoming HIV positive. Stagman, Schwarz, and Powers (2011) stated that homelessness for youth between the ages of 12 and 17 years was a significant factor that led youth to becoming involved with drugs. In 2009, homeless youth had the following drug usage: 81% used tobacco, 80% used alcohol, and 75% used marijuana, and homeless youth are easy targets for drug dealers and gangs (Stagman et al., 2011). (Guibord, Bell Romano, and Rouillard (2011), Canadian adolescent girls placed in living environments such as foster homes away from their genetic parents, faced stressful and unwanted mistreatment. Girls were sometimes unprotected in these environments, which left them susceptible to being preyed upon or neglected. Unwanted mistreatment caused mental health issues to emerge, which caused depression and led to emergence of substance abuse. This depression for Canadian girls was higher than boys. The study estimated that one in five children placed in foster homes will have substance abuse challenges (Guibord et al., 2011).

Drug Access to Prescription and Non-Prescription Drugs

Pirisi (2011) stated young female youths are more likely than their male counterparts to abuse prescription drugs. Adolescents can gain easy access to prescription medication due to low cost, and availability, and these medications can become habit-forming and misused (Sikes, Walley, McBride, Fusco, Cole, & Lauka, 2011). Kornblum (2008) stated that prescription drugs not prescribed for adolescents were easier to acquire than beer due to the following; parents were oblivious to their adolescents' drug use, and medicine cabinets were visible and unlocked, allowing for easy access and sharing with friends. Cotto et al. (2010) reported that a contributing factor of substance abuse in adolescent girls between the ages of 12 to 17 years was also the easy access they had to prescription nonmedical psychotherapeutics that led to dependence on these meds These girls had mental health conditions such as sleep disorders that led to psychotherapeutic dependence and vulnerability to substance abuse, which caused difficulty in ceasing from the use of a particular drug (Cotto et al., 2010).

According to OSDUHS in 2010, 23 percent of girls and 18 percent of boys reported using at least one prescription drug not prescribed for them (Pirisi, 2011). Easy access to common household products is a quick and low-cost avenue for drug misuse for adolescent girls. This is a very popular practice among adolescent girls. Adolescent girls' had a tendency to start early and tendency to resort to inhalation of household products because of easy access to them (Ohio

Department of Alcohol and Drug Addiction Services, 2007). A study by Aoun, Christopher, and Ingraham (2014) revealed that abusing bath salts is more prevalent due to low cost, easy access, and public viewing them as harmless, when in fact, bath salts can depress appetite and mood when used inappropriately. Brown University Child and Adolescent Behavior Letter (2007) reported adolescent girls abused inhalants such as glue, nail polish, shoe polish, spray paints, aerosols, and correction fluid. According to Renes and Strange (2009), by the 1980s, adolescent females' misuse of inhalants was revealed as closely following their male counterparts. Additionally, King, Vidourek, and Merianos (2013) reported that over-the-counter medications misused by adolescents are a great concern because of the harmful effects. These adolescent girls have easy access to over-the-counter cough medicines and diet pills, which in turn, can be used for different reasons such as coping mechanisms, social involvement, or getting high. Adolescent girls tend to abuse diet pills during their high school years to cope with personal issues and family problems.

Medical Disorders and Drug Use

Attention deficit hyperactivity disorder (ADHD) is a medical condition that is more apparent in males than females; however, current information has revealed the increased presence of this condition in girls. Adolescent girls with ADHD had more challenging conflicts with relationships and substance abuse, which increased as they transition from adolescent years to adulthood (Babinski et

al., 2011). Malone, Van Eck, Flory, and Lamis (2010) studied students diagnosed with ADHD from kindergarten throughout adolescent school years and found that a correlation existed between adolescent drug use and ADHD. The ADHD symptoms contributed to students encountering impulsive thoughts, careless risks, academic challenges, misbehavior, and difficulty functioning in society. Challenges with societal behavior functions caused adolescents to become involved with marijuana, cocaine, heroin, and methamphetamines (Malone et al., 2010). Lee and Hinshaw (2006) completed a 5-year study that followed girls between the ages of 11 to 18 years diagnosed with ADHD. This study showed that ADHD adolescent girls were at a higher risk for substance abuse that contributed to delinquent behavior. Biederman et al. (2009) found a correlation that existed between adolescent girls diagnosed with ADHD and psychoactive substance abuse, and family history of ADHD and substance abuse were also found in this study (Biederman et al., 2009). Girls diagnosed with ADHD received prescription drugs that are derived from methamphetamine, which is made of household cleaners like acetone and certain fuels that caused substance misuse. Although this drug is effective with ADHD, it also caused damage to the brain and was habit-forming (Herman-Stahl, Krebs, Kroutil, & Heller, 2006). Mental health disorders in adolescent girls can also be associated with misuse of hallucinogenic drugs such as lysergic acid diethylamide (LSD) and ecstasy. Ecstasy is a very popular hallucinogenic “pick-me-up” drug among adolescents

that led to the use of multiple drugs; alcohol and marijuana misuse were also found to be enhanced in these girls (Wu, Pan, Yang, Reeve, & Blazer, 2009). Likewise, adolescent girls with anxiety disorder and obsessive-compulsive disorder have a higher incidence of drinking, smoking, and illicit drug use than males. This drug misuse is possibly due to these girls having phobias to public open spaces, so drugs help them to cope with interactions in public places (Wu et al., 2010).

Global Adolescent Girls Drug Influences

Additionally, substance misuse and mental health disorders have emerged in adolescent girls in Australia over the past 20 years. A sample study of girls revealed that these girls have increased or similar drug usage compared to boys. Between the years of 1991 and 1996, girls aggression from substance misuse was 50% higher compared to boys (Lennings, Kenny, Howard, Arcuri, & Mackdacy, 2007). Schwinn, Schinke, and Trent (2010) reported in their study a high usage of marijuana among late-developing adolescent girls with aggression issues and, high rates of depression and anxiety. Illegal use of prescription drugs and methamphetamines was found to be popular with these adolescent girls. Siu (2011) examined adolescents in Hong Kong and found a significant increase in substance abuse from 2007 (total substance abusers 2,999) to 2008 (total substance abusers 3,430). This study also found a relationship existence between substance abuse and personality characteristics like stress, depression, and anxiety

that occurred during genetic and social transitions for adolescents. Adolescent girls in this study had a higher anxiety sensitive score than boys, girls 1.50, boys 1.14, which indicated underlying factors such as substance misuse contributing to high scores for girls (Siu, 2011). Taiwan adolescent girls using ecstasy have higher sexual encounters that are harmful to their health. They also tend to be involved in relationships with peers who are sexually active and use drugs (Chen & Yen, 2011).

Relationship Between Drug Use and Gang Social Settings

Swahn, Robert, Bethany, and Volkan (2010) reported there was a connection between adolescent drug use and gang affiliation. Gang membership was more common among students in Grade 7 and Hispanic students; this membership gave adolescents a sense of belonging in a family environment. Alcohol was consumed early within an adolescent gang member's life, and he/she used alcohol more often after membership to please new friends who had accepted him/her (Swahn et al., 2010). Hispanic adolescent girls have early exposure to gang membership, which also led to substance abuse and other delinquent activity. This group of girls has become a great concern for our nation due to the increase in this ethnicity's population, which has exceeded that of other ethnicities. Many of these girls have parental and family members who have been incarcerated, been affiliated with gangs, sold illicit drugs, and experienced violent situations that resulted in loss of a life (Valdez, Mikow, & Cepeda, 2006).

Peer and School Relationship Settings

Peer and school influences played significant roles during the middle to higher grade levels for adolescent girls. The lesser the involvement and expectations from these influences, the greater defiant behavior and substance abuse involvement for these girls adolescents grew (Simons-Morton & Rusan, 2009). Low self-esteem and physical appearance during adolescent development are important for adolescent girls because they seek approval from their peers to build relationships and be accepted within peer groups in and out of school. Adolescent girls are more concerned about building relationships or friendships, so they try to obtain acceptance from their peers by becoming involved with illegal drugs (Schinke, Fang, Cole, & Cohen-Cutler, 2011). Adolescent girls also build strong associations with older peers in order to receive illicit substances like alcohol and drugs. This social involvement also led to other risky behavior such as early sexual encounters, various delinquent behaviors, and poor academic attainment (Boislard & Poulin, 2011). Shekhtmeyster, Sharkey, and You (2011) found that meaningful and caring peer relationships are factors that influenced whether an adolescent girl became involved with drugs. School staff bonding and active participation in school activities for adolescent girls are valuable assets that promote higher achievement and encourage good decision making that dissuades them from the influences that led to drug involvement (Shekhtmeyster et al., 2011).

Cultural Settings

The Mexican-American adolescent population has shown tremendous growth within the past years. Adolescent girls within this ethnic group have become substance abusers as a result of gender cultural expectations, parental restrictions, and peer influences that possibly develop at school (Parsai, Voisine, Marsiglia, Kulis, & Nieri, 2009). Indigenous mid-western and Canadian girls' pubertal development have strong family connections, and these girls are easily influenced by peers and family members, such as cousins, because they live in an intertwined social environment. Dominance of this influence is due to past historical abuse and traditions like menarche rites, which are passed on to off-springs and the traditional cycles continues (Wall & Whitbeck, 2011).

Natural Disaster Settings

Internal stress and environment had an impact on adolescent substance abuse. Adolescents who were involved in the Hurricane Katrina disaster experienced trauma that caused them to encounter family disruptions, mental, physical, emotional, and financial issues. These adolescents in this situation also experienced low parental involvement that led to PTSD and delinquency that led to substance abuse involvement, particularly in girls. An important feature of the traumatic event was the classification of being a girl in the Hurricane Katrina disaster and using drugs to cope with the disaster (Rowe, 2010). Rowe also discussed the same effect occurred for adolescents experiencing similar or same

drug abuse issues with the destruction of the World Trade Center in New York (Rowe, 2010).

Incarceration for Drug Use and Delinquent Behavior

Chesney-Lind, Morash, and Stevens (2008) found in their study that adolescent girls have shown a tremendous growth in being incarcerated for substance abuse crimes. Girls had a 171% growth in drug offenses compared to boys at 156% increase. Therefore, the more drug involved adolescents become, the more delinquent behavior they displayed, which led to incarceration. The juvenile justice system has interventions in place for males but has not developed interventions for girls, which can be detrimental for girls' health because of the lack of interventions. Incarcerated girls had higher rates of mental health issues such as, hopelessness, sickness, and PTSD, which led to increased substance abuse after completion of incarceration (Roberts-Lewis, Welch-Brewer, Jackson, Kirk, & Pharr, 2010).

Crosby et al. (2004) found that incarcerated adolescent girls had increased mental health issues plus substance misuse issues, sexually transmitted diseases, and suicidal thoughts that developed from being exposed to violence or being forced to become a gang member. Seventy-five percent of incarcerated youth had several mental health issues. Mental health issues led to suicide attempts, increased delinquent behavior, and increased substance abuse (Russell & Marston, 2010). Additionally, juvenile prostitution is another growing social

problem among adolescent girls and drug use. This social prostitution act was associated with obtaining illicit drugs, shelter, food, or money for survival (Brawn & Roe-Sepowitz, 2008). Substance abuse and alcohol use continues to be the reason for adolescents to enter and continue juvenile prostitution. In 1999, there were approximately 10 million adolescents who were participating in child prostitution, and the number continues to grow (Brawn & Roe-Sepowitz, 2008).

Relationship Between Drug Use and Academic Performance

According to the National Center on Addiction and Substance Abuse (2011) three-fourths of high school students (75.6% of 10.0 million) have smoked cigarettes, consumed alcohol, or used other drugs, and nearly half of high school students (46.1% of 6.1 million) are current users. These percentages do not include incarcerated adolescents. Further stated, teen tobacco, alcohol, and marijuana users are twice as likely as nonusers to have poor grades, and teen marijuana users are approximately twice as likely as non-users to drop out of high school (NCASA, 2011). The National Survey on Drug Use and Health (ONDCP, 2009b) reported adolescents who used marijuana had grade averages of "D" or lower compared to students who did not use marijuana and maintained grade averages of "C" or higher. Nationally, the study showed that 19.3 of marijuana using adolescents had "D" averages. Additionally, Henry (2010) in the article "Academic Achievement and Adolescent Drug Use…" stated that students' academic achievement can begin to decline in junior high school due to an

increase in drug use. Students more often have very little attachment with school and little or no activities to build their interests and these students have a strong attachment to peers with persistent misbehavior. Low school attachment contributed to the development of substance abuse and student academic failure (Henry, 2010).

Brain Function for Learning and Drug Use

White matter of the brain affects how the brain learns and functions. Adolescent girls' brain has two components that are larger than the males, but the overall structure and design of a girls' brain is 10% smaller than an adolescent boys' brain. During early adolescent development, male white matter tends to increase faster than girls. Adolescent girls who engage in substance abuse can have higher and larger disruptions to the development of their brains' white matter than males, which can affect academic achievement (Thatcher, Pajtek, Chung, Terwilliger, & Clark, 2010). Froeschle et al. (2007) found a relationship between girls adolescent substance use, pessimistic behavior, and low academic achievement. They also found an increase in girls' substance abuse, which equaled that of boys, and in some cases, was more than boys.

School Bonding/Drug Use and Academic Performance

Additionally, Oelsner et al. (2011) examined school bonding for middle school students and found a decrease in teacher and student bonding as academic years progressed, which affected these adolescents' social development and

academics by causing a decline in achievement. The lack of teacher/student bonding also generated the development of delinquent behavior that led to evolving of substance abusers. Li and Lerner (2011) stated that students who were not actively engaged at school and unproductive academically have increased levels of psychological distress, delinquent behavior, and substance abuse. This study also found there was no difference in behavior or psychological distress between boys or girls with high substance usage or high depression level. Dauber et al. (2011) study found that White adolescent girls who continuously abuse alcohol have enhanced academic misbehavior, criminal behavior, and substance misuse. Eitle and Eitle (2007) found that low-school bonding and commitment that involved racial disparity among adolescents were factors that predicted whether drugs and alcohol would emerge as social misbehavior for these youth. Adolescent students who have low or no bonding with educators caused them to lose interest in education, experiment with drugs, and perform low academically.

Extracurricular Activities/Drug Use and Academic Performance

According to Dawkins, Williams, and Guilbault (2006) certain drug use is prevalent among students who participated in sports where they have a tendency to use drugs and/or alcohol as either preventative or protective factor. This study found that Black girls commonly used alcohol as a protective factor due to their perceived knowledge about less harmful effects from alcohol than other illicit substances and acceptance in drug related athletic social settings. This drug use

among athletic female students led to absenteeism, student academic failure and dropping-out of school. (Dawkins et al., 2006) reported that girls used steroids illegally in order to enhance athletic ability or physique. Using these body-enhancing drugs are detrimental to your health and can lead to serious medical conditions such as heart disease, liver disease, breast reduction, and HIV exposure from sharing steroid needles that leads to more serious health issues. Hua and Braddock (2008) reported that 4% to 12% of adolescent boys and 0.5% to 2.9% of adolescent girls had used steroids either to improve athletic abilities or to change body mass to gain more bulk, both of which led to health other concerns. Other health issues included mental health conditions that developed from steroid use that caused suicidal thoughts, psychosis, and violent behavior (Hua & Braddock, 2008).

Implications

Adolescent girls' substance abuse continues to increase locally, nationally, and globally year after year. Because of the increase in adolescent girls' substance abuse, there is a need for more development of drug prevention programs in schools. Drug-prevention programs have been implemented in some schools with minimal success, due to the design of these programs. The programs were not designed to address the growing adolescent girls' substance abuse problem and needs. Therefore, more research is needed to increase more understanding of contributing factors that entice adolescent girls to become involved in substance

abuse. Innovative substance abuse programs that focus on adolescent female substance abusers, with components that can be replicated in any social learning environment, will benefit adolescent substance abusers and their communities.

Study was completed and a project emerged which was a girls drug prevention program designed to equip adolescent girls to (a) become more productive learners, (b) build self-esteem, and (c) become better decision makers in life-changing social circumstances. Program components include educating adolescent girls, parents, peers, and school staff in how to build strong, positive relationships and how to recognize drug effects on academic skills. Interactive social skills activities and end-of-project presentations are imperative components in building adolescent girls' written and verbal communication skills. Programs that encompass adults who have passion, commitment, and experience in educating today's youth how to build positive social skills will help these youth build resistance skills towards drugs. This will enable them to function in a global society, to enhance their academic performance, and to build leadership skills that aid them in overcoming certain peer social status or standards. This program equips adolescent girls to achieve maximum success for social change. Program mentors consist of various parents, mentors, school staff, and community leaders. Program counseling services are geared towards improving parent/child relationships, peer/student relationships, student/school relationships, positive

social interactions, leadership skills, and activities to challenge mental capacity in detrimental situations.

Summary

Section 1 introduced factors that contributed to adolescent girls' involvement in drugs and the effect these drugs have on their academic performance and social development. The literature review introduced some factors that included lack of parental involvement with adolescents as they transitioned to different grade levels, family and peer influences, cultural and gender identity, homelessness, community environments, prescription abuse, and pubertal development. The literature review in this section also presented some effects that drug involvement and contributing factors have on adolescent girls' academic performance, social development, and mental/ physical capacity. Some effects on academic performance consisted of skipping classes, incomplete assignments, grades below "C," and high attrition rates. The effects on social development discussed in the section consisted of the inability to cope as normal adolescents in societal situations with non-drug involved peers. Results were produced from past literature that showed how drug involvement had affected students locally, nationally, and globally. Some literature demonstrated that drug use occurrences were more prevalent in girls than boys and is continuing to increase.

The aim of Section 2 is to explain how quantitative descriptive statistics and inferential statistical testing explored the relationship between adolescent girls' involvement with drugs and the effect on their academic performance and social development based on archival data from the Dane County Youth Assessment Survey. Section 2 summarizes the chosen research design that was used for this study. Section 2 also contains instruments that were used for measurement, setting of the study, and sample participants selected for this study. The archival data from the Dane County Youth Assessment supported this research study data analysis, and the analysis results are also included in Section 2. The last component of Section 2 encompasses the limitation, delimitations, and assumptions of the study.

Section 2: The Methodology

Introduction

In 2002 adolescent girls showed higher alcohol consumption rates than males, and these rates continued to increase year after year (Johnston et al., 2010b). As social interactions and influences occur for adolescents, drug prevention program components are almost prehistoric in addressing the adolescent girls' drug involvement problem. Updated training programs for teachers are needed and can begin by using current school staff or by combining programs with family-based drug prevention programs (Gorman, 2011). The goal of this study examined the relationship between adolescent girls' involvement with drugs and the effects on their social development and academic performance. Creswell (2009) stated that quantitative research is used when examining relationships among variables. A quantitative survey design, which consisted of descriptive and inferential statistics, was used for this study. The inferential statistics were conducted to analyze archival data to examine the relationship between adolescent girls' drug involvement and the effect on academic performance and social development. Archival data from the Dane County Youth Assessment survey were analyzed. Questions from survey provided numeric descriptions of trends or opinions from participants in a cross-sectional study with the purpose of generalizing from a sample population (Creswell 2009). The research question that addressed the frequency of self-reported drug use of

adolescent girls required descriptive statistics. Research questions addressing the relationship between adolescent girls' drug use and the effect on their academic performance and social development required inferential statistics.

Research Design and Approach

I analyzed archival data from the Dane County Youth Assessment survey to examine the relationship between drug involvement in adolescent girls between the ages of 12 to 18 and their academic performance and social development. According to Lodico, Spaulding, and Voegtle (2010), a descriptive survey research design focuses on descriptions of individuals' behavior to collect their insights, views, and approaches pertaining to present issues. The methodology used in this study was a quantitative descriptive survey design to show the existence of a relationship between the variables. The archival data revealed a relationship between adolescent girls' drug involvement and the negative effect that drug involvement had on their academic performance and social development.

Setting and Sample

The Dane County Youth Assessment survey was conducted in 2009 for students in Grades 7-12. DCYA was administered anonymously and did not require personal information that would identify individual participants (see Appendix C). Data were included in a Statistical Package for the Social Sciences (SPSS) data file with responses to survey items by subject with school indicators removed (see Appendix D). A school

district name was assigned to the data file for this study. The participants for this study were from the Clearwater School District, a suburban district in Wisconsin. Clearwater School District had a total population of 18,202 students complete the Dane County Youth Assessment. DCYA is a population-based survey of middle and high school students. The sampling size was a 50% weighted population for Grades 7-12 to allow demographic representation per county and consistency with other school districts. No disabilities were excluded from the survey. Ethnic representation for participants included White (74%), African American (7%), Bi/Multiracial (7%), Hispanic (5%), Asian (4%) other (2%), and Native American (1%); 5.4% identified as lesbian, gay, bisexual, and transgender (Sinclair et al., 2011).

Table 1

Descriptive Statistics for Gender and Age Group Ranges of Participants

	Gender		
Age	Female	Male	Total
12 years	24	57	81
13 years	9	11	20
14 years	1228	1140	2368
15 years	2373	2321	4694
16 years	2357	2334	4691
17 years	2097	2177	4274
18 years or older	973	1101	2074
Total	9061	9141	18202

Table 1 displays the number of survey participants by gender and age. Socioeconomic status of these students ranged from the lowest status of economic poverty to upper-class status. The targeted group from this district's archived data consisted of female respondents between the ages of 12 and 18 years.

Instrumentation and Materials

The Dane County Youth Assessment was developed in 1980 by representatives from 14 of the 16 school districts, five funding organizations, and several academic researchers. This assessment was administered electronically to youths in Grades 7-12 during the 2008-2009 school year. School administrators were responsible for administering the survey to participants, which began in

November, 2008 and continued until February, 2009. This time period allowed for participants who experienced absences or suspensions an opportunity to participate (Sinclair et al., 2011). In addition to the rigorous process of demonstrating the validity of this assessment, this questionnaire also was empirically validated using both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) (Mayberry et al., 2009). A hierarchical linear model (HLM) (Raudenbush & Bryk, 2002) was used to consider the variation of parental and peer influences (Level 1 variables) on risk behaviors, while also addressing the influences of school and community (Level 2 variables), thereby creating a more complete model of the dynamics of factors influencing adolescent substance use (Mayberry et al., 2009). The relationship between adolescent girls' drug involvement and the effect it had on their social development and academic performance was examined by using the 2009 Dane County Youth Assessment (DCYA) archival data. The Dane County Youth Assessment raw data is found in Appendix D.

Table 2

Construct Variables

Construct	Questions	Scale
Academic Performance	What grades do you usually get on your report card?	(1) Mostly As, (2)Ds (2) Half As and half Bs (3) Mostly Bs (4) Half Bs and half Cs (5) Mostly Cs (6) Half Cs and half Ds (7) Mostly Ds (8) Mostly below Ds
Drug Involvement	How many times do use drugs?	Not all = 0.00, 1.00 = Once or Twice, 2.00 = 1-3 Times Per Month 3.00 = 1-3 Times Per Week, 4.00 = 4-6 Times Per Week *5.00 = Daily
Social Development	Have you done any volunteer work in the last 12months?	(1)No and I am not inter. to(5)Yes, I have volunteered
	How many days per week are you involved in extra-curricular activities?	(1) 0 days to (8) 7days
	How many days a week do you spend time at a youth or community center?	(1) 0 days to (8) 7days
	How many days a week do you play team sports?	(1) 0 days to (8) 7days
	In an average week how many days do you eat evening meals with your family?	(1)0 days to (8) 7 days
	When things go wrong in my life I try Not to think it is my fault…?	(1)Always to (4)Not at all
	During the past 12 months, did you ever feel so sad or hopeless almost every day for at least two weeks in a row that you stopped doing some usual activities?	(1)Yes (2) No
	During the past 30 days, have you thought seriously about killing yourself?	(1)No to (4)Yes almost all time
	What do you think you will do after you finish high school?	(1) Won't finish to (9) Other

Table 2 includes the questions used to measure each variable. Questions for academic performance included grades received on report card with a scale range from mostly As to mostly below Ds (Appendix D). Questions for social development included volunteer work, extracurricular activities, family meals, life-changing events, hopelessness, sadness, suicidal thoughts, school enjoyment, and after graduation plans (Appendix D). Questions for drug involvement included drug use with a scale range from Not At All to Daily (Appendix D). Inferential statistics were calculated to evaluate the relationship between adolescent girls' academic performance and their reported drug use (Table 12). Inferential statistics were calculated to evaluate the relationship between adolescent girls' social development and their reported drug use (Table 9). The 5.00 value in the drug involvement column in Table 2 indicated a negative high score for drug use effect on academic performance and social development always has the same meaning, which are good grades and healthy social interactions. This is showing a reverse in scores.

Participants' Protection of Human Rights

Approval from the Institutional Review Board (IRB) was granted for the proposal of this study; issues related to the protection of human subjects were addressed. Walden IRB approval for the use of the Dane County Youth Assessment archival data was also given. The survey is administered anonymously. The survey is completely private (Appendix C). Directions for

survey included the following; No one else will see your answers. So please answer all the items thoughtfully and honest. Your participation is voluntary. You do not have to answer any questions on the survey that you do not want to answer. Some of the questions are personal in nature and may raise uncomfortable feelings for you. You may want to talk with your parent or you may want to talk to a professional. So you know where to get help, everyone will: 1) Be given a list of phone numbers and web addresses with places to call for assistance. 2) Be asked to fill out a slip of paper indicating whether or not you'd like to talk with a school counselor (Appendix D). The survey is administered by school administrators (Sinclair et al., 2011). Archival data from the Dane County Youth Assessment will be protected and kept confidential throughout the study (Lodico et al., 2010).

Data and Analysis of Archival Data

Approval from Walden University IRB was granted (approval number 07-29-14-0176422) to conduct this study. The Dane County Youth Assessment Survey and Data Use Agreement was used to obtain permission from Lynn Green, LCSW, PASS AmeriCorps Director/CYF Prevention Manager for Dane County Human Services; and Dr. Brian Koenig, Project Administrator (Appendix C). Analysis of Dane County Youth Assessment archival data was completed after Walden University's IRB approval and permission from Dane County

administrators were obtained. The analysis of archival data from the Dane County Youth Assessment was conducted using SPSS (Appendix D).

Data were analyzed using descriptive statistics to summarize and explain the central tendency pertaining to participants' age and gender. Descriptive statistics were used to answer Research Question 1 addressing the frequency of self-reported drug use of adolescent girls between the ages of 12 and 18 years. Inferential statistics were used to answer Research Questions 2 and 3 addressing the relationship between drug involvement and academic performance and social development.

Descriptive and inferential statistics were used to analyze the archival data from the Dane County Youth Assessment. Descriptive statistics for frequency and interval and ordinal data with an inferential statistical test was utilized. Quantitative data were analyzed using ordinal data to describe mean responses and to measure inferential associations between drug use and academic performance and social development. The data were examined to determine whether self-reported social development and academic achievement differed by drug usage. Descriptive statistics were utilized to determine frequency of self-reported drug use of participants for gender and age. Inferential statistics were conducted to compare relationship between adolescent girls drug involvement. Results of the analysis of archival data were presented to address each research question. Descriptive statistics addressed frequency of self-reported drug use of

adolescent girls (Appendix E). ANOVA addressed the social development and drug use relationship for adolescent girls. ANOVA also addressed the academic performance and drug use relationship for adolescent girls. ANOVA was used to measure the mean differences between social development and academic development responses among grouped drug users.

Descriptive Frequency Analysis

Research Question 1 asked "What is the frequency of self-reported drug use of adolescent girls between the ages of 12 years to 18 years?" Frequency tables were generated to show self-reported drug use from adolescents by gender and ages ranging from 12 to 18 years or older in the past 12 months. Survey participants reported using drugs such as over-the-counter drugs to get high, prescription drugs not prescribed to the survey participants, cocaine or crack, inhalants (glue, paint, spray cans, markers), speed, crystal meth, crank, heroin (smack, junk, china white), ecstasy, bath salts (ivory white, bliss, white lightening), synthetic marijuana (K-2, spice, blaze), and steroids and HGH (Appendix E). The descriptive statistic frequency test conducted for self-reporting categories included the following responses: not at all, less than one time per month, and one time per month or more. The results of these responses are presented in Tables 3-7 for frequency of drug usage for cocaine or crack, speed, crystal meth, crank, heroin, smack, junk, china white, ecstasy, bath salts, ivory white, bliss, and white lightening.

Table 3

Frequency of Self-Reported Cocaine or Crack Usage

Gender	Reporting Categories			
Female	Not at all	Less than 1 time per month	1 time per month or more	Total
12 years old or younger	3	0	14	17
13 years old	7	0	1	8
14 years old	1156	3	4	1163
15 years old	2248	15	8	2271
16 years old	2210	16	32	2258
17 years old	2003	20	19	2042
18 years old or older	884	19	17	920
Total	8511	73	95	8679
Gender	Reporting Categories			
Male	Not at all	Less than 1 time per month	1 time per month or more	Total
12 years old or younger	12	1	27	40
13 years old	10	0	1	11
14 years old	1045	2	9	1056
15 years old	2083	25	42	2150
16 years old	2132	29	51	2212
17 years old	1951	48	38	2037
18 years old or older	935	20	42	997
Total	8168	125	210	8503

The descriptive frequencies for self-reporting drug usage of cocaine or crack are reported in Table 3 for age groups 12 to 18 years. The results show higher self-reporting drug use values for ages 14 years to 17 years for female respondents than male respondents for cocaine or crack usage in all self-reporting categories.

Table 4

Frequency of Self-Reported Speed, Crystal Meth, Crank Usage

Gender	Reporting Categories			
Female	Not at all	Less than 1 time per month	1 time per month or more	Total
12 years old or younger	2	0	14	16
13 years old	7	0	1	8
14 years old	1151	3	5	1159
15 years old	2263	8	6	2277
16 years old	2222	13	23	2258
17 years old	2020	11	12	2043
18 years old or older	907	2	11	920
Total	8572	37	72	8681
Gender	Reporting Categories			
Male	Not at all	Less than 1 time per month	1 time per month or more	Total
12 years old or younger	12	1	26	39
13 years old	10	0	1	11
14 years old	1042	5	9	1056
15 years old	2091	16	41	2148
16 years old	2142	24	45	2211
17 years old	1975	23	35	2033
18 years old or older	944	12	40	996
Total	8216	81	197	8494

The descriptive frequencies for self-reporting drug usage of speed, crystal meth, or crank are reported in Table 4 for age groups 12 to 18 years. The results show higher self-reporting drug use values for ages 14 years to 17 years for female respondents than male respondents for speed, crystal meth, or crank.

Table 5

Frequency of Self-Reported Heroin (Smack, Junk, China White) Usage

Gender	Reporting Categories			
Female	Not at all	Less than 1 time per month	1 time per month or more	Total
12 years old or younger	2	0	14	16
13 years old	7	0	1	8
14 years old	1154	3	4	1161
15 years old	2260	5	8	2273
16 years old	2223	7	23	2253
17 years old	2022	11	9	2042
18 years old or older	900	4	10	914
Total	8568	30	69	8667
Gender	Reporting Categories			
Male	Not at all	Less than 1 time per month	1 time per month or more	Total
12 years old or younger	12	4	25	41
13 years old	10	0	1	11
14 years old	1045	5	9	1057
15 years old	2091	15	40	2146
16 years old	2145	24	42	2211
17 years old	1979	21	33	2033
18 years old or older	946	8	41	995
Total	8228	75	191	8494

The descriptive frequencies for self-reporting drug usage of heroin, smack, junk, and china white are reported in Table 5 for age groups 12 to 18 years. The results show higher self-reporting drug use rates for female respondents, ages 14 years to 17 years, than male respondents for heroin, smack, junk, and china white.

Table 6

Frequency of Self-Reported Ecstasy Usage

Gender	Reporting Categories			
Female	Not at all	Less than 1 time per month	1 time per month or more	Total
12 years old or younger	3	0	14	17
13 years old	7	0	1	8
14 years old	1151	8	5	1164
15 years old	2236	21	7	2264
16 years old	2184	33	34	2251
17 years old	1983	35	19	2037
18 years old or older	864	35	16	915
Total	8428	132	96	8656
Gender	Reporting Categories			
Male	Not at all	Less than 1 time per month	1 time per month or more	Total
12 years old or younger	7	6	27	40
13 years old	9	1	1	11
14 years old	1036	5	9	1050
15 years old	2075	28	45	2148
16 years old	2117	46	44	2211
17 years old	1951	45	38	2207
18 years old or older	932	20	42	994
Total	8127	151	206	8484

The descriptive frequencies for self-reporting drug usage of ecstasy are reported in Table 6 for age groups 12 to 18 years. The results show higher self-reporting drug use values for female respondents, ages 14 years to 17 years, than male respondents for ecstasy.

Table 7

Frequency of Self-Reported Bath Salts (Ivory White, Bliss, White Lightening)Usage

Gender	Reporting Categories			
Female	Not at all	Less than 1 time per month	1 time per month or more	Total
12 years old or younger	3	0	13	16
13 years old	4	3	1	8
14 years old	1148	8	4	1160
15 years old	2254	11	5	2270
16 years old	2227	9	18	2254
17 years old	2016	13	12	2041
18 years old or older	904	4	13	921
Total	8556	48	66	8670
Gender	Reporting Categories			
Male	Not at all	Less than 1 time per month	1 time per month or more	Total
12 years old or younger	13	3	24	40
13 years old	10	0	1	11
14 years old	1040	5	9	1054
15 years old	2091	16	38	2145
16 years old	2159	25	28	2212
17 years old	1992	21	20	2033
18 years old or older	940	14	39	993
Total	8245	84	159	8488

The descriptive frequencies for self-reporting drug usage of bath salts, ivory white, bliss, and white lightening are reported in Table 7 for age groups 12 to 18 years. The results show higher self-reporting drug use values for female respondents, ages 14 years to 17 years than male respondents for bath salts, ivory white, bliss, and white lightening.

Table 8

Frequency of Self-Reported Synthetic Marijuana (K-2, Spice, Blaze) Usage

Gender	Reporting Categories			
Female	Not at all	Less than 1 time per month	1 time per month or more	Total
12 years old or younger	2	0	14	16
13 years old	7	0	1	8
14 years old	1126	24	16	1166
15 years old	2143	79	53	2275
16 years old	2062	101	92	2255
17 years old	1854	112	73	2039
18 years old or older	851	36	27	914
Total	8045	352	276	8673
Gender	Reporting Categories			
Male	Not at all	Less than 1 time per month	1 time per month or more	Total
12 years old or younger	12	2	25	39
13 years old	10	0	1	11
14 years old	990	30	36	1056
15 years old	1961	79	110	2150
16 years old	1958	129	126	2213
17 years old	1757	168	103	2028
18 years old or older	836	81	78	995
Total	7524	489	479	8492

The descriptive frequencies for self-reporting drug usage of synthetic marijuana, K-2, spice, and blaze are reported in Table 8 for age groups 12 to 18 years. The results show higher self-reporting drug use values for female respondents, ages 14 years to 17 years, than male respondents for synthetic marijuana, K-2, spice, and blaze.

Inferential Statistics Analysis

The inferential tests were used to examine the relationships between adolescent girls' substance abuse involvement and the effect on academic performance and social development. The archival data from the Dane County Youth Assessment survey were analyzed and utilized to complete this study. This section also presents the assumptions, limitations, and delimitations that had an effect on the research study.

Table 9

Descriptive Statistics of the Social Development of Respondents Based on Their Reported Frequency of Drug Use

Drug Use Frequency	*N*	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
0.00	9212	2.1959	.50249	.00524	2.1857	2.2062	0.00	4.17
1.00	1308	1.9294	.52605	.01454	1.9009	1.9580	0.00	3.38
2.00	222	1.8529	.54633	.03668	1.7806	1.9252	0.00	3.13
3.00	36	1.3640	.69925	.11647	1.1276	1.6004	0.29	2.67
4.00	34	1.2631	.62463	.10729	1.0448	1.4814	0.29	2.63
5.00	144	2.0614	.71560	.05964	1.9435	2.1793	0.29	3.38
Total	10956	2.1498	.52412	.00501	2.1400	2.1596	0.00	4.17

The inferential statistic test conducted for descriptive statistics of social development presented on Table 9 conveyed drug use values 0.00 to 5.00; 0.00 represents Not at All, 1.00 represents Once or Twice, 2.00 represents 1-3 Times per Month, 3.00 represents 1-3 Times per Week, 4.00 represents 4-6 Times per Week, and 5.00 represents Daily. Social interactions included volunteer work,

extracurricular activities, family meals, life changing events, hopeless, sad, suicidal thoughts, school enjoyment, and after graduation plans. This is a construct comprised of respondents' perceptions of drug use and the effect on social development. As the construct score increases, respondents are considered to have healthy relationships and interactions.

Table 10

Test of Homogeneity of Variance for Social Development

Levene's Statistic	*df1*	*df2*	Sig.
16.265	5	10950	0.000

Table 10 represents the statistical analysis of ANOVA test of homogeneity of variances for whether social development differs by drug use. A test of homogeneity of variance was conducted to assess assumptions. The results of homogeneity of variances are significant ($p = 0.000$) signifying that the standard *F* statistic cannot be used. Instead, a more robust, asymptotic *F* statistic will be utilized (Brown-Forsythe).

Table 11

Social Development of Respondents Differing Among Varying Drug Use

	Statistic[a]	*df1*	*df2*	Sig.
Brown-Forsythe	78.004	5	281.994	0.000

F distributed.

Table 11 represents the robust test of equality of means as a proxy for the one-way ANOVA for social development among various levels of drug use. This

test was conducted because the assumption test of homogeneity of variance was significant. The results of this test $F(5,281.994) = 78.004$, $p = 0.000$ show a significant difference in social development, based on level of drug use.

To determine where the significant differences occurred among respondents, post-hoc analyses were run. Because the Levene's test was significant, the Games-Howell post-hoc test, which does not assume equal variance among the groups, was utilized to determine the extent of within-group differences.

Relationship Between Drug Use and Social Development

Games Howell post-hoc test showed within-group differences in levels of social development for varying levels of drug use. The test addressed Research Question 2, "What is the relationship between drug use and social development?" Post-hoc comparisons showed, in general, that increased frequency of drug use led to lower social development. In particular, respondents who reported that they did not use drugs at all showed significantly higher social development scores, compared with respondents who used drugs. A noted exception was among respondents who reported daily use: These respondents scored as high as those who reported not using drugs (mean difference = 0.2665). This may be a reflection of the bias inherent in self-reporting of sensitive questions. The data clearly show that those who had used drugs once or twice had significantly higher social development scores than those who reported monthly drug use. Those who reported monthly drug use had significantly higher social development scores

than those who reported weekly drug use. The complete post-hoc analysis is located in the Appendices section (see Appendix F).

Table 12

Descriptive Statistics of the Academic Performance of Respondents Based on Their Reported Frequency Drug Use

Drug Use Frequency	*N*	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
.00	8576	3.33	0.840	0.009	3.31	3.35	0	4
1.00	1211	3.01	0.969	0.028	2.95	3.06	0	4
2.00	204	2.69	1.304	0.091	2.51	2.87	0	4
3.00	35	2.60	1.623	0.274	2.04	3.15	0	4
4.00	18	1.81	1.816	0.433	0.90	2.72	0	4
5.00	142	3.07	1.275	0.107	2.86	3.28	0	4
Total	10186	3.27	0.895	0.009	3.25	3.29	0	4

The inferential statistic test conducted for descriptives of grades presented on Table 12 conveys drug use values 0.00 to 5.00; 0.00 represents Not at All; 1.00 represents Once or Twice; 2.00 represents 1-3 Times per Month; 3.00 represents 1-3 Times per Week; 4.00 represents 4-6 Times per Week, and 5.00 represents Daily. Grades received on report cards ranged from mostly grade A to mostly below grade D. Grades were collapsed for this test. This table is a construct comprised of respondents' perceptions of grades achieved during drug use. As the construct score increases, respondents were considered to have good grades.

Table 13

Test of Homogeneity of Variance for Academic Performance

Levene's Statistic	*df1*	*df2*	Sig.
52.054	5	10180	0.000

Table 13 represents the statistical analysis of ANOVA test of homogeneity of variances for grades differing by drug use. A test of homogeneity of variance was conducted to assess assumptions. The results of homogeneity of variances was significant ($p = 0.000$) signifying that ANOVA results cannot be used. Instead a more robust, asymptotic F statistic was utilized (Brown-Forsythe).

Table 14

Academic Performance of Respondents Differing Among Varying Drug Use

	Statistic[a]	*df1*	*df2*	Sig.
Brown-Forsythe	23.931	5	115.665	0.000

Asymptotically F distributed.

Table 14 represents the robust test of equality of means as a proxy for the one-way ANOVA for academic performance among varying levels of drug use. This test was conducted because the assumption test of homogeneity of variance was significant. The results of this test $F(5,115.665)$, $p = 0.000$ indicate a significant difference in reported grades among different levels of respondents' drug use. To determine where those differences occurred, the Games-Howell post-hoc test was utilized.

Relationship Between Drug Use and Academic Performance

The Games Howell post-hoc test showed within-group differences in levels of grades for varying levels of drug use. This test addressed Research Question 3, "What is the relationship between drug use and academic performance of adolescent girls?"

Girls who did not use drugs reported significantly higher grades than those who used drugs at any given frequency, except 1-3 times per week and daily use. The largest significant mean difference was 1.520, or approximately 1.5 grade levels. As with social development, the reported high grades among daily drug users may be a reflection of self-reporting and the bias of sensitive questions. The only other significant relationships were between those who used drugs very rarely, once or twice, who reported significantly higher grades than those who used drugs on a monthly basis. The largest significant mean difference was 1.199. The complete post-hoc analysis is located in the Appendices (see Appendix G).

Assumptions, Limitations, Scope, and Delimitations

Assumptions are what the researcher takes for granted (Lodico et al., 2010). Assumptions pertaining to school involvement as a contributing factor for substance abuse caused the researcher challenges because there were so many facets involved with schools that allowed students few opportunities to have a sense of belonging; there were more boys involved with drugs than girls. Participants involved with drugs participated in drug prevention program because

they needed help to address their drug involvement problems. The possibility of bias thoughts and conclusions were evident due to participant responses to questions in the data analysis for this study. According to Creswell (2008), limitations are acknowledged by the researcher as possible problems that may occur with the study. Limitations that may have occurred in this study included the following weaknesses: Archival data from the Dane County Youth Assessment possibly contained hidden bias from original researchers and participants' accurate responses to questions. Thoughts, points of views, and researcher original purpose for investigation may have differed from current researcher's purpose for data. Data may have not contained information to assist with completing the researcher's project study.

Delimitations were the actions of the researcher (Ellis & Levy, 2009). In this study, the researcher limited the age between 12 and 18 that did not include students who were younger than 12 or older than 18 who possibly were substance abusers. The researcher included only archival data from a school district recommended by Dane County Youth Assessment Officials. .

Conclusion

Data analyses were presented in Tables 1-7 using inferential statistics to address project study research questions 2 and 3. I used descriptive statistics for frequency to calculate the results for Research Question 1 which asked, "What is the frequency of self-reported drug use of adolescent girls between the ages of 12

years to 18 years? The results in these tables showed higher self-reporting drug use values for female respondents' ages 14 years to 17 years than male respondents in seven out of the ten self-reporting drug use categories.

Brown-Forsythe test was utilized to address Research Question 2, which was "What is the relationship between drug use and social development of adolescent girls?" The test results showed adolescent girls that had increased frequency in drug use had low social development scores. Respondents that reported drug use for once or twice had significantly high social development scores. Participants that reported monthly drug use had significantly high social development scores. Additionally, the results revealed an inherent bias may exist due to respondents reporting high social development scores in the daily use of drugs category. The analysis concluded that a relationship does exist between drug use and social development in some categories.

Brown-Forsythe test was utilized to address Research Question 3, which was "What is the relationship between drug use and academic performance of adolescent girls?" Post-Hoc comparisons showed that adolescent girls that used drugs 1-3 times per week and daily use had significant low grades. This test also found that an inherent bias may exist from respondents in the daily drug use category that reported high grades. The analysis concluded that a relationship does exist between drug use and academic performance in specific categories.

The findings recommend the need for an adolescent girls' drug prevention project that focuses on equipping adolescent girls with knowledge that will assist in enhancing their social development decision making skills and academic performance while transitioning through higher grade levels.

Section 3: The Project

Introduction

Distinct relationship issues were revealed after analysis of archival data from the Dane County Youth Assessment on adolescent girls' drug involvement. My data analysis indicated that a relationship existed between drug use, social development, and academic performance. The results were used to develop an adolescent girls program designed to give adolescent girls knowledge about the effects of substance abuse on academic performance and social development. The program included highly qualified mentors to increase adolescent girls' social skills and enhance parental awareness of the relationship between substance abuse and social development and academic performance.

Description and Goals

Description of Project

Girls Empowered to Resist drugs to Leverage their Subject knowledge and Social skills (GELS^2) is a program to improve adolescent girls' academic performance and social development as they transition through their middle and high school years. Program components include interactive modules designed to increase adolescent girls' academic skills, parental modules designed to increase knowledge of the detrimental effects of substance abuse and factors that influence substance abuse, and highly qualified mentors who assist with building positive

social development so adolescent girls are equipped to be productive 21st century learners.

Description of Goals

GERL*S*^{2} will foster academic achievement by increasing organizational and communicative skills to ensure success, by building strong parenting skills to enable monitoring of behavior changes that inhibit positive decision making, by creating a community of health care and educational professionals who have knowledge to share with adolescent girls, and by keeping all participants involved in the program abreast of substance abuse effects and new updates. The GERL*S*^{2} program aims to accomplish these goals:

- Improve adolescent girls' academic performance by building study skills and social skills through engaging and interactive activities about substance abuse effects;
- Increase parental knowledge and awareness of the effects of substance abuse, peer influences, social standards, and contributing factors to adolescent girls' substance abuse;
- Provide professional development and training for school personnel to enhance skills for identification and detection of drug abuse signs;
- Provide highly qualified mentors/counselors who possess drug knowledge and who will focus on building positive relationships, identifying factors

that contribute substance abuse, and addressing adolescent girls' social and civic activity.

Rationale

Adolescent substance abuse for girls occurs at higher rates than for boys in some areas. Based on results presented in Section 2, I developed an adolescent girls' substance abuse program for middle and high school students to focus on individual needs to overcome drug misuse. This adolescent girls' substance abuse program includes knowledgeable professionals from health care and law enforcement who educate adolescent girls, parents, school staff, and other community partners regarding the impact of substance abuse on social development and academic performance. This program also has components to educate adolescent girls, parents, and school staff about substance abuse signs and effects on adolescent girls' development, and focuses on building academic and social skills. There have been a limited number of gender-specific programs between 1980 and 2000 that targeted girls, and more programs are needed to address these gender-specific needs (Schwin, Schike, & di Noia, 2010). Prevention program strategies need to be initiated in middle school based on previous studies that showed onset of drug experimentation in early adolescent years.

Review of the Literature

This section presents scholarly work from previous researchers pertaining to adolescent girls' substance abuse. Minimal studies have been conducted specifically on girls. The majority of articles focused on male participants or social interactions as adolescents transitioned to higher levels during their school years. The theoretical framework of this study included Bandura's social learning theory, which addresses the positive and negative social influences that individuals have on other individuals. Bandura's social cognitive theory addresses the relationship between empathy and substance abuse and the unforeseen influence on adolescent substance abuse by understanding adolescent inner turmoil and using drug refusal efficacy: "The theory describes self-regulatory mechanisms through which individuals observe their own behavior (self-observation), judge it in relation to personal or societal standards (normative judgment process), and adjust or maintain their behaviors through self-reactive influence" (Nguyen, Clark, & Belgrave, 2011, p. 290). Previous adolescent intervention programs included straightforward preventative methods, which probably contributed to inadequate development of adolescent social skills after treatment (Clark, 2010). To accurately address the development of adolescent substance abuse, more action needs to be taken to understand the patterns and causes. An amalgamation of preventative methods could assist in reducing recurrences of substance use (Clark, 2010). According to Paiva, Amoyal,

Johnson, and Prochaska (2014), many drug prevention programs have made little progress in deterring and preventing substance misuse and its effect on adolescents, including the plethora of substance abuse studies of previous years. Prevention efforts need to begin early because adolescents begin using substances early in their lives, which means early effects on their academic performance, social conduct, and health that can also feed into adulthood with long-lasting effects (Paiva et al., 2014). Substance abuse prevention programs need to target specific adolescent needs to prevent drug misuse and to address general or common needs (Paiva et al., 2014). Early education of adolescents about substance abuse and its effects is an effective intervention. Meetings or courses within intervention programs should include engaging activities that aim to decrease undesirable social interactions that lead to use of alcohol, tobacco, and other substances (Schulte, Monreal, Kia-Keating, & Brown, 2010). Adolescent drug prevention programs that enhance knowledge of drug effects, resisting drugs, negative influences, and engaging activities would be more effective (Huber, Workman, Ford, Moore, & Mayer, 2009).

Social Adjustments and Influences During School Transitions

As adolescents transition to higher grade levels, they may not always make positive social and situational choices. One negative choice would be the decision to skip school (truancy) with their peers. Truancy sometimes contributes to substance abuse activities. Other factors that contribute to truancy and

substance abuse include family issues, mental issues, and gang affiliation. One effective intervention to reduce these dangerous tendencies is to educate parents about unsafe behaviors that occur during truancy, which will assist with decreasing the drug misuse social activity (Henry, 2010). Lee, Storr, Ialongo, and Martin (2012) posited that there are certain factors such as gambling and traumatic life events such as a dysfunctional family that contribute to adolescents developing a life of delinquency and substance abuse simultaneously.

Girls face challenges dealing with painful life events, which can cause them to make depraved decisions leading to substance abuse and other aberrant behavior. Intervention programs need to identify adolescent girls' personal, hurtful life events and prepare them with skills to alleviate or cope with these issues in order to function in society (Unikel, Root, Vonholle, Ocampo, & Bulik, 2011). Eating disorders contribute to or are related to Mexican adolescent girls' substance abuse. As these girls continue to develop throughout their adolescent years, they need interventions to address the eating disorder or preventive methods to impede the progression of the disorder (Unikel et al., 2011). According to Sartor et al. (2013), sexual abuse that occurs during childhood leads to depression or posttraumatic stress disorder, which in turn can lead to adolescent girls' substance abuse. Adolescents living in dysfunctional families where violence occurs between parents and adolescent girls led to substance abuse. These are strong influences that can lead to substance abuse and other health issues for these girls. Early

identification of contributing factors for substance abuse is imperative so that mental health support can be implemented to promote development of coping skills.

Substance Abuse Effect on Academics

McKay, Sumnall, Cole, and Percy (2012) stated that adolescent illicit drug use is not just a problem in the United States but in other countries as well. This problem also affects adolescents' academic progress, and preventative measures need to be applied to decrease substance abuse. McKay et al. (2012) also reported that Northern Ireland adolescents who engaged in socially unacceptable alcohol drinking also had lower academic performance, which contributed to substance abuse. Chakravarthy, Shah, and Lotipour (2013) stated that drug prevention programs should focus on building self-efficacy approaches to decrease alcohol consumption and influences. Specific influences that contribute to adolescent drug misuse need to be identified so prevention methods can be implemented effectively. Early enhancement of knowledge and skills for family members, school staff, and health care workers about drug prevention needs to be implemented as well so they can be aware of updates. Negative outcomes such as low academic achievement, promiscuous sexual acts, mental health problems, deviant behavior, and loss of life result from adolescent illicit drug abuse. Adolescents and their parents need to be educated about these negative outcomes through prevention programs. Prevention program effectiveness is determined by the abilities of stakeholders to properly identify at-risk teens and implement

program components to address their individual drug needs (Chakravarthy, Shah, & Lotipour, 2013).

Suicidal Tendency and Substance Abuse

According to Dunn, Goodrow, Givens, and Austin (2008), substance abuse and suicidal thoughts begin in middle school years, and intervention programs need to focus on preventive methods to be implemented during this period. School staff members need to be aware of contributing factors for substance abuse and intercede for these adolescents. According to Brown University Child and Adolescent Behavior Letter (2010), approximately three fourths (72.3%) of suicide attempts by adolescents were made by girls. (Kim, Moon, & Kim, 2011) stated statistics for 2006; suicide was the third highest cause of adolescents' death between the ages of 12-18 years and girls showed a higher tendency rate to commit suicide than boys. Kim et al. also found a stronger correlation between substance abuse and suicidal tendency among adolescent girls than boys. This was due to substance abuse products such as alcohol and cigarettes that were legally obtained by adults and given to adolescents. Intervention programs need to educate all individuals responsible for the care and development of these adolescents about the effects of substance abuse and how it can lead to adolescent suicide (Kim et al., 2011).

Enhancing Parental Knowledge

Abar, Jackson, and Wood (2014) examined parent and adolescent relationships and found there were gaps in parental knowledge of adolescent activities. Abar et al. also stated that parents' lack of knowledge of their adolescents' whereabouts and extracurricular activities needs to be addressed because parental awareness of adolescent involvement with substance abuse was not visible in the parent-child relationship. Educating parents on how to build strong relationships during their children's adolescence developmental growth helps to increase parents' awareness of their adolescents' social influences. King and Vidourek (2011) stated that parents need to be trained on how to be effective communicators and knowledgeable when speaking to adolescents about substance abuse. Parents are instrumental influences who can inhibit substance use by assisting adolescents in making better peer choices and by building strong family relationships. Parents need to enhance their parental skills to be more observant of adolescent behavior changes and becoming more involved in their adolescents' lives without being overbearing. According to Becker (2013), family members play significant roles during adolescent development, and they need to have knowledge about the effects of drugs. Family counseling is imperative to empower family members to identify and cope with the effects that substance abuse has on the individual adolescent and other members. Belgrave, and Abell (2012) studied the relationship between African American adolescent, parent, and

peer association and drug use. Clark et al. (2012) found that girls tend to use drugs to blend into certain social arenas for acceptance. Clark et al. also found that lack of parental monitoring influenced adolescent substance use for African American girls. Clark et al. recommended for drug use prevention programs to strengthen parental knowledge about adolescent girls' peer associates and monitoring skills for adolescent drug use.

Knowledge Based Intervention Program Implementers

According to Tze, Li, and Pei (2012), school drug intervention programs need to focus on informing adolescents at 14 years of age about effects and consequences associated with substance abuse, build their resistance to drugs, and develop their social skills to prepare them for drug exposures and influences by their peers. These programs should be created by professionals such as school counselors, healthcare workers, social workers, and police officers with specialized training pertaining to the effects of drug abuse. These programs need to be able to target specific substance abusers and address their individual needs (Tze et al., 2012). Rieckmann et al. (2011) found in their study that adolescent drug intervention programs need to be enhanced to address individual drug users' specific needs, community needs, family needs, and the responsibilities of each. All constituents involved in the developmental process of an adolescent's life need to be concerned about the whole wellbeing by being observant of individual needs and be able to report those needs to program implementers. Choi, Krieger,

and Hecht (2013) studied the implementation of refusal efficacy (RE) and self-efficacy (SE) by adolescents on drugs when interacting with their peers in different social settings and found positive effects. The inclusion of RE in drug-prevention program curriculum assists youth with resisting drug offers to decrease substance misuse (Choi et al., 2013).

Adolescent Girls Drug Prevention Program

Kunz et al. (2014) studied adolescent girls and parents' credence about sociably acceptable practices pertaining to substance abuse and other medical conditions that adolescent girls battled such as asthma and other health impairments unforeseen during drug misuse and use of regular prescribed medication. This study found that substance abuse intervention programs needed to educate these sickly adolescents about the heightened effect of drugs on their medical condition, including information on medication contraindications and causes of other acquired health issues. Adolescent substance abuse can lead to various problems such as unhealthy lifestyles and defiant behavior that interferes with natural pubertal development. As adolescents develop, their social interactions change, and these interactions can come with social pressure from their peers who encourage substance abuse and deviant misbehavior. There are several drug prevention programs focused on reducing adolescent substance abuse and misconduct such as Cognitive Behavior Theory (CBT), 12 Step Facilitation, Psycho-education (PE), Motivational Interviewing (MI) and Multi-systemic

Therapy (MST). The most effective approach is Multi-systemic Therapy (MST) for adolescent illicit drug use issues and social unacceptable practices. This intervention program targets many adolescent drug influences, allows family involvement during the treatment process, and provides knowledgeable program implementers to ensure success of implementing interventions (Spas, Ramsey, Paiva, Stein, & 2012). Schwinn, Hopkins, and Schinke (2014) stated that the adolescent girls growing rate of substance abuse is equivalent to boys in some circumstances, but in many cases or circumstances it exceeds drug misuse in their male counterparts. Additionally, girls and boys have some ubiquitous factors that contribute to substance abuse, but girls have specific factors due to their gender. Drug prevention programs should be gender-based because of the differing factors between genders. Areas that need to be closely addressed include adolescent girls' puberty process, knowledge of substance abuse, peer pressure, and social development interactions. Programs should provide scenarios of real-world substance abuse situations to equip and guide adolescents in making positive informed decisions about substance abuse situations. Drug prevention programs need to incorporate innovative approaches that focus on gender-specific risk and protective factors for adolescent substance misuse (Schinke et al., 2011).

Project Description

Girls Empowered to Resist drugs to Leverage their Subject knowledge and Social skills (GERLS^2) to improve academic performance and social development as they

transition through their middle and high school years: this program builds on the knowledge and skills of adolescent girls, parents, and school personnel by using educated healthcare workers, law enforcement officials, licensed counselors, and other professionals who have acquired knowledge to teach participants about resisting substance abuse.

Potential Resources and Existing Supports

The school district where I currently serve has implemented drug programs such as the Drug Abuse Resistance Education (DARE) program at various campuses. The GERL*S*^{2} project can be implemented as a support for existing drug programs at various campuses. It can be utilized at the middle, freshman, high school levels and alternative education campuses. District grant writing committees could assist with finding grants to fund the program. Community stakeholders could volunteer to donate time to minimize program and implementation cost. Local vendors could supply materials needed for participant assignments and projects. Mental health facilities that currently serve students within our district could assist by allowing licensed counselors to volunteer their knowledge and time to the program.

Potential Barriers

Potential barriers to implementation of the above mentioned program include; limited courses that do not focus on the individual needs of adolescent girls, lack of qualified professionals who are not able to identify causes of

substance abuse, shortened program timeline for treatment to produce needed results or change. Other barriers might be attributed to parents' inability to attend all training sessions to receive proper knowledge to improve their drug knowledge, observation skills, and monitoring skills of their adolescent girls. Finally, inadequate funding to cover program expenses for supplies and program implementers could also be a potential barrier. Possible solutions could include reviewing program components to review sources needed to alleviate barriers. Program developers can use all resources that are accessible and presented from program implementers, healthcare professionals, law enforcement officials and highly qualified counselors to ensure barriers do not develop during program implementation. All participants can contribute their knowledge, talent, and ideas to assist with addressing any foreseen obstacles or hindrances that may prohibit proper implementation of the program.

Proposal for Project Implementation and Timetable

Project Implementation

I am going to make a suggestion for my GERL*S*^{2} curriculum to be implemented for the 2016-2017 school year at least by marking period three. This will allow district administrators an opportunity to review my program and determine where my program would be most useful. GERL*S*^{2} curriculum is a 9 week program, which could fit well into our district's newly adopted nine-week marking period calendar for the 2015-2016 school year. Once the GERL*S*^{2}

curriculum has been approved by district administrators, the curriculum can be reviewed by school staff or parents in a paper-based format or online. This timeline will allow staff and parents time to train in order to be prepared for adolescent girls participants that will be enrolled in the program.

Proposal for Implementation and Timeline

After thorough review of the GERL*S*^{2} program, the following timeline will be proposed to begin implementation:

- Marking period 1: project proposal to district administrators;
- Marking period 2: district administrators discuss program components and decide implementation period;
- Marking period 2: GERL*S*^{2} curriculum components presented to staff for training preparation;
- Marking period 2: GERL*S*^{2} curriculum components presented to parents for training purposes;
- Marking period 3 or 4: GERL*S*^{2} curriculum implemented for participants.

Roles and Responsibilities of Student and Others

G.E.R.L.*S*^{2} curriculum will be an integral part of any school's drug resistance program by supporting current drug programs and assisting with elimination of adolescent girls' involvement with drugs/substance abuse. The participants will be required to complete all program components and final project to receive full knowledge benefits. Participants will be responsible for attending

modules to become experts in building their academic performance and social development. Participants completing the program will have an opportunity to acquire drug resistance skills to be successful in their future academic careers. Parental support is essential in ensuring that participants have family support during the program and encouragement to complete the program. Parents are required to complete a one-day training workshop to learn about the GERL*S*^{2} curriculum components to enhance their knowledge about drug/substance abuse effects. Program implementers will be prepared to share their knowledge and experience, and will be required to be available to volunteer and commit to program implementation.

GERL*S*^{2} Curriculum

The purpose of Girls Empowered to Resist drugs to Leverage their Subject knowledge and Social skills (GERL*S*^{2}) is to improve their academic performance and social development as adolescent girls transition through their middle to high school years. Program components include interactive courses that build on adolescent girls' knowledge of drug effects, drug resistance, and social skills. Academic skills are addressed simultaneously with module drug knowledge and skills in all weeks of the modules. Staff and parental courses will be designed to increase knowledge about substance abuse effects and will be conducted before and during participant involvement in the curriculum. The curriculum consists of three modules that contain weekly courses with interactive activities. Interactive

activities will be recorded in the participants' interactive journals. Lessons within the modules have questions to ignite discussion, and participants will also have multiple opportunities to demonstrate acquired knowledge. The G.E.R.L.*S*^{2} curriculum will increase adolescent girls' drug knowledge through a variety of sources such as literacy tools, technology tools, and writing experiences. Participants will become effective communicators by utilizing effective communication skills to contribute to positive conversations or disengage from negative conversations. The implementation of the curriculum components will produce the desired effect of resistance to substances, increase academic performance, and enhance social skills of adolescent girls in order to be responsible, safe, healthier, and be successful as a 21st century learner (see appendix A).

GERL*S*^{2} Curriculum Parent and Staff Training

The GERL*S*^{2} staff and parents attend an all-day training for one day, which will encompass the GERL*S*^{2} program purpose and components. The staff and parents will receive a copy of the GERL*S*^{2} program curriculum at the beginning of training. Training will include courses about drug awareness, effects, influences, and early identification of adolescent girl drug users, module will be presented by community partners (see appendix A).

Project Evaluation

Accountability and rigor are the driving forces of many districts within our learning societies for school improvements. Drug prevention programs need to be evaluated for program effectiveness and rigor (Self, Morgan, Fuhrman, & Navarro, 2013). This adolescent girl's program summative evaluation will contain six steps. Step 1 states the purpose, which is to determine if the GERLS^2 program has met its goal of providing knowledge to participants about the effects of substance abuse on adolescents' academic performance and social development by using highly qualified professionals from healthcare organizations, law enforcement, licensed counselors and school staff to facilitate the program. The evaluator will address stated objectives/goals and questions about the program in the evaluation plan. Step 2 identifies the stakeholder group, which will consist of members such as program implementers, participants, parents, school personnel, law enforcement officers, and other constituents as data sources. According to Spaulding (2008), "Data for summative evaluation is collected for the purpose of measuring outcomes and how those outcomes relate to the overall judgment of the program and its success" (p. 9). Step 3 evaluates the objective/goal of the program based on the information expected to be learned about the program and also evaluates the accomplishment of said stated goals. Step 4 assesses data type, data sources, timeline and evaluation design (data must be confidential and accessible for program evaluators). Status Design will allow evaluators to observe and gather information about what is currently happening with the participants by using data from school records such as

attendance records, discipline records, parent surveys and/or interviews. Step 5 states data analysis shows the data of participants at the beginning of the program and after completion of program in percentage points. It reveals the effect of the program on knowledge acquired and utilized by adolescent girls, their parents, and school staff about substance abuse effects on academic performance and social development, contributing factors, and peer influences after completion of GERL*S*^{2} program. Step 6 is a written report of the findings and recommendations of the evaluation results. It contains a status report on what was discovered from evaluating the program including program effects, purpose, goals, evaluation techniques, types of data collected, data sources, data analysis, and brief description of each goal or objective addressed summarized data in a table format, results from the evaluation, and conclusions and recommendations for future programs (see appendix A) .

Implications Including Social Change

Local Community

This GERL*S*^{2} curriculum will be effective within middle, freshman, high school, and alternative education programs within my school district and other surrounding districts to assist with decreasing adolescent girls' involvement with drugs/substance abuse: "About 1 in 10 (9.2%) adolescent girls have taken more prescription drugs for nonmedical purposes, compared with 1 in 13 (7.5%) adolescent boys" (Schinke, Fang, Cole & Cohen-Cutler, 2011).

Far-Reaching

Adolescent girls' drug involvement is rapidly growing within many schools. GERL*S*^{2} program has the capability to change the mindset of adolescent girls within different professional learning environments to assist them with making informed decisions in a variety of social settings and develop healthier lifestyles.

Conclusion

Adolescent girl substance abusers have social impairments that affect their mental thought process. This impairment leads to harmful effects to their bodies. More research focused on girls substance abuse is needed (Kerr, Preuss & King, 2006). Additional research studies are needed in the area of adolescent girls substance abuse based on specific needs to assist with designing design drug prevention programs focused on enhancing their social abilities and academic achievement (Froeschle et al., 2007). The girls' drug prevention program developed from this project study will promote drug awareness effects and empowerment of adolescent girls, parents, school staff, and community workers to identify substance abusers and resist drug involvement.

Section 4: Reflections and Conclusions

Introduction

This final section of this project study presents the strength and limitations of the study, the data analyses, the adolescent girls' substance abuse program developed from the results, and other strategies that could have been implemented to address the problem. This section also includes a discussion of the knowledge acquired from developing the project study, a description of how this knowledge affected my personal growth as a scholar and leader, a discussion of the impact the study may have on social change, and recommendations for further research.

Project Strengths

One strength of this project study is the knowledge and resistance skills that adolescent girls will obtain as they transition to higher grades. Adolescent girls experience social interactions that influence them to make uninformed decisions that are detrimental to their lives. As the participants complete each module of the GERLS^2 program, new knowledge will emerge causing an increase in understanding of substance abuse and its effects on their academic, social, mental, and physical abilities. This substance abuse knowledge will also enable them to make informed decisions that will probably give their parents some peace of mind when their children are not within their presence. Another strength of this project is the engaging activities that are embedded within the weekly lessons of each module to enhance drug knowledge, drug resistance skills, and available resources to seek help. My current district has the focus to engage all

students by the 2016-2017 school year, which means that all systems need to be in place working collectively for the good of all students and GERL*S*^{2} will be as easy program to transition into the district's full engagement plans. My adolescent girls' drug prevention program will be a good fit for students within our district because of the engaging activities. Our district is also incorporating more project-based learning within our curriculum. The GERL*S*^{2} program has an essential element at the end, which includes a project that allows participants to present their acquired knowledge in a presentation format of their choice. The parental training piece of the program is another significant strength that will increase parents' knowledge, awareness, and monitoring skills to decrease adolescent girls' substance abuse. There is strong evidence of positive outcomes for participants in drug intervention programs that include family-based skills training (Kumpfer, 2014).

Recommendations for Remediation of Limitations

One limitation of the project may be the delayed implementation of the program due to district leaders' approval. Many school districts are under pressure to ensure that professional learning environment instructors are prepared with adequate resources, training, and updated guidelines to ensure success on state assessments. Another limitation is the number of participants enrolled in the program, which excludes males. Male participants could possibly benefit from the program components because of the specific design to address certain substance abusers needs. Enrollment of participants will depend on the following factors that will affect the timely implementation of the

program: district's approval, dissemination of program information, campus leaders' distribution of program information, student acceptance of program benefits, parental consent for students to participate in the program, parental involvement in the program, and volunteers needed to implement the program. A checks and balancing system will need to be implemented to ensure these factors are being addressed in a timely manner.

Recommendations for Alternative Approaches

Adolescent girls' substance abuse problems could have been addressed differently by focusing on gender specifics for male students and female students because contributing factors and peer influences occur for both genders. As stated in the literature review, pubertal changes, adolescent transitioning, and social adjustments are various influences on teens as they enter middle, freshman, and high school years. My project study program design could be revamped to include male substance abusers considering female substance abusers and male substance abusers exist in similar social settings and have similar challenges during adolescent development.

A qualitative study to address the adolescent girls' substance abuse problem could be conducted by interviewing incarcerated adolescent girls. Analyze collected data, discuss results to identify needs and utilize components of GERLS^2 to address their needs and then evaluate program effectiveness for these incarcerated adolescent girls. During my quest for literature pertaining to adolescent girls' drug abuse, I found a vast of literature revealing the percentage

of incarcerated girls with associations of delinquency and substance abuse. Conducting a qualitative study would allow for contributing factors and influences to be revealed that may be similar to non-incarcerated adolescent girls. Then, my GERL*S*^{2} drug intervention program could be implemented to address their contributing factors and influences. Effective implementation of modules would increase incarcerated adolescent girls knowledge about drugs and build resistance skills to drugs in future social settings. Girls could be tracked and a survey could be conducted at intervals about program effectiveness. The survey results about program effectiveness could be shared with school districts and other drug prevention programs to assist adolescent girls participants enrolled in their programs.

Scholarship

I have a newfound respect for previous researchers who devoted time and effort toward conducting research to address problems that occur within our societies. I have a better understanding of some of the challenges that they endured from the beginning and completion of a research study. I did not realize the importance of the problem that I selected until I began my research, and now I am truly happy for the selection of my doctoral project study. I believe the design and focus of my research project study will have an impact on adolescent girls, parents, program implementers, and stakeholders who participate with a mind-set

to attack this substance abuse problem and change adolescent girls' thinking in various social settings.

I have learned that it takes patience, time, and passion to research a particular topic from beginning to end. It is also important to brainstorm, use semantics, and compile as many synonyms or terms associated with a study as possible in order to find literature to complete a thorough study. It is imperative to have an extensive understanding of data, data analysis programs, and how data were analyzed in previous studies. Tables, graphs, and charts are presented in various forms that allow a researcher to share a summary of their findings (Trott, 2013). Interpreting data and presenting it in an understandable form to show results was a challenge for me, but after I worked through my uncomfortable zone with the data analysis program, the presentation of tables and graphs became clearer.

Project Development and Evaluation

I also have a newfound respect for curriculum developers. I had no idea of the detailed concepts involved or lessons incorporated into creating a curriculum for a specific program. Ensuring that curriculum has components with attainable goals. Curriculum design requires detailed work and focused attention. The development of the curriculum for this program reminded me of one of my first administrative leadership courses, which I was introduced to early in my administrative leadership journey. This course focused on becoming a change agent through leadership. My journey as a change agent began when I was

promoted from a teacher to an administrator, which sparked my interest in curriculum development because my new role granted me exposure to various curricular formats. My new acquired knowledge pertaining to leadership change agents and curriculum exposure equipped me with skills to create an adolescent drug intervention program. My contribution to change the adolescent girls drug misuse program consisted of developing a GERLS^2 drug intervention program.

Leadership and Change

My first administrative leadership assignment was as an alternative school administrator. I then transitioned to a high school administrator during summer school, which enhanced my curriculum experience. While serving at the alternative school, I noticed that the girls' enrollment continuously increased over the years for placements that included; alcohol, weapons, gang actions and substance misuse. The alternative school became a revolving door for many of these girls. When I transitioned to become a middle school administrator, I encountered many adolescent girls with substance abuse issues. There were frequent misbehavior encounters with drug involvement that led adolescent girls to begin having interactions with school resource officers. These drug involvement encounters warranted assignment to the disciplinary alternative education program for numerous days. I began to think to myself, "What can I do to change the mind-set of these adolescent girls as an administrative leader?" I asked, "How could I assist with decreasing this disciplinary alternative education

program enrollment of girls and reduce this detrimental behavior?" As I began to interact with these girls, I noticed there was a lack of knowledge about drugs, and they all had personal and social influences that contributed to substance misuse. Therefore, I concluded that their overlooked personal struggles and lack of substance abuse knowledge was how this problem emerged in their minds and social environments. Then I knew that it was time for me to apply the knowledge and skills that I had acquired in my leadership courses to put a plan in motion to address this growing problem among adolescent girls. Leadership capacity is built with visualization, planning, strategizing, creativity, and implementation of plan to achieve change. (Kin, Kareem, Nordin & Bing, 2014, p. X). Researching the problem through my doctoral courses was my first step in addressing this problem to make an impact on adolescent girls' social interactions.

Analysis of Self as Scholar

My research for the literature review and my analysis of the archival data confirmed that I had selected a doctoral study that would contribute to previous research conducted on adolescent girls with substance abuse problems. Government officials need to increase their awareness pertaining the growing adolescent girls' substance abuse problem because they are vulnerable targets for many illegal substances that are detrimental to their mental and physical well-being (Kathmandu, 2012). My research for the literature review was challenging because the research was minimal on adolescent girls' substance abuse. Analysis of archival data showed that a significant relationship

exists between adolescent girls' substance abuse and their academic performance and social development.

Analysis of Self as Practitioner

My doctoral study will contribute to the limited literature pertaining to adolescent girls' substance abuse. I learned that I need to explore and collect as much literature or information about a research topic first and then determine the appropriate research questions to enable me to complete my study with minimal changes or challenges. I have learned how to be a better technical writer which will be beneficial for my future research studies. I also realized that I need to consider or include other factors like gender-specific queries in my search for literature focused on adolescent girls or future research topics.

Analysis of Self as Project Developer

I used many terms to search for literature that involved adolescent girls' drug use and certain articles would appear in all of the searches, which made me realize this topic had limited research. This realization allowed me to continue my research about adolescent girls' substance abuse increasing problem and create a program to address the problem. Design a program that targeted specific gender influences for adolescent girls and effects of substance abuse has on adolescent girls. A program designed to equip these girls with extensive knowledge of substance abuse, the importance of grades, and positive social skills to enable them to make informed decisions within various social environments. A research project study program encompassing an adolescent girls' intervention program to contribute to the limited research focused on girls.

The Project's Potential Impact on Social Change

The GERLS^2 program will equip adolescent girls with knowledge and skills to resist drugs as they transition to higher grade levels. These girls will excel in social environments inside and outside of professional learning communities with new knowledge and communication skills. They will be able to make informed decisions pertaining to their mental and physical health when approached by their peers about becoming involved with various legal and illegal substances. Additionally, adolescent girls will become more conscious of their academic performance and will be more focused on ways to enhance their performance by helping themselves and others. This program has an additional component for parents, school staff, health care workers and law enforcement officials to increase and share their knowledge of adolescent girls' substance abuse. This will be beneficial in identifying and addressing specific substance abuse needs for these adolescent girls.

Implications, Applications, and Directions for Future Research

The implications of the relationship between adolescent girls' substance abuse and their academic performance and social development resulted in the development of a project study program. Substance abuse is a growing problem in U.S. society, and this societal ill needs to be addressed. Based on the results of the data analysis, more interventions need to be implemented to address adolescent girls' academic performance and social development. The literature review showed a lack of knowledge of girls

substance abuse in social settings with grade level transitions, which indicated that more studies need to be conducted to address adolescent girls substance abuse and social development issues.

Previous research studies have indicated that more research towards adolescent girls' substance abuse needs to be completed because of the different views that society has for girls versus boys. Past medical and psychological studies mainly focused on males with drug issues which caused a disparity among children that are high risk, psychosocial, other health problems that include adolescent girls (Landsverk & Reid, 2013). This study will add to the limited amount of studies that have been conducted on adolescent girl substance abusers. Future studies focusing on childhood trauma experiences by adolescent girls and the relationship with substance abuse could shed more light on substance abuse influences. Previous studies have focused on the importance of educating family members, especially parents to assist with tackling adolescent girls' substance abuse. More studies on effective parenting during adolescent development are needed. Parents play a significant role in building positive and productive relationships with adolescents during their social developmental phases. Parents need adequate knowledge to guide adolescent girls towards making positive selections of friends and extracurricular activities that will enable them to be productive citizens in our social communities (Bhattacharjee & Choudhury, 2014).

Conclusion

This project study had a significant impact on my professional growth as an educational leader. I am able to use the scientific method with a different view to identify a problem; conduct research to address the problem and enable me to be a contributor to social change. Now, I am able to be a problem solver for future issues or problems that affect the social growth of our societies. This type of forward thinking will allow me to be a true lifelong learner within any professional learning environment because I will be able to identify a problem conduct research, and contributor to our growing societies. I also have acquired knowledge on how to improve my scholarly writing techniques, researching abilities, and data analysis procedures to complete results for a research study. I have learned how to persevere when it seems hopeless, or when a dim light is only seen at the end, or when the light goes completely out, I know how to shake the dust off, and collect what I have, and go forward to finish strong. I hope my trials and challenges that I have experienced to complete this doctoral project study will motivate and inspire others to stay on their educational journey until completion of their doctoral journey. I feel within my heart that the troubles I have experienced while completing my doctoral project study gave me strength to endure many challenges and any future challenges that I may encounter. I have completed a good deed or endeavor because adolescent girls' substance abuse problems will be seen in a different way through my doctoral project study.

References

Abar, C., Jackson, K., & Wood, M. (2014). Reciprocal relations between perceived parental knowledge and adolescent substance use and delinquency: The moderating role of parent-teen relationship quality. *Developmental Psychology, 18*(5), 2176-2187. doi:10.1037/a0037463

Amstadter, A., Elwood, L., Begle, A., Gudmundsdorrit, B., Smith, D., Resnick, H., & Kilpatrick, D. (2011). Predictors for physical assault victimization: Findings from the National Survey of Adolescents. *Addictive Behavior, 36*(8), 814-820. doi:10.1016/j.addbeh.2011.03.008

Aoun, E., Christopher, P., & Ingraham, J. (2014). Emerging drugs of abuse: Clinical and legal considerations. *Rhode Island Medical Journal*, *97*(6), 41-45. Academic Search Complete database. (Accession No. 96315089)

Babinski, D., Pelham, W., Molina, B., Gnagy, E., Waschbusch, D., Yu, J., & Karch, K. M. (2011). Late adolescent and young adult outcomes of girls diagnosed with A.D.H.D. in childhood: An exploratory investigation. *Journal of Attention Disorders, 15*(3), 204-214. doi:10.1177107054710361586

Bachman, J., Freedman-Doan, P., O'Malley, P., Schulenberg, J., Johnston, L., & Messersmith, E. (2007). *Education-drug use relationships: An examination of racial/ethnic subgroups*. (Monitoring the Future Occasional Paper No. 66) Ann Arbor, MI: Institute for Social Research.

Baker, A., Ashare, C., & Charvat, B. (2009). Substance use and dependency disorders in adolescent girls in group living programs: Prevalence and associations with milieu factors. *Residential Treatment for Children & Youth, 26*(1), 42-47. doi:10.1080/08865710802689837

Bandura, A. (1977). Social learning theory. (Bandura) *Learning-Theories.com Knowledge Base Webliography*. http://www.learning-theories.com

Barlow, A., Mullany, B., Neault, N., Davis, Y., Billy, T., Hastings, R… Walkup, J. T. (2010). Examining correlates of methamphetamines and other drug use in pregnant American Indian adolescents. *The Journal of the National Center, 17*(1), 1-24. Academic Search Complete database. (Accession No. 52225819)

Beauvais, F., Jumper-Thurman, P., & Burnside, M. (2008). The changing patterns of drug use among American Indian students over the past thirty years. *The Journal of the National Center, 15*(2), 15-24. Academic Search Complete database. (Accession No. 35761465)

Becker, S. (2013). Adolescent substance abuse: National trends, consequences, and promising treatments. *Brown University Child & Adolescent Behavior Letter, 29*(5), 1-7. Academic Search Complete database. (Accession No. 86965278)

Bhattacharjee, D., & Choudhury, M. (2014). A study on need of parental guidance to the adolescents. *International Journal of Multidisciplinary Approach &*

Studies, 1(5), 181-191. Academic Search Complete database. (Accession No. 100271702)

Biederman, J., Carter, P., Monuteaux, E., Clarke, A., Haagen, K., & Faraone, S. (2009). Familial risk analysis of the association between attention-deficit/hyperactivity disorder and psychoactive substance use disorder in female adolescents: A controlled study. *Journal of Child Psychology and Psychiatry, 50*(3), 352-358. doi:10.1111/j.1469-7610.2008.02040.x

Bodinger-deUriarte, C., & Austin, G. (1999). *Substance abuse among adolescent females*. Prevention Research Update No. 9.

Boislard, M., & Poulin, F. (2011). Individual, familial, friends-related and contextual predictors of early sexual intercourse. *Journal of Adolescence, 34*(2), 289-300. doi:10.1016/j.adolescence.2010.05.002

Bradshaw, C., Waasdorp, T., Goldweber, A., & Johnson, S. (2013). Bullies, gangs, drugs, and school: Understanding the overlap and the role of ethnicity and urbanicity. *Journal of Youth & Adolescence, 42*(2), 220-234. doi:10.1007/s10964-012-9863-7

Brawn, K., & Roe-Sepowitz, D. (2008). Female juvenile prostitutes: Exploring the relationship to substance use. *Children and Youth Services Review, 30*(12), 1395-1402. doi:10.1016/j.childyouth.2008.04.011

Brown University Child & Adolescent Behavior Letter. (2007). Teen use of inhalants on the rise, *23*(5), 4-4. Academic Search Complete database. (Accession No. 24687341)

Brown University Child & Adolescent Behavior Letter. (2010). Adolescent drug-related ER visits and suicide attempts, *26*(10), 4-5. Academic Search Complete database. (Accession No. 53491366)

Cavazos-Rehg, P., Krauss, M., Splitznagel, E., Schootman, M., Cottler, L., & Bierut, L. (2011). Substance use and the risk for sexual intercourse with and without a history of teenage pregnancy among adolescent females. *Journal of Studies on Alcohol and Drugs, 72*(2), 194. doi:http://dx.doi.org/10.15288/jsad.2011.72.194

Centers for Disease Control and Prevention (CDC). (2011). Youth risk behavior surveillance system. http://apps.nccd.cdc.gov/yrbss.

Chakravarthy, B., Shah, S., & Lotipour, S. (2013). Adolescent drug abuse-awareness & prevention. *Indian Journal of Medical Research, 137*(6), 1021-1023. Academic Search Complete database. (Accession No. 89236737)

Chamberlain, P., Leve, L., & Smith, D. (2006). Preventing behavior problems and health-risking behaviors in girls in foster care. *International Journal of Behavior Consultation and Therapy, 2*(4), 518-530. Academic Search Complete database. (Accession No. 23965178)

Chen, T., & Yen, C. (2011). Sexual intercourse experience and engagement in unprotected sex in adolescent MDA users in Taiwan. *Substance Use & Misuse, 46*(4), 398-403. doi:10.3109/10826084.2010.501670

Chesney-Lind, M., Morash, M., & Stevens, T. (2008). Girl's troubles, girl's delinquency, and gender responsive programming: A review. *Journal of Criminology, 41*(1), 162-189. doi:10.1375/acri.41.1.162.

Choi, H., Krieger, J., & Hecht, M. (2013). Reconceptualizing efficacy in substance use prevention research: Refusal response efficacy and drug resistance self-efficacy in adolescent substance use. *Health Communication, 28*(1), 40-52. doi:10.1080/10410236.2012.720245.

Clark, T. (2010). Reviewing the connection between paradigms and theories to understand adolescent drug use. *Journal of Child & Adolescent Substance Abuse, 19*(1), 16-32. doi:10.1080.10678280903400479.

Clark, T., Belgrave, F., & Abell, M. (2012). The mediating and moderating effects of parent and peer influences upon drug use among African American Adolescents, *Journal of Black Psychology, 38*(1), 52-80. doi:10.11770095798411403617

Conway, M., & Vermette, P. (2006). Lessons for middle school teachers from the film *Thirteen*. *Middle School Journal, 38*(2), 37-42. Education Research Complete database. (Accession No. 23160913) http://www.nmsa.org/Publiciations/MiddleSchoolJournal/Articles

Corliss, H., Rosario, M., Wypij, S., Wylie, S., Frazier, L., & Austin, B. (2010). Sexual orientation and drug use in a longitudinal study of U.S. adolescents. *Addictive Behaviors, 35*(5), 517-521. doi:10.1089/jwh.2009.1488

Cotto, J., Davis, E., Dowling, G., Elcano, J., Staton, A., & Weiss, S. (2010). Gender effects on drug use, abuse, and dependence: A special analysis of results from the a national survey on drug use and health. *Gender Medicine, 7*(5), 402-413. http://www.dx.doi.org/10.1016/jgenm.2010.09.004

Creswell, J. (2008). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research.* Upper Saddle Creek, NJ: Pearson Education.

Creswell, J., (2009). *Research design: Qualitative, quantitative, and mixed methods approaches.* Thousand Oaks, CA: Sage Publications, Inc.

Crosby, R., Salazar, L., DiClemente, R., Yarber, W., Caliendo, A., & Staples-Home, M. (2004). Health risk factors among detained adolescent females. *American Journal of Preventive Medicine, 27*(5), 404-410. http://www.dx.doi.org/10.1016/j.amepre.2004.07.017

Dauber, S., Paulson, J., & Leiferman, J. (2011). Race-specific transition patterns among alcohol use classes in adolescent girls. *Journal of Adolescence, 34*(3), 407-420. http://www.dx.doi.org/10.1016/j.adolescence.2010.07.001

Dawkins, M., Williams, M., & Guilbault, M. (2006). Participation in school sports: Risk or protective factor for drug use among Black and White students? *The Journal of Negro Education, 75*(1), 25-33. Academic Search Complete database. (Accession No. 20956743)

Deas, D., St. Germaine, K., & Upadhyaya, H. (2006). Psychopathology in substance abusing adolescents: Gender comparisons. *Journal of Substance Use, 11*(1), 45-51. doi:10.1080/14659890500114318

Dehn, J. (2010). Paternal alcoholism: Consequences for female children. *The Forum on Public Policy: A Journal of the Oxford Round Table*. Google Scholar database. (Eric No. EJ903833) http://www.forumonpublicpolicy.comezp.waldenulibrary.org

Denoth, F., Siciliano, V., Iozzo, P., Fortunato, L., & Molinaro, S. (2011). The association between overweight and illegal drug consumption in adolescents: Is there an underlying influence of the sociocultural environment? *PLoS ?ONE, 6*(11). doi:10.1371/journal.pone.0027358

Drapela, L., & Mosher, C. (2007). The conditional effect of parental drug use on parental attachment and adolescent drug use: Social control and social development model perspectives. *Journal of Child & Adolescent Substance Abuse, 16*(3), 63-87. Academic Search Complete database. (Accession No. 25758763)

Dunn, M., Goodrow, B., Givens, C., Austin, S. (2008). Substance use behavior

and suicide indicators among rural middle school students. *Journal of School Health, 78*(1), 26-31. doi:10.1111/j.1746-1561.2007.00262.x.

Eitle, T., & Eitle, D. (2007). School commitment and alcohol use: The moderating role of race and ethnicity. *Education Policy Analysis Archives, 15*(22), 1-20. Education Research Complete database. (Accession No. 28043149)

Ellis, T., & Levy, Y. (2009). Towards a guide for novice researchers on research methodology: Review and proposed methods. *Issues in Informing Science & Information Technology, 6,* 323-337. Academic Search Complete database. (Accession No. 44457551)

Ennett, S., Foshee, V., Bauman, K., Hussong, A., Cai, L., Reyes, H., & DuRant, R. (2008). The social ecology of adolescent alcohol misuse. *Child Development, 79*(6), 1777-1791. doi:10.1111/j.1467-8624.2008.01225.x

Eunyoung, K., Dae-Hoon, K., & Minwoo, Y. (2010). Investigating the effects of peer association and parental influence on adolescent use: A study of adolescents in South Korea. *Journal of Criminal Justice, 38*(1), 17-24. http://www.dx.doi.org/10.1016/j.crimjus.2009.11.003

Ewing Marion Kauffman Foundation. (2002). *Kaufman teen survey*. *An annual report on teen behaviors: Use of alcohol, tobacco, and other drugs among 8th-10th-12th grade students in Greater Kansas City, 1991-1992 to 2000-2001*. Kansas City, MO: Author.

Faden, V., & Ruffin, B. (2010). The relationship among pubertal stage, age, and drinking in adolescent boys and girls. *Journal of Child & Adolescent Substance Abuse, 19*(1), 1-5. doi:10.1080/10678280903185591

Fetro, J., Rhodes, D., & Hey, D. (2010). Perceived personal and social competence: Development of valid and reliable measures. *Health Educator, 42*(1), 19-26. Education Research Complete database. (Accession No. 60193127)

Fletcher, A., Bonell, C., & Rhodes, T. (2009). New counter-school cultures: Female students' drug use at a high-achieving secondary school. *British Journal of Sociology of Education, 20*(5), 549-562. doi:10.1080/01425690903101049

Ford, J. (2008). Social learning theory and nonmedical prescription drug use among adolescents. *Sociological Spectrum, 28*(8), 299-316. doi:10.1080/02732170801898471

Ford, J. (2010). Nonmedical prescription drug use among adolescents: The influence of bonds to family and school. *Youth & Society, 40*(3), 336-352. doi:10.1177/0044118X08316345

Froeschle, J., Smith, R., & Ricard, R. (2007). The efficacy of a systematic substance abuse program for adolescent females. *Professional School Counseling, 10*(5), 498-505. Academic Search Complete database. (Accession No. 25447847)

Gallerani, C., Garber, J., & Martin, N. (2010). The temporal relation between depression and comorbid psychopathology in adolescents at varied risk for depression. *Journal of Psychiatry, 51*(3), 242-249. http://www.dx.doi.org./10.1111/j1469-7610.2009.02155.x

Gorman, D. (2011). Does the life skills training program reduce use of marijuana? *Addiction Research & Theory, 19*(5), 470-481. doi:10.3109/16066359.2011.557164

Gryczynski, J., & Ward, B. (2011). Social norms and the relationship between cigarette use and religiosity among adolescents in the United States. *Health Education & Behavior, 38*(1), 39-48. doi:10.1177/1090198110372331

Guibord, M., Bell, T., Romano, E., & Rouillard, L. (2011). Risk and protective factors for depression and substance use in an adolescent child welfare sample. *Child and Youth Services Review, 33*(11), 2127-2137. http://www.dx.doi.org/10.1016/j.childyouth.2011.06.019

Guthrie, B. Low, L., & Low, K. (2000). A substance use prevention framework: Considering the social context form African American Girls. *Public Health Nursing, 17*(5), 363-373. doi:10.1046/j.1525-1446.2000.00363.x

Harder, A. (2008). *The developmental stages of Erik Erikson*. Retrieved from Learning place online.com

Haydon, A., & Halpern, C. (2010). Older romantic partners and depressive symptoms during adolescence. *Journal of Youth and Adolescence, 39*(10), 1240-1251. http://www.dx.doi.org./10.1007/s100964-010-9539-0

Henry, K. (2010). Academic achievement and adolescent drug use: An examination of reciprocal effects and correlate growth trajectories. *Journal of School Health. 80*(1), 38-43. doi:10.1111/j.1746-1561.2009.00455.x

Henry, K. (2010). Skipping school and using drugs: A brief report. *Drugs: Education, Prevention & Policy, 17*(5), 650-657. doi:10.3109/09687630902862452

Herman-Stahl, M., Krebs, C., Kroutil, L., & Heller, D. (2006). Risk and protective factors for nonmedical use of prescription stimulants and methamphetamine among adolescents. *Journal of Adolescent Health, 39*(3), 374-30. http://www.dx.doi/10.1016/.jadohealth.2006.01.006

Hipwell, A., Stepp, S., Keenan, K., Chung, T., & Loeber, R. (2011). Brief report: Parsing the heterogeneity of adolescent girls' sexual behavior: Relationships to individual and interpersonal factors. *Journal of Adolescence, 34*(3), 589-592. http://www.dx.doi.org/10.1016/j.adolescence.2010.03.002

Hsieh, S., & Hollister, D. (2004). Examining gender differences in adolescent substance abuse behavior: Comparisons and implications for treatment.

Journal of Child and Adolescent Substance Abuse, 13(3), 53-70. doi:10.1300/J029v13n03_03

Hua, L., & Braddock, J. (2008). School sports and adolescent steroid use: National trends and race-ethnic variations. *Challenge: A Journal of Research on African American Men, 14*(2), 29-49. Academic Search Complete database. (Accession No. 50913596) http://wwww.morehouse.edu/centers/mri/challengejournal.html

Huber, M., Workman, J., Ford, J., Moore, D., & Mayer, T. (2009). Evaluating the prevention though alternative. *Journal of Drug Education, 39*(3), 239-259. doi:10.2190/DE.39.3b.

Huebner, A., Shettler, L., Matheson, J., Meszaros, P., Piercy F., & Davis, S. (2006). Examining ethnic differences in predictors of female adolescent smoking in rural Virginia. *Journal of Child and Adolescent Substance Abuse, 15*(3), 63-81. doi:10.1300/J028v15n03_05

Huh, D., Tristan, J., Wade, E., & Stice, E. (2006). Does problem behavior elicit poor parenting?: A prospective study of adolescent girls. *Journal of Adolescent Research, 21*(2), 185-204. doi:10.1177/0743558405285462

Jackson, K., & LeCroy, C. (2009). The influence of race and ethnicity on substance use and negative activity involvement among monoracial and multiracial adolescents of the southwest. *J. Drug Education, 39*(2), 195-210. doi:10.2190/DE.39.2f

James, J., Kristjansson, A., & Sigfusdottir, I. (2010). Adolescent substance use, sleep, and academic achievement: Evidence of harm due to caffeine. *Journal of Adolescence, 34*(4), 665-673. http://dx.doi.org/10.1016/j.adolescence.2010.09006

Johnston, L., O'Malley, P., Bachman, J., & Schulenberg, J. (2010a). *Monitoring the future: National results on adolescent drug use: Overview of key findings, 2009*. (NIH Publication No. 10-7583). Bethesda, MD: National Institute on Drug Abuse.

Johnston, L., O'Malley, P., Bachman, J., & Schulenberg, J. (2010b). *Monitoring the future: National survey results on drug use 1975-2008, Volume I, Secondary school students*. (NIH Publication No. 10-7585). Bethesda, MD: National Institute on Drug Abuse.

Kathmandu. (2012). Young girls falling prey to substance abuse. Himalayan Times.http://search.proquest.com.ezp.waldenulibrary.org/docview/1010455317?accountid = 14872

Kaufman, A. (2008). Predictors of regular cigarette smoking among adolescent females: Does body image matter? *Nicotine & Tobacco Research, 10*(8), 1301-1309. doi:10.1080/1462200802238985

Kelly, A., Toumbourou, J., O'Flaherty, M., Patton, G., Homel, R., Connor, J., & Williams, J. (2011). Family relationship quality and early alcohol use: Evidence for gender-specific risk processes. *Journal of Studies on Alcohol*

and Drugs, 72(3), 399-407. doi:http://dx.doi.org/10.15288/jsad.2011.72.399

Kerr, D., Preuss, L., & King, C. (2006). Suicidal adolescents' social support from family and peers: Gender-specific associations with psychopathy. *Journal of Abnormal Child Psychology, 34*(1), 103-114. doi:10.1007/s10802-005-9005-8

Kim, Y., Moon, S., Kim, M. (2011). Physical and psycho-social predictors of adolescents' suicide behaviors. *Child Adolescent Social Work Journal, 28*(6), 421–438. doi:10.1007/s10560-011-0241-1

Kin, T., Kareem, O., Nordin, M., & Bing, K. (2014). The development of a principal change leadership competency model: A structural equation modelling (SEM) approach. *International Studies in Education Administration (Commonwealth Council for Educational Administration & Management (CCEAM)), 42*(2), 3-43. Academic Search Complete database. (Accession No. 97394709)

King, K., & Vidourek, R. (2011). Enhancing parent-child communication about drug use: Strategies for professionals working with parents and guardians. *Prevention Researcher, 18*(2), 12-15. http://www.TPRonline.org

King, K., Vidourek, R., Merianos, A. (2013). Psychosocial factors associated

with over-the-counter drug abuse among youth. *American Journal of Health Studies, 28*(2), 68-76. Academic Search Complete database. (Accession No. 91274094)

Kiriakidis, S. (2010). Child-rearing practices and delinquency in children and adolescents. *International Journal of Special Education, 25*(1), 94-105. Google Scholar database. (Eric No. EJ890570)

Kornblum, J. (2008). Prescription drugs more accessible to teens: Easier to get than beer, survey finds. http://search.proquest.com.ezp.waldenulibrary.org/docview/409060516

Kumpfer, K. L. (2014). Family-Based interventions for the prevention of substance abuse and other impulse control disorders in girls. *ISRN Otolaryngology, 23*, 1-23. doi:10.1155/2014/308789

Kuntz, J., Greenley, R., Mussatto, K., Roth-Wojcicki, B., Miller, T., Freeman, M., & Lerand, S. (2014). Personal, attitudes, perceived social norms, and health-risk behavior among female adolescents with chronic medical conditions. *Journal of Health Psychology, 19*(7), 877-886. doi:10.1177/1359105313481077

Landsverk, J., & Reid, J. (2013). Introduction to evidence-based interventions for girls: From prevention to treatment. *Journal of Child & Adolescent Substance Abuse, 22*(50), 365-369. doi:10.1080/1067828X.2013

Lee, G., Akers, R., & Marian, B. (2004). Social learning and structural factors in

adolescent substance abuse. *Western Criminology Review, 5*(1), 17-34. http://www.home.heinonline.org/subscriptions/request-a-quote

Lee, G., Storr, C., Ialongo, N., & Martin, S. (2012). Association between adverse life events and addictive behaviors among male and female adolescents. *The American Journal On Addictions, 21*(6), 516-523. doi:10.1111/j.1521-0391.2012.00285.x

Lennings, C., Kenny, D., Howard, J., Arcuri, A., & Mackdacy, L. (2007). The relationship between substance abuse and delinquency in female adolescents in Australia. *Psychiatry, Psychology and Law, 14*(1), 100-110. doi:10.1375/pply.14.1.100

Li, Y., & Lerner, R. (2011). Trajectories of school engagement during adolescence: Implications for grades, depression, delinquency and substance use. *Developmental Psychology, 47*(1), 233-247. http://www.dx.doi.org.ezp.waldenulibrary.org/10.1037/a0021307

Lodico, M., Spaulding, D., & Voegtle, K. (2010). *Methods in educational research: From theory to practice.* Hoboken, NJ: John Wiley & Sons.

Lohmeier, J., Schmitt,V., & Frey, B. (2008). The relationship between attitude towards conflict & drug involvement attitudes. *Middle Grades Research Journal, 3*(4), 73-87. Education Research Complete database. (Accession No. 51835585)

Lopez, B., Wang, W., Schwartz, S., Prado, G., Huang, S., Brown, H., &

Szapocznik, J. (2009). School, family and peer factors and their association with substance use in Hispanic adolescents. *Journal of Primary Prevention, 30*(6), 622-641. doi:10.1007/s10935-009-0197-5

Lopez, V., Katsults, Y., & Robillard, A. (2009). Drug use with parents as a relational strategy for incarcerated female adolescents. *Family Relations, 58*(2), 135-147. doi:10.1111/j.1741-3729.2008.00542.x

Maguire, E., Wells, W., & Katz, C. (2011). Measuring community risk and protective factors for adolescent problem behaviors: Evidence from a developing nation. *Journal of Research in Crime & Delinquency, 48*(4), 594-620. doi:10.11770022427810395148

Malone, P., Van Eck, K., Flory, K., & Lamis, D. (2010). A mixture-model approach to linking ADHD to adolescent onset of illicit drug use. *Developmental Psychology, 46*(6), 1543-1555. doi:10.1037/a0020549

Maryland State Department of Education (MSDE). (2008). *2007 Maryland Adolescent Survey*. Retrieved from http://www.eric.ed.gov

Mason, M., Mennis, J., & Schmidt, C. (2010). A social operational model of urban adolescents' tobacco and substance use: A meditational analysis. *Journal of Adolescence, 34*(5), 1055-1063. http://www.dx.doi.org/10.1016/j.adolescence.2010.11.002

Mason, W., Hitchings, J., & Spoth, R. (2007). Emergence of delinquency and depressed mood throughout adolescence as predictors of late adolescent

problem substance use. *Psychology of Addictive Behaviors, 21*(1), 13-24. doi:10.1037/0 893-164X.21.1.13

Maurice, E., & Friedlander, B. (1994). *The social decision making and life skills development program: A framework for promoting students' social competence and life skills and preventing violence, substance abuse and related problem behaviors*. New Brunswick, NJ: Center for Applied Psychology. Google Scholar database. (Eric No. ED383967)

Maxwell, J., & Liu, L. (1998). *Texas school survey of substance use among students: Grades 7-12*. Texas Commission on Alcohol and Drug Abuse.

Mayberry, M., Espelage, D., & Koenig, B. (2009). Multilevel modeling of direct effects and interactions of peers, parents, school, and community influences on adolescent substance use. *Journal of Adolescence, 38*(8), 1038-1049. http://www.dx.doi.org./10.1007/s10964-009-9435-9

McKay, M., Sumnall, H., Cole, J., & Percy, A. (2012). Self-esteem and self-efficacy: Associations with alcohol consumption in a sample of adolescents in Northern Ireland. *Drugs: Education Prevention & Policy, 19*(1), 72-80. doi:10.3109/09687637.2011.579585

Mercken, L., Snijders, T., Steglich, C., Vertianen, E., & de Vries, H. (2010). Smoking-based selection and influence in gender-segregated friendship networks: A social network analysis of adolescent smoking. *Addiction, 105*(7), 1280-1289. doi:10.1111/j.1360-0443.2010.02930.x

National Center on Addiction and Substance Abuse (NCASA). (2003). *The formative years: Pathways to substance abuse among girls and young women ages 8-22*. New York, NY: Columbia University.

National Center on Addiction and Substance Abuse (NCASA). (2011). *Adolescent substance use: America's # 1 public health problem*. New York, NY: Columbia University, Carnegie Corporation of New York.

Ndetei, D., Khasakhala, L., Ogencha-Quwor, F., & Kokonya, D. (2009). Psychosocial and health aspects of drug use by students is public secondary schools in Nairobi, Kenya: Official publication of the Association for Medical Education and Research. *Substance Abuse, 30*(1), 61-68. doi:10.1080/08897070802606410

Nguyen, A., Clark, T., & Belgrave, F. (2011). Empathy and drug use behaviors among African-American adolescents. *Journal of Drug Education, 41*(3), 289-308. Academic Search Complete database. (Accession No. 66444143)

Oelsner, J., Lippold, M., & Greenberg, M. (2011). Factors influencing the development of school bonding among middle school students. *Journal of Early Adolescence, 31*(3), 463-487. doi:10.1177/0272431610366244

Office of National Drug Control Policy (ONDCP). (2006). *Girls and drugs. A new analysis: Recent trends, risk factors and consequences*. Washington, DC: Executive Office of the President. http://www.whitehousedrugpolicy.gov

Office of National Drug Control Policy (ONDCP). (2007). *Teens and prescription drugs: An analysis of recent trends on the emerging drug threat*. Washington, DC: Executive Office of the President.

Office of National Drug Control Policy (ONDCP). (2009a). *National Survey on Drug Use and Health (NSDUH)* [Fact sheet].

Office of National Drug Control Policy (ONDCP). (2009b). *National Survey on Drug Use and Health (NSDUH)*: *The NSDUH report: Perceptions of risk from substance use among adolescents.*

Office of National Drug Control Policy (ONDCP). (2010). *2009 National Survey on Drug Use and Health*. [Fact sheet].

Ohio Department of Alcohol and Drug Addiction Services (ODADAS), (2007). *More adolescent girls using inhalants. e-update*. Columbus, OH: Author. http://www.odadas.ohio.gov

Ojanen, T. (2010). Modeling contextual effects in developmental research: Linking theory and method in the study of social development. *Social Development, 19*(3), 437-446. doi:10.1111/j.1467-9507.2009.00563.x

Oldehinkel, A., Verhulst, F., & Ormel, J. (2011). Mental health problems during puberty: Tanner stage-related differences in specific symptoms. The trails study. *Journal of Adolescence, 34*(1), 73-85. http://www.dx.doi.org/10.1016/j.adolescence.2010.01.010

Padilla, Y., Crisp, C., & Rew, D. (2010). Parental acceptance and illegal drug use among gay, lesbian, and bisexual adolescents: results from a national survey. *Social Work, 55*(3), 265-275. Academic Search Complete database. (Accession No. 54283439)

Page, R., Dennis, M., & Lindsay, G. (2011). Psychosocial distress and substance use among adolescents in four countries: Philippines, China, Chile, and Nambia. *Youth & Society, 43*(3), 900-930. http://www.dx.doi.org/10.1177/0044118X10368932

Paiva, A., Amoyal, N., Johnson, J., & Prochaska, J. (2014). Adolescent substance use initiation: Correlates of the profiles of prevention. *Journal of Early Adolescence, 34*(8), 1033-1057. doi:10.1177/0272431613519497

Parsai, M., Voisine, S., Marsiglia, F., Kulis, S., & Nieri, T. (2009). The protective and risk effects of parents and peers on substance use, attitudes, and behaviors of Mexican-American female and male adolescents. *Youth & Society, 40*(3), 353-376. doi:10.1177/0044118X08318117

Paxton, R., Valois, R., & Wanzer, D. (2007). Is there a relationship between family structure and substance use among public middle school students? *Journal of Child and Family Studies, 16*(5), 593-605. http://www.dx.doi.org./10.1007/s10826-006-91019-y

Peterson, J. (2010). A qualitative comparison of parent and adolescent views regarding substance use. *The Journal of School Nursing, 26*(1), 53-64. doi:10.1177/105984050935586

Pirisi, A. (2011). Help set teens straight about prescription drugs. *CrossCurrents, 14*(3). http://search.proquest.com.ezp.waldenulibrary.org/docview/921024795

Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods* (2nd ed.). Thousand Oaks, CA: Sage Publications.

Renes, S., & Strange, A. (2009). Factors affecting drug abuse in adolescent females in rural communities. *Journal of School Counseling, 7*(41). Education Research Complete database. (Accession No. 48238859)

Richard, A., Trevino, R., Baker, M., & Valdez, J. (2010). Negative reflected appraisal, negative self-perception, and drug use intentions in a sample of suburban high school students. *Journal of Child & Adolescent Substance Abuse, 19*(3)193-209. doi:10.1080/1067828X.2010.488924

Rieckmann, T., Fussell, H., Doyle, K., Ford, J., Riley, K., & Henderson, S. (2011). Adolescent substance abuse treatment: Organizational change and quality of care. *Journal of Addictions & Offender Counseling, 31*(2), 80-93. Academic Search Complete database. (Accession No. 605568707)

Roberts-Lewis, A., Welch-Brewer, C., Jackson, M., Kirk, R., & Pharr, O. (2010). Assessing change in psychosocial functioning of incarcerated girls with a substance use disorder: Gender sensitive substance abuse intervention. *Journal of Offender Rehabilitation, 49*(7), 479-494. doi:10.1080/10509674.2010.510771

Rodney, E., & Mupier, R. (2004). The special needs of girls in trouble. Reclaiming children and youth: *The Journal of Strength-based Interventions, 13*(2), 103. Academic Search Complete database. (Accession No. 14227109)

Roosa, M., Zeiders, K., Knight, G., Gonzales, N., Jenn-Yun, T., Saenz, D… Berkel, C. (2011). A test of the social development model during the transition to junior high with Mexican-American adolescents. *Developmental Psychology, 47(*4), 527-537. doi:10.1037/a0021269

Rowe, C. (2010). Family and individual factors associated with substance abuse involvement and PTSD symptoms among adolescents in greater New Orleans after Hurricane Katrina. *Journal of Consulting and Clinical Psychology, 78*(6), 806-817. doi:10.1037/a0020808

Russell, M., & Marston, E. (2010). Profiles of mental disorder among incarcerated adolescent females. *Court Review, 46*(1/2), 16-23. Academic Search Complete database. (Accession No. 59220586)

Saint-Jean, G. (2010). Gender differences in the salience of psychosocial mediators of the impact of acculturation on substance abuse among Hispanic youth in Florida. *Journal of Immigrant & Minority Health, 12*(2), 166-172. doi:10.1007/s0903-008-9195-5

Samek, D., & Rueter, M. (2011). Considerations of elder sibling closeness in predicting younger sibling substance use: Social learning versus social bonding explanations. *Journal of Family Psychology, 25*(6), 931-941. doi:10.1037/a0025857

Sartor, C., Waldron, M., Duncan, A., Grant, J., Mccutchen, V., Nelson, E… Heath, A. (2013). Childhood sexual abuse and early substance use in adolescent girls: The role of familial influences. *Addiction, 108*(5), 993-1000. doi:10.1111/add.12115

Sawyer, T., & Stevenson, J. (2008). Perceived parental and peer disapproval toward substances influences on adolescent decision-making. *Journal of Primary Prevention, 29*(6), 465-477. doi:10.1007/s10935-008-0156-6

Schinke, S., Fang, L., Cole, K., & Cohen-Cutler, S. (2011). Preventing substance use among Black and Hispanic adolescent girls: Results from a computer-delivered, mother-daughter intervention approach. *Substance Use & Misuse, 46*(1), 35-45. doi:10.3109/10826084.2011.21074

Schulte, M., Monreal, T., Kia-Keating, M., & Brown, S. (2010). Influencing adolescent social perceptions of alcohol use to facilitate change through a

school-based intervention. *Journal of Child & Adolescent Substance Abuse, 19*(5), 372-390. doi:10.1080/1067828X2010.515877

Schwinn, T., Hopkins, J., & Schinke, P. (2014). Developing a web-based intervention to prevent drug use among adolescent girls. *Research on Social Work Practice*, 1-6 doi:10.1177/1049731515579204

Schwinn, T., Schinke, S., & di Noia, J. (2010). Preventing drug abuse among adolescent girls: Outcome data from an internet based intervention. *Prevention Science, 11*(1), 24-32. doi:10.1007/s1121-009-0146-9

Schwinn, T., Schinke, S., & Trent, D. (2010). Substance use among late adolescent urban youths: Mental health and gender influences. *Addictive Behaviors, 35*(1), 30-34. http://www.dx.doi.org/10.1016/j.addbeh.2009.08.005

Scull, T., Kupersmidt, J., Parker, A., Elmore, K., & Benson, J. (2010). Adolescent's media-related cognitions and substance use in the context of parental and peer influences. *Journal of Youth and Adolescence, 39*(9), 981-998. http://www.dx.doi.org./10.1007/s10964-009-9455-3

Self, C., Morgan, A., Fuhrman, N., & Navarro, M. (2013). An evaluation of the 4-H Health Rocks program: Implications for program improvement. *Journal of Drug Education, 43*(1), 49-63. doi:10.2190/DE.43.1.d

Shekhtmeyster, Z., Sharkey, J., & You, S. (2011). The influence of multiple ecological assets on substance use patterns of diverse adolescents. *School*

Psychology Review, 40(3), 386-404. Academic Search Complete database. (Accession No. 66866416)

Shelton, K., & Van Den Bree, M. (2010). The moderating effects of pubertal timing on the longitudinal associations between parent-child relationship quality and adolescent substance use. *Journal of Research on Adolescence, 20*(4), 1044-1064. http://www.dx.doi.org./10.111/j.1532-7795.2010.00643.x

Sikes, A., Walley, C., McBride, R., Fusco, A., Cole, R., & Lauka, J. (2011). Inhalant and prescription medication abuse among adolescents: An inexpensive, accessible, and misperceived trend. *Journal of Child & Adolescent Substance Abuse, 20*(3), 237-252. doi:10.1080/1067828X.2011.581903

Simons-Morton, B., & Rusan, C. (2009). Peer and parent influences on school engagement among early adolescents. *Youth & Society, 41*(1), 3-25. doi:10.1177/0044118X09334861

Sinclair, K., Bauman, S., Poteat, P., Koenig, B., & Russell, T. (2011). Cyber and bias-based harassment: Associations with academic, substance use, and mental health disorders. *Journal of Adolescent Health, 50*, 521-523. doi:10.1016/j.jadohealth.2011.09.009

Siu, A. (2011). Validation of the substance use risk profile scale for adolescents in Hong Kong. *Journal of Psychoeducational Assessment, 29*(1), 75-83.

doi:10.1177/0734282910362044

Skeer, M., McCormick, M., Normand, S., Mimiaga, M., Buka, S., & Gilman, S. (2011). Gender difference in the association between family conflict and adolescent substance use disorders. *Journal of Adolescent Health, 49*(2), 187-192. http://www.dx.doi/10.1016/j.j.jadohealth.2010.12.003

Slobada, Z., Cottler, L., Hawkins, D., & Pentz, M. (2009). Reflections on 40 years of drug abuse and prevention research. *Journal of Drug Issues, 39*(1), 179-195. doi:10.1177/002204260903900114

Spas, J., Ramsey, S., Paiva, A., & Stein, L. (2012). All might have won, but not all have the prize: Optimal treatment for substance abuse among adolescents with conduct problems. *Substance Abuse: Research and Treatment, 6*, 141. doi:10.4137/SART.S10389

Spaulding, D. (2008). *Program evaluation in practice: Core concepts and examples for discussion and analysis.* Hoboken, NJ: John Wiley & Sons.

Stagman, S., Schwarz, S., & Powers, D. (2011). *Adolescent substance use in the US: Facts for policymakers*. [Fact sheet]. Washington, DC: National Center for Children in Poverty. http://hdl.handle.net/10022/AC:P:10747

Stormshak, E., Bullock, B., & Falkenstein, C. (2009). Harnessing the power of sibling relationships a tool for optimizing social-emotional development. *New Directions for Child and Adolescent Development, 17*(126), 61-77. doi:10.1002/CAD.257

Substance Abuse and Mental Health Services Administration (SAMHSA). (2011). *Emergency visits for drug-related suicide attempts involving antidepressants by adolescents and young adults: 2004 to 2008. (The Dawn report)*.

Sussman, S. (2011). Preventing and treating substance abuse among adolescents. *Prevention Researcher, 18*(2). 3-7. Education Research Complete database. (Accession No. 60088478)

Swahn, M., Robert, B., Bethany, W., & Volkan, T. (2010). Alcohol and drug use among gang members: Experiences of adolescents who attend school. *Journal of School Health, 80*(7), 353-360. doi:10.1111/j.1746-1561.2010.00513.x

Tanner-Smith, E. (2010). Negotiating the early developing body: Pubertal timing, body weight, and adolescent girls' substance use. *Journal of Youth and Adolescence, 39*(12), 1402-1416. http://www.dx.doi.org./10.1007/s10964-009-9489-6

Tarter, R., Kirisci, L., Mezzich, A., & Patton, D. (2011). Multivariate comparison of male and female adolescent substance abusers with accompanying legal problems. *Journal of Criminal Justice, 39*(3), 207-211. http://www.dx.doi.org/10.1016/j.jcrimjus.2011.02.001

Tebes, J., Cook, E., Vanderploeg, J., Feinn, R., Chinman, M., Shepard, J., … Connell, C. (2011). Parental knowledge and substance use among African-

American adolescents: Influence of gender and grade level. *Journal of Child and Family Studies, 20*(4), 406-413. http://www.dx.doi.org/10.1007/s10826-01009406-3

Thatcher, D., Pajtek, S., Chung, T., Terwilliger, R., & Clark, D. (2010). Gender differences in the relationship between white matter organization and adolescent substance use disorders. *Drug & Alcohol Dependence, 110*(1/2), 55-61. http://www.dx.doi.org/10.1016/j.drugalcdep.2010.02.004

Thompson, R., & Auslander, W. (2011). Substance use and mental health problems as predictors of HIV sexual risk behaviors among adolescents in foster care. *Health & Social Work, 36*(1), 33-43. Academic Search Complete database. (Accession No. 596627630)

Trott, B. (2013). Thoughts on scholarly writing. *Reference & User Services Quarterly, 53*(1), 2-4. Academic Search Complete database. (Accession No. 90455089)

Tze, V., Li, J., & Pei, J. (2012). Effective prevention of adolescent **s**ubstance **a**buse — educational versus deterrent approaches. *Alberta Journal of Educational Research, 58*(1), 122-138. Education Research Complete database. (Accession No. 76283450)

Unikel, C., Root, T., Vonholle, A., Ocampo, R., & Bulik, C. (2011). Disordered eating and substance use among a female sample of Mexican adolescents.

Substance Use & Misuse, 46(4), 523-534. doi:10.3109/10826081003725260

Vakalahi, H. (2002). Family-based predictors of adolescent substance use. *Journal of Child & Adolescent Substance Abuse, 11*(3), 1-15. doi:10.1300/J029v11n03_01

Valdez, A., Mikow, J., & Cepeda, A. (2006). The role of stress, coping ethnic identity and mother-daughter relationships on substance use among gang-affiliates Hispanic females. *Journal of Social Work Practice I the Addictions, 6*(4), 31-54. Academic Search Complete database. (Accession No. 23507034)

Van der Vorst, H., Burk, W., & Engels, R. (2011). The role of parental-specific communication in early adolescents' alcohol use. *Drug and alcohol dependence, 111*(3), 183-190. doi:10.1016j.drugalcdep.2010.03.023

Vygotsky, L. (1934). Social development theory. (Vygotsky). *Learning-Theories.com Knowledge Base Webliography*. http://www.learning-theories.com

Wainright, J., & Patterson, C. (2006). Delinquency, victimization, and substance use among adolescents with female same-sex partners. *Journal of Family Psychology, 20*(3), 526-530. doi:10.1037/0893-3200.20.526

Walker, D., Neighbors, C., Rodriguez, L., Stephens, R., & Roffman, R. (2011). Social norms and self-efficacy among heavy using adolescent marijuana

smokers. *Psychology of Addictive Behavior, 24*(4), 727-732. doi:10.1037/a0024958

Wall, M., & Whitbeck, L. (2011). Maturation, peer context, and indigenous girls' early-onset substance use. *Journal of Early Adolescence, 31*(3), 415-442. doi:10.1177/0272431610366245

Wang, M., Dishion, T., Stormshak, E., & Willet, J. (2011). Trajectories of family management practices and early adolescent behavioral outcomes. *Developmental Psychology, 47*(5), 1324-1341. doi:10.1037/a0024026

Webb, L. (2009). Counting girls out: A review of suicide among young substance misusers and gender difference implications in the evaluation of risk. *Drugs: Education, Prevention & Policy, 16*(2), 103-126. doi:10.1080/09687630701801404

Wu, L., Pan, J., Yang, C., Reeve, B., & Blazer, D. (2009). An item response theory analysis of DSM-IV criteria for hallucinogen abuse and dependence in adolescents. *Addictive Behaviors, 35*(3), 273-277. http://dx.doi.org/10.1016/j.addbeh.2009.10.009

Appendix A: **G.E.R.L.*S*²** Curriculum

The purpose of **G.E.R.L.*S*²., G**irls **E**mpowered to **R**esist drugs to **L**everage their **S**ubject knowledge and **S**ocial skills to improve academic performance and social development as adolescent girls transition through their middle and high school years. Program components will encompass interactive courses that will build on adolescent girls' knowledge about drugs, resistance, and social skills. Academic skills will be addressed simultaneously in all weeks of the modules. Staff and parental courses designed to increase knowledge about substance abuse effects will be implemented before and during participants' involvement in the curriculum. The curriculum consists of 3 Modules that contain weekly courses with interactive activities. Interactive activities will be recorded in a participants' interactive journal. Lessons within the modules will have questions to ignite discussions and participants will also have multiple opportunities to demonstrate acquired knowledge. **G.E.R.L.*S*²** curriculum will increase adolescent girls' drug knowledge through a variety of sources such as literature, technology, websites and writing experiences. Participants will be effective communicators by utilizing effective communications skills to contribute to positive conversations or disengage from negative conversations. The implementation of the curriculum components will produce the desired effect of resistance to substance, increase academic performance and enhance social skills to be responsible, stay safe, caring and strive for a healthy lifestyle as a 21st century learner.
Materials: Power-points, Videos, Literacy Tools, Websites, Pencil, Interactive journal, Drawing tablet/pad, Markers, Coloring Pencils
Module 1 Outline **Introduction to G.E.R.L.*S*² Curriculum, Expectations, Drug Knowledge and Effects** This module will introduce participants to the purpose of the program and components. Participants will complete a program implementer's designed questionnaire about present knowledge of drugs. Program Implementers will use a variety of sources such as literature, activities, videos, or power-points to build lesson instruction. Writing will be integrated at the end of lessons to allow participants to reflect on acquired knowledge. Staff will monitor and observe writing by questioning to check for understanding, giving real world encounters or situations, assisting participants with grammar and listening to their writing challenges. Participants will also complete a subject level knowledge assessment or results from previous district assessments will be utilized to determine participants' skills to tutor other participants. Last day of each week module will allow participants to demonstrate their knowledge by a presentation of their choice such as a power-point, visual charts, T-charts, Venn Diagrams, or act out knowledge in a skit.

Module Understanding:	**Key Understandings:**
Program Implementers will use various teaching strategies to create engaging lessons that will evoke participants' interest and encourage them to participate in lessons to enhance their understanding of drugs and substance abuse. Program Implementers will facilitate lesson discussions and guide participants back to key understandings of program which are resist, care, safe and responsible. Participants will be able to define key understandings using their own semantics.	Drugs Substance Abuse Prescription Medication Over-the-Counter Medication Effects Affects Influences Associated Academic Achievement Consume Positive Consequences Negative Consequences Family Friends Mind Brain Physical Appearance Resist Care Safe

	Responsible

Week 1 Lesson: Introduction to **G.E.R.L.*S*^{2}, G**irls **E**mpowered to **R**esist drugs to **L**everage their **S**ubject knowledge and **S**ocial skills
➢ Assessment: Questionnaire (Day 1) (Program Implementers Create) ➢ Show what you know. (Participants will complete a district designed subject based assessment for grade level). Participants with highest score will be assigned to be a peer tutor for that subject. (Day 2-3) ➢ What do you know about drugs or substance abuse? (Day 4) ➢ What do the words in **G.E.R.L.*S*^{2}, G**irls **E**mpowered to **R**esist drugs to **L**everage their **S**ubject knowledge and **S**ocial skills mean to you? (Day 5)
Week 2 Lesson: Building Drug Knowledge
➢ Do drugs have the same effect on boys and girls? (Day 1) ➢ Do drugs make your mind and body feel better? (Day 2) ➢ Are prescription drugs for your family and friends safe for you? (Day 3) ➢ Can you buy and consume as many over the counter pills that you want? (Day 4) ➢ Show what you know. (Day 5)
Week 3 Lesson: Drug Effect on Health: Mental Status and Physical Changes
➢ How do drugs affect your brain? (Day 1) ➢ Do drugs affect your physical appearance? (Day 2) ➢ Are there consequences associated with drugs? (Day 3) ➢ Does consuming drugs affect your grades? (Day 4) ➢ Show what you know. (Day 5)

Module 2: Outline

Building Resistance to Drug Related Peer Pressure, Responsible Choices, Seeking Help

This module will introduce participants to an understanding of peer pressure, influences, responsible choices or decisions in various social settings, consequences connected to choices and available sources to help in crisis situations at school. This module will also focus on implementing strategies to resist drugs or substance abuse. Program Implementers will use a variety of sources such as literature, activities, videos, or power-points to build lesson instruction. Writing will be integrated at the end of lessons to allow participants to reflect on acquired knowledge. Staff will monitor and observe writing by

questioning to check for understanding, giving real world encounters or situations, assisting participants with grammar and listening to their writing challenges. Last day of each week module will allow participants to demonstrate their knowledge by a presentation of their choice such as a power-point, visual charts, T-charts, Venn Diagrams, or act out knowledge in a skit.

Module Understanding:	**Key Understandings:**
Program Implementers will use various teaching strategies to create engaging lessons that will evoke participants' interest and encourage them to participate in lessons to enhance their understanding of peer pressure, responsible choices and seeking help from school resources. Program Implementers will facilitate lesson discussions and guide participants back to key understandings of program which are resist, care, safe and responsible. Participants will be able to define key understandings using their own semantics.	Peer Pressure Role Models Influences Negative Situations Positive Relationships Choices Actions Consequences Bullying Consume School Counselor School Nurse Teachers School Resource Officer Resist Care Safe

	Responsible

Week 4 Lesson: Building Peer Pressure Knowledge and Influences
➢ What is peer pressure? (Day 1) ➢ Who are positive role models or influences for you? (Day 1) ➢ How do you resist negative influences/situations and maintain a positive relationship with your friends? (Day 3) ➢ How do you identify peer pressure signs? (Day 4) ➢ Show what you know. (Day 5)
Week 5 Lesson: Responsibility/Choices/Actions/Consequences
➢ What is responsibility? Choices? Actions? Consequences? (Day 1) ➢ Are there consequences associated with your choices? With Drugs? (Day 2) ➢ Are you responsible for your actions? (Day 3) ➢ If someone is bullying you to consume drugs are you still responsible for actions? (Day 4) ➢ Show what you know. (Day 5)
Week 6 Lesson: Immediate Sources to Help You At School
➢ How can your school counselors help you? (Day 1) ➢ How can your teachers help you? (Day 2) ➢ How can school resource officers help you? (Day 3) ➢ How can your school nurse help you? Day 4) ➢ Show what you know. (Day 5)

Module 3: Building Communication Skills for Proper Social Development This module will introduce participants to the importance of communication, how to be effective communicators and enhance participants communication skills to develop socially acceptable practices for adolescent girls. Program Implementers will use a variety of sources such as literature, activities, videos, or power-points to build lesson instruction. Writing will be integrated at the end of lessons to allow participants to reflect on acquired knowledge. Staff will monitor and observe writing by questioning to check for understanding, giving real world encounters or situations, assisting participants with grammar and listening to their writing challenges. Last day of each week module will allow participants to demonstrate their knowledge by a presentation of their choice such as a power-point, visual charts, T-charts, Venn Diagrams, or act out knowledge in a skit.	
Module Understanding:	**Key Understandings:**

Program Implementers will use various teaching strategies to create engaging lessons that will evoke participants interest and encourage them to participate in lessons to understand the importance of communication, how to be effective communicators and enhance participants communication skills to develop socially acceptable practices for adolescent girls. Program Implementers will facilitate lesson discussions and guide participants back to key understandings of program which are resist, care, safe and responsible. Participants will be able to define key understandings using their own semantics.	Communication Communication Skills Social Development Socially Acceptable Behavior Social Skills Audience Family Members Protect Love Building Self-Esteem Body Resist Care Safe Responsible
G.E.R.L.*S*^{2} Final Program Project: Participants will present a comprehensive project that displays acquired knowledge from the **G.E.R.L.*S*^{2}** curriculum. Project will be presented during last week of program. Collaborative group projects will be created by participants and facilitated by program implementers.	

Week 7 Lesson: Building Communication Skills to Resist Drugs
➢ What is communication and components?

➢ Do you consider your audience when you communicate? ➢ How do you communicate when you need help? ➢ Why should you communicate with a family member? ➢ Show what you know.
Week 8 Lesson: Building Social Skills by Practicing Care for Yourself and Others
➢ What is socially acceptable behavior? (Day 1) ➢ How can helping others build your social skills? (Day 2) ➢ Why should you love and protect your body? (Day 3) ➢ Why should you work on building your self-esteem? (Day 4) ➢ Show what you know.
Week 9 Lesson: Final Project Presentation, **G.E.R.L.*S*²** Presentation Project of knowledge acquired from program.
Present what you know about substance abuse or drugs and their effect on your performance. (Day 1-2) Present what you know about peer pressure, influences and seek guidance. (Day 2-3) Present what you know about effective communication and building on your social development. (Day 4-5)

G.E.R.L.*S*^{2} Curriculum Parent and Staff Training

G.E.R.L.*S*^{2} Parent and Staff Training Modules **G.E.R.L.*S*^{2}** parents and staff will attend an all-day training for 1 day which encompasses the **G.E.R.L.*S*^{2}** program purpose and components. Parents and staff will receive a copy of **G.E.R.L.*S*^{2}** program curriculum. Parents and staff will receive training for community partners about drug awareness, effects, influences and early identification of adolescent girl drug users.
Duration of Modules: Each module will be allotted 2 hour increments for training.
Module 1: Increase Parents and Staff Drug Awareness Knowledge by Police Officers: Increase parental and staff knowledge and awareness about substance abuse, peer influences, contributing factors to substance abuse, social standards and effects on adolescent girls.
Module 2: Increase Parents and Staff Awareness of Drug Effects by Healthcare Workers: Increase parental and staff knowledge about mental and physical effects on adolescent girls and difference from boys. Knowledge on how to identify warning signs or symptoms of an adolescent girls' substance abuser.

Module 3: Increase Parents and Staff Awareness of Drug Effects on Adolescent Girls Academic and Social Performance by Counselors: ➢ Training for school personnel to enhance skills for identification and detection of drug abuse signs. Training provided from highly qualified mentors/counselors that possess drug knowledge that focuses on building positive relationships, identify factors that contribute or lead to increased substance abuse, address adolescent girls' social and civic deportment.

Program Evaluation

Step 1: Purpose of Evaluation:
The purpose of this evaluation is to determine **G.E.R.L.*S*^{2}** program met goals of providing knowledge to adolescent girls the acquired knowledge of adolescent girls pertaining to effects of substance abuse on their academic performance and social development by using highly qualified mentors to equip them to resist drugs and to increase their academic performance and build their social skills. Empowering and enhancing parents' awareness of the effects of substance abuse on academics and social performance by using qualified professionals from healthcare organizations, law enforcement and school staff. Evaluator will address stated objective/goal question in Step 3 below about program goals.

Step 2: Stakeholder Group
Identification of stakeholder group is imperative to success of data collection and analysis.

Program Implementers
School Counselors
School Nurse
School Resource Officers (S.R.O.)
Other Healthcare Professionals
Other Law Enforcement Officials
Other Licensed Professional Counselors
Participants

Step 3: State what you want to know about the program.
Evaluation Objective/Goal Question:

Did the **G.E.R.L.*S*^{2}** program accomplish stated goals?

G.E.R.L.*S*^{2} Program Goals:

1. Improve adolescent girls academic performance and social development by building on study skills

2. Increase parental knowledge and awareness about substance abuse, peer influences, contributing factors to substance abuse, social standards and effects on adolescent girls

3. Provide professional development and trainings for school personnel to enhance skills for identification and detection of drug abuse signs

4. Provide highly qualified mentors/counselors that possess drug knowledge that focuses on building positive relationships, identify factors that contribute or lead to increased substance abuse, address adolescent girls social and civic deportment		
Step 4: Determine Evaluation Design and Data Collection Status Design will allow evaluator to observe and know what is currently happening with the participants by using data such as school records.		
Questions:	Outcome Measure Evidence:	Type of Data and Data Sources
Has the academic performance of adolescent girls increased since completion of **G.E.R.L.*S*²** program?	100% of adolescents girls that completed program have above 70% passing grade in all subjects 100% of adolescents that completed program will have an above passing grade on all district common and benchmark assessments, state assessments	Progress Reports Report Cards Teacher Designed Assessments Common Assessments District Assessments State Mandated Assessments P.E.I.M.S. Clerk Instructional Coordinators Program Implementers
Has parental knowledge about effects of substance abuse, peer influences,	100% of parents that participated in **G.E.R.L.*S*² Curriculum Parent and**	Parent questionnaires(developed by locally) how parents feel about knowledge acquired from program Interview parents end of program meetings to determine parents ability to identify effects of substance abuse, peer influences, contributing

contributing factors, social standards and effects on adolescent girls increased?	**Staff Training** are able to identify effects of substance abuse on adolescent girls 100% of parents are able to identify negative peer influences for adolescent girls 100% of parents that are able to identify contributing factors for girls adolescent substance abuse 100% of parents are able to identify acceptable social standards for adolescent girls	factors, and social standards Parent Conference Notes P.T.A. Meetings S.R.O. Drug Update Meetings School Counselor Drug Awareness Meeting Updates Program Implementers	
Has school personnel	100% of school staff	School staff questionnaires(d	Weekly End of 3

knowledge to enhance skills for identification and detection of drug abuse signs increased?	that participated in program are able to identify and detect drug abuse signs for adolescent girls	eveloped by locally) how staff feel about knowledge acquired from program Interview school staff at end of program about ability to identify and detect drug abuse signs for adolescent girls Program Implementers	weeks Marking Period End of 6 Weeks Marking Period End of 9 weeks Marking Period
Has adolescent girls' social development increased?	100% of adolescent girls that participated in program will have no school documented referrals for drug abuse. 100% of adolescent girls that participated in program will have above 90% average of school attendance 100% of adolescent girls that participated in program will have at	Discipline report to review adolescent girls' drug offenses School attendance report to review girls adolescent absences P.E.I.M.S. Clerk School Counselor notes for individual and group meetings to review student peer relationship building	Weekly End of 3 weeks Marking Period End of 6 Weeks Marking Period End of 9 weeks Marking Period

	least 2 to 3 positive, influential friends		

Step 5: Data Analysis
Before data analysis begins, make sure data is kept confidential and accessible for program evaluators. The purpose of data analysis for this evaluation is to determine if knowledge acquired in the program made a difference with girls adolescents, parents and school staff about substance abuse effects on academic performance and social development, contributing factors, and peer influences.

Percentage of Participants	Beginning of **G.E.R.L.*S*²** program	% After Completion of **G.E.R.L.*S*²** program
Percentage of participants academic performance	% of Participants grades below 70%	% of Participants grades below 70%
Percentage Score	%	%
Percentage of participants academic performance	% of Participants grades below passing on all district common and benchmark assessments, state assessments	% of Participants grades below passing on all district common and benchmark assessments, state assessments
Percent Score	%	%
Percentage of parents that can identify positive peer relationships	% of parents that participated in **G.E.R.L.*S*²** program are able to identify peer influences for adolescent girls	% of parents that participated in **G.E.R.L.*S*²** program are able to identify peer influences for adolescent girls
Percentage of parents that can identify contributing factors	% of parents that participated in **G.E.R.L.*S*²** program are able to identify contributing factors for adolescent girls	% of parents that participated in **G.E.R.L.*S*²** program are able to identify contributing factors for adolescent girls

Percentage of parents that can identify acceptable social standards	% of parents that participated in **G.E.R.L.*S*²** program are able to identify social standards for adolescent girls	% of parents that participated in **G.E.R.L.*S*²** program are able to identify social standards for adolescent girls
Percent Score	%	%
Percentage of school staff that can identify	% of school staff that participated in **G.E.R.L.*S*²**	% of school staff that participated in **G.E.R.L.*S*²**

and detect drug abuse signs	program are able to identify and detect drug abuse signs for adolescent girls	program are able to identify and detect drug abuse signs for adolescent girls
Percent Score	%	%
Percent of girls adolescents with drug abuse related discipline offenses	% of adolescent girls that participated in **G.E.R.L.*S*²** program with school documented drug abuse offenses	% of adolescent girls that participated in **G.E.R.L.*S*²** program with no school documented drug abuse offenses
Percentage of girls adolescent school attendance	% of adolescent girls that participated in **G.E.R.L.*S*²** program with below 90% average of school attendance	% of adolescent girls that participated in **G.E.R.L.*S*²** program with above 90% average of school attendance
Percentage of girls adolescent positive peer relationship building	% of adolescent girls that participated in **G.E.R.L.*S*²** program with no positive, influential friends	% of adolescent girls that participated in **G.E.R.L.*S*²** program with 2 or 3 positive, influential friends

Percent Score	%	%
Step 6: Report Findings and Recommendations: It is imperative to complete a thorough written project status report about your findings from evaluating the program so you can share program effects. It is also important to evade biases when completing reports about the results. Summary report must contain these components; describe your purpose, goals, what you were evaluating, tools and types of data collected and used, data sources, data analysis, brief description of each goal or objective addressed, present summarized data in a table format, your results from the evaluation, conclusion and recommendations.		

Appendix B: Instrument Approval Request Document

May 27, 2012
Lynn Green
1202 Northport Drive, 4th Floor
Madison, WI 53704

Ms. Green:

I am requesting permission to utilize the Dane County Youth Assessment in my doctoral research project study developed by Dane County Youth Authorities, after approval from IRB. I am currently enrolled in Walden University's Administrator Leadership Doctoral Education program.

The purpose of my project study research is to identify contributing factors that lead adolescent girls between the ages of 13 and17 to become involved in drug use. This study will explore this drug involvement and these contributing factors to reveal what effect they have on these adolescent girls' social development and academic performance.

After completion of study, I will provide Dane County Authorities a brief report that will consist of results from instrument use and information about instrument success.

Date: May 27, 2012

Name: Jackie Briggs-Vaughn

Address: 324 W. Glen Meadow Drive, Red Oak, TX 75154

Phone: 214-518-9783

Email: jackie.briggs@waldenu.edu

University: Walden University

Address: 155 5th Avenue South, Minneapolis, MN 55401

Phone: 612-925-3368

Title of Study: Adolescent Girls' Involvement With Drug Use and the Effect on Academic and Social Development

Description of Study including sample: A precise problem within these local school districts is that 13- to17-year-old adolescent girls involved with drugs lack social development skills and perform academically lower than their peers. Participants will be randomly selected from these school districts.

Appendix C: Dane County Youth Survey Data Use Agreement

DANE COUNTY
YOUTH SURVEY DATA USE AGREEMENT

The Dane County Youth Assessment (DCYA) is a survey of youth in grades 7-12 regarding their opinions, concerns, behaviors, and experiences in areas such as family, school, community and peer relationships, health, nutrition and engagement in high-risk behaviors such as AODA use and sexual activity. The central purpose of the survey is to provide area educators, service providers, parents, policy-makers, and funding bodies with accurate, current data to inform grant writing and the development of youth programs, services and public policies. Although Dane County and its partners in the DCYA produce summaries of the survey data, it welcomes more in-depth and focused analysis of the data by academic institutions and other qualified entities.

The purpose of this Data Use Agreement is to document and confirm the parties' understanding of the standards to which the parties agree to adhere for the protection of the security and privacy of the DCYA DATA.

The DATA is defined as an SPSS (Statistical Package for the Social Sciences) data file containing responses to all 2009 DCYA survey items by subject with school indicators removed.

This DATA Use Agreement is made and entered into by and between the County of Dane (COUNTY) and_____(hereinafter DATA USER), whose address is
as of the date both parties have signed this Agreement.

THE PARTIES DO AGREE AS FOLLOWS:

1. The DCYA DATA remains at all times the property of COUNTY, and no license or the sharing of the DCYA DATA with DATA USER implies other rights to the DCYA DATA.

2. The DCYA survey tool is administered anonymously and requested no information that could be used to personally identify any of the participating youth.

Nevertheless, the parties recognize that it is possible that certain information included within the DCYA DATA, when paired with other information available through the survey or from other sources, might be used to identify individual participants. The parties agree that the receipt, storage, handling, analysis and reporting of the DCYA DATA shall be conducted in a manner that does not permit the personal identification of any youth participant.

3. Except as expressly authorized in writing by COUNTY, DATA USER shall not

a. Copy or Re-disclose the DATA provided hereby to any third-party individual, organization or entity; other than that described in paragraph 7 or
b. Use the DATA for any further research, study or other purpose other than that described in paragraph 6, below
c. Alter the DATA in any manner; or
d. Sell the DATA.

4. DATA USER shall include in all of its publications which incorporate or rely upon, in whole or in part, the DCYA DATA provided hereby a statement identifying the source of the DATA as follows: "2009 Dane County Wisconsin Youth Assessment".

5. DATA USER shall provide Dane County with a copy of any abstracts, publications or reports that incorporate or rely upon, in whole or in part, the DCYA DATA provided hereby.

6. Brief description of DATA User's proposal:

7. Professors affiliated with a University or other accredited institution of higher education may provide copies of the DATA to student or colleagues working on the research proposal described in paragraph 6.

FOR DANE COUNTY:

_____ Date: _____

Dane County
1202 Northport Drive
Madison, WI 53704

FOR DATA USER

_____ Date: _____

Signature

Contact information:

Appendix D: Dane County Youth Assessment

Dane County Youth Assessment 2012 Code Book Grades 9-12

Version 1-April 2, 2013

This document summarizes the coding design for the DCYA 2012 survey. The code book follows the file structure of an SPSS .sav file or data file. In this code book column 1 (farthest left) is the row number in an SPSS variable view. Column 2 is the Variable Name (item number). Column 3 is the Variable Label (exact wording of the item). Column 4 is the Value Label (response choices).

Some questions have sub-items, covering multiple rows. These items are shaded in grey.

Some items have "jumps" which cause the participant to skip over unnecessary questions based on their response choice. These jumps are marked with bold brackets **[skipto. ..]** .

Missing values are blank. Missing values generally fall into 3 categories:

- Non-response because the student seemed to ignore the question.
- Non-response because there were many choices and the respondent only picked choices that apply to them
- Non-response because the survey design caused the student to automatically jump over certain items.

Questions or comments about the code book should be directed to Brian Koenig @ K12 Associates. (EMAIL) bwkoenig@k12associates.com or (PHONE) 608 836-8893.

Column # SPSS	**SPSS Variable**	**Survey Item or *Derived Variables***	**(code) Options**

1	District	School district and/or building identifier	
2	RespondentID	Unique # for each survey respondent assigned by Survey Monkey	
3	CollectorID	Unique school ID assigned by Survey Monkey	
4	Weight	Weighting factor	(Madison only) (1) All other schools
5	Age	1. How old are you?	(1) 12 years old (2) 13 years old (3) 14 years old (4) 15 years old (5) 16 years old (6) 17 years old (7) 18 years old or older
6	Grade	2. What is your current grade in school?	(1) 7th (2) 8th (3) 9th (4) 10th (5) 11th (6) 12th (7) Other
		3. What is your race? (Check all that apply)	
7	q003_001		(1) Middle Eastern/Arab American
8	q003_002		(2) Native American
9	q003_003		(3) Black or African American
10	q003_004		(4) Hispanic or Latino
11	q003_005		(5) Hmong
12	q003_006		(6) Asian (not Hmong)
13	q003_007		(7) White (not Hispanic)
14	q003_008		(8) Other
15	NewRace	Race items compiled into one variable. Any student who checked more than one race category was placed in the *mixed* category and recoded 8.	(1) White (2) Black (3) Hispanic (4) Hmong (5) Asian, not Hmong (6) Native (7) Middle Eastern/Arab American (8) Mixed (9) Other

16	Gender	4. What is your gender?	(1) Girls (2) Male
17	GLBT	5. Which of the following best describes you?	(1) Straight/Heterosexual (2) Gay or Lesbian (3) Bi-Sexual (4) Questioning my sexual orientation
18	Transgender	6. Do you identify yourself as transgender?	(1) Yes (2) No
		7. In the drop down menus, choose the zip code where you live most of the time? (Choose only 1 zip code)	
19	q0007_0001_0001	Madison zip codes (53701 -53719)	
20	q0007_0001_0002	Madison zip codes (53725-53794)	
21	q0007_0001_0003	Dane County zip codes (not Madison)	
22	q0008	8. Who do you live with most of the time? (Choose only one)	(1) Two parents one home (2) Two parents separate homes (3) One parent only (4) One parent, another adult (5) Group home or foster home (6) A relative (aunt, uncle, grandparents, other sibling, etc.) (8) I live with friends (9) I live alone (10) Other
23	q0009	9. If I'm home after school, from 3:00-6:00 p.m., there is . . .	(1) Always a parent/guardian at home (2) Usually a parent/guardian at home (3) Seldom a parent/guardian at home (4) Never a parent/guardian at home
24	q0010_1	Run away from home for 1 or more nights	(1) Never (2) Yes, in the last 12 months (3) Yes, over 12 months ago
25	q0010_2	Been homeless	(1) Never (2) Yes, in the last 12 months (3)Yes, over 12 months ago
26	q0010_3	Been kicked out of your house by your parents	(1) Never (2) Yes, in the last 12 months (3) Yes, over 12 months ago
27	q0010_4	Lived in foster care	(1) Never (2) Yes, in the last 12 months

			(3) Yes, over 12 months ago
28	q0010_5	Lived in a group home or residential facility	(1) Never (2) Yes, in the last 12 months (3) Yes, over 12 months ago
29	q0010_6	Been in juvenile corrections/prison for more than 30 days.	(1) Never (2) Yes, in the last 12 months (3) Yes, over 12 months ago
30	q0011	11. Do you currently have a job?	(1) No, and I'm not looking for a job (2) No, I am looking for a job but can't find one (3) Yes, I do occasional jobs (babysitting, snow shoveling, lawn work, etc.) (4) Yes, less than 20 hours (5) Yes, more than 20 hours
31	q0012	12. Have you done any volunteer work in the last 12 months?	(1) No and I am not interested in volunteering (2) No, but I am interested (3) Yes, I volunteer on a weekly basis (4) Yes, I volunteer on a monthly basis (5) Yes, I have volunteered a few times in the last 12 months.
32	q0013	13. How many days per week are you involved in extracurricular activities like dance, drama, music, sports or school organizations?	(1) 0 days (2) 1 day (3) 2 days (4) 3 days (5) 4 days (6) 5 days (7) 6 days (8) 7 days
33	q0014	14. How many days a week do you spend time at a youth or community center?	(1) 0 days (2) 1 day (3) 2 days (4) 3 days (5) 4 days (6) 5 days (7) 6 days (8) 7 days
34	q0015	15. How many days a week do you play team sports? (Practice, lessons and games)	(1) 0 days (2) 1 day (3) 2 days (4) 3 days (5) 4 days (6) 5 days (7) 6 days (8) 7 days
35	q0016	16. How many days a	(1) 0 days

		week do you exercise on your own, not in an organized program? (For example: biking, skating, running, playground basketball, dancing, tennis with a friend, snowboarding, skateboarding, etc.)	(2) 1 day (3) 2 days (4) 3 days (5) 4 days (6) 5 days (7) 6 days (8) 7 days
		17. What things stop or limit you from exercising, either in sports, organized exercise programs or on your own? (Check all that apply)	
36	q0017_1	Nothing stops or limits me	(1)
37	q0017_2	I don't have time (because of school work, job, chores, etc.)	(1)
38	q0017_3	I don't like or don't think it's important	(1)
39	q0017_4	I have physical or health problems	(1)
40	q0017_5	My skills aren't good enough	(1)
41	q0017_6	There aren't enough programs or places to exercise	(1)
42	q0017_7	I don't know what is offered or how to sign up	(1)

43	q0017_8	It costs too much (fees or equipment)	(1)
44	q0017_9	Transportation is a problem	(1)
45	q0017_10	There are safety concerns in my neighborhood (such as traffic or crime)	(1)
46	q0017_11	My parents don't want me to	(1)
47	q0017_12		(1)
		18. Do you agree or disagree with these statements about summer?	
48	q0018_0001	I eat and drink more "junk food" in the summer than during the school year	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
49	q0018_0002	I am more active in the summer than during the school year	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
50	q0018_0003	There are enough sports/fitness programs or places to be active, if I'm interested	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
51	q0018_0004	I spend more time on the computer or watching TV during the summer	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
52	q0019	19. On an average school day/night, how many total hours do you sit and watch TV, play video or computer games, use	(1) None (2) Less than 1 hour (3) 1 hours (4) 2 hours (5) 3 hours (6) 4 hours

		Facebook or the internet, or spend time using hand held computer devices? (Don't count time spent on school work.)	(7) 5 or more hours
53	q0020	20. On average, how many school nights a week are you awake past 11pm?	(1) 0 nights (2) 1 night (3) 2 nights (4) 3 nights (5) 4 nights (6) Every night
54	q0021	21. In an average week, how many days do you eat evening meals with your family?	(1) 0 days (2) 1 day (3) 2 days (4) 3 days (5) 4 days (6) 5 days (7) 6 days (8) 7 days
		22. My parents . . .	
55	q0022_0001	Know where I am when I go out	(1) Always (2) Often (3) Sometimes (4) Never
56	q0022_0002	Set clear rules about what I can and cannot do	(1) Always (2) Often (3) Sometimes (4) Never
57	q0022_0003	Have talked with me about my future plans	(1) Always (2) Often (3) Sometimes (4) Never
58	q0022_0004	Have consequences if I break rules	(1) Always (2) Often (3) Sometimes (4) Never
59	q0022_0005	Encourage me to do well	(1) Always (2) Often (3) Sometimes (4) Never
60	q0022_0006	Monitor my school progress	(1) Always (2) Often (3) Sometimes (4) Never
61	q0022_0007	Talk with me about things that bother me	(1) Always (2) Often (3) Sometimes (4) Never

		23. Please click one choice for each question below.	
62	q0023_0001	My parent has been in prison or jail	(1)Yes (2) No (3) Don't know
63	q0023_0002	My parent has hit me, leaving bruises, marks or any kind of injury	(1) Yes (2) No (3) Don't know
64	q0023_0003	My parent gets drunk at least once a week	(1) Yes (2) No (3) Don't know
65	q0023_0004	My parent abuses drugs at least once a week	(1) Yes (2) No (3) Don't know
66	q0023_0005	My parents physically fight with each other	(1) Yes (2) No (3) Don't know
67	q0024	24. Is one or more of your family members (not including you) involved in a gang?	(1) Yes (2) No (3) Don't know
68	q0025_0001_0001	25. How tall are you?	Feet
69	q0025_0001_0002	25. How tall are you?	Inches
70	q0026_0001	26. How much do you weigh	Pounds
71	BMI	Body Mass Index (Calculated using CDC cutoffs)	(1) Healthy weight (2) Under weight (3) Over weight (4) Obese
72	q0027	27. Which of the following are you trying to do about your weight?	(1) I am NOT TRYING TO DO ANYTHING about my weight (2) Lose weight (3) Gain weight (4) I'm trying to stay the same weight

73	q0028	28. 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.	(1) 0 days (2) 1 day (3) 2 days (4) 3 days (5) 4 days (6) 5 days (7) 6 days (8) 7 days
74	q0029	29. How many total servings of fruit and/or vegetables do you eat most days? One serving = either 1/2 cup canned or cooked, one cup raw, or one medium sized piece of fresh fruit. Do not include juice, French fries or chips.	(1) 0 servings (2) 1 serving (3) 2 servings (4) 3 servings (5) 4 servings (6) 5 or more servings
75	q0030	30. During the past 7 days, how many days did you eat breakfast?	(1) 0 days (2) 1 day (3) 2 days (4) 3 days (5) 4 days (6) 5 days (7) 6 days (8) 7 days
76	q0031	31. In the past 30 days, how often did you have to skip meals or eat less because your family didn't have enough money for food?	(1) Never (2) Once (3) More than once

		32. How many cans, bottles, glasses or cups of these beverages did you drink in the past week?	
77	q0032_0001	Soda or pop (don't count diet soda)	(1) 0 per week (2) 1-3 per week (3) 4-6 per week (4) 1 per day (5) 2 per day (6) 3 per day (7) 4 or more per day
78	q0032_0002	Energy drinks like Red Bull, AMP or RockStar	(1) 0 per week (2) 1-3 per week (3) 4-6 per week (4) 1 per day (5) 2 per day (6) 3 per day (7) 4 or more per day
79	q0032_0003	Other sugar sweetened drinks like Snapple, Sobe, Sunny D, Kool Aid or Hi-C (not 100% juice)	(1) 0 per week (2) 1-3 per week (3) 4-6 per week (4) 1 per day (5) 2 per day (6) 3 per day (7) 4 or more per day
80	q0032_0004	Coffee or coffee drinks	(1) 0 per week (2) 1-3 per week (3) 4-6 per week (4) 1 per day (5) 2 per day (6) 3 per day (7) 4 or more per day
81	q0032_0005	Milk (any kind but not shakes)	(1) 0 per week (2) 1-3 per week (3) 4-6 per week (4) 1 per day (5) 2 per day (6) 3 per day (7) 4 or more per day

		33. Do you have a disability that limits you from doing certain activities? If yes, which disabilities do you have? (Check all that apply)	
82	q0033_0001		(1) I do not have a disability
83	q0033_0002		(1) Autism/Aspergers
84	q0033_0003		(1) Attention deficit or hyperactivity (ADD or ADHD)
85	q0033_0004		(1) Emotional or mental health problems
86	q0033_0005		(1) Learning disability
87	q0033_0006		(1) Hearing problem or deafness
88	q0033_0007		(1) Vision problem or blindness
89	q0033_0008		(1) Speech or language problem
90	q0033_0009		(1) Physical disability
91	q0033_0010		(1) Health problems
92	q0033_0011		(1) Other disability
93	q0034	34. In the past 12 months, have you taken medication for asthma, seen a doctor for asthma, or had asthma symptoms?	(1) Yes (2) No
94	q0035	35. When was the last time you were seen by a dentist?	(1) Less than 1 year (2) 1 year (3) 2 years (4) 3 years or more
95	q0036	36. In the past 12 months, have you ever missed school because of pain in your teeth or gums? (not because of braces)	(1) Yes (2) No
96	q0037	37. How often do you wear a seatbelt when driving or riding in a car?	(1) Never (2) Rarely (3) Sometimes (4) Most of the time (5) Always

97	q0038	38. How often do you wear a protective helmet when you are biking?	(1) I never ride a bike (2) Never (3) Rarely (4) Sometimes (5) Most of the time (6) Always
		39. In the past 30 days, how often have you . . .	
98	q0039_0001	Felt nervous, anxious or on edge	(1) Always (2) Often (3) A little (4) Not at all
99	q0039_0002	Not been able to stop or control worrying	(1) Always (2) Often (3) A little (4) Not at all
100	q0039_0003	Felt problems were piling up so high that you could not handle them	(1) Always (2) Often (3) A little (4) Not at all
101	q0040	40. Most youth would look down on someone who is getting professional help for a mental health problem.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
		41. When things go wrong in my life I . . .	
102	q0041_0001	Try not to think about the problem	(1) Always (2) Often (3) A little (4) Not at all
103	q0041_0002	Think it's my fault	(1) Always (2) Often (3) A little (4) Not at all
104	q0041_0003	Talk about how I am feeling with others	(1) Always (2) Often (3) A little (4) Not at all
105	q0041_0004	Get aggressive, yell, hit or scream	(1) Always (2) Often (3) A little (4) Not at all
106	q0041_0005	Am able to calm myself down	(1) Always (2) Often (3) A little (4) Not at all
107	q0041_0006		(1) Always (2) Often (3) A little (4) Not at all
108	q0041_0007	Keep my thoughts and feelings to myself	(1) Always (2) Often (3) A little (4) Not at all
109	q0041_0008	Try to see the good that can come of the situation	(1) Always (2) Often (3) A little (4) Not at all
110	q0041_0009	Think of ways to solve the problem	(1) Always (2) Often (3) A little (4) Not at all

111	q0042	42. Do you have any of the following long-term emotional or mental health problems?(Long-term means 6 months or more)	(1) I don't have any long term emotional or mental health problem. (2) Depression (3) Anxiety (4) An eating disorder (5) Other emotional or mental health problem (not ADD or ADHD)
112	q0043	43. During the past 12 months, did you ever feel so sad or hopeless almost every day for at least two weeks in a row that you stopped doing some usual activities?	(1) Yes (2) No
113	q0044	44. During the past 30 days, have you thought seriously about killing yourself?	(1) No (2) Yes, but rarely (3) Yes, some of the time (4) Yes, almost all the time
114	q0045	45. During the past 12 months, have you attempted to kill yourself?	(1) No (2) Yes, one time (3) Yes, more than one time
115	q0046	46. Have you ever choked yourself intentionally to make yourself pass out?	(1) Yes (2) No
116	q0047	47. Have you seen or known of someone who choked themselves intentionally just to pass out?	(1) Yes (2) No
117	q0048	48. During the past 12 months, how many times did you do something to hurt yourself on purpose, without wanting to die, such as cutting or burning yourself?	(1) 0 times (2) 1 to 2 times (3) 3 or more times
		49. Have you ever voluntarily . . . ? (Check all that apply)	
118	q0049_0001	Engaged in vaginal sexual intercourse	(1)

		(penis/vagina)	
119	q0049_0002	Engaged in oral sexual contact (mouth/penis or mouth/vagina)	(1)
120	q0049_0003	Engaged in anal sexual intercourse (penis/anal)	(5)
121	q0049_0004	No, I have never done any of the above	**(1) [skips to q0063]**
122	q0050	50. During your life, who have you had sexual contact with?	(1) I have never had sexual contact **[skips to q0063]** (2) Girlss (3) Males (4) Girlss and males
123	q0051	51. How old were you the first time you had voluntary sexual contact (vaginal, anal, oral)?	(1) I have never had sexual contact with anyone (2) 11 years old or younger (3) 12 years old (4) 13 years old (5) 14 years old (6) 15 years old (7) 16 years old (8) 17 years old (9) 18 years old or older
124	q0052	52. How many people have you had voluntary sexual contact with during your life?	(1) I have never had sexual contact with anyone (2) 1 person (3) 2 people (4) 3 people (5) 4 people (6) 5 people (7) 6 or more people
125	q0053	53. How many people have you had sex with that you just met or didn't know very well?	(1) I have never had sexual contact with anyone (2) 1 person (3) 2 people (4) 3 people (5) 4 people (6) 5 people (7) 6 or more people
126	q0054	54. Have you ever had sex with someone while you were under the influence of alcohol, marijuana or other drugs?	(1) No, never (2) Yes, a few times (3) Yes, many times (4) Yes, all the time

127	q0055	55. When you have vaginal sexual intercourse, how often do you use a method to prevent pregnancy?	(1) I have never had vaginal sexual intercourse (2) Never (3) Sometimes (4) Always
		56. What do you use or do to prevent pregnancy? (Check all that apply)	
128	q0056_0001	I have not had sexual intercourse	(1)
129	q0056_0002	Abstinence, we do not have sex	(1)
130	q0056_0003	Pills	(1)
131	q0056_0004	Implants (Implanon)	(1)
132	q0056_0005	Patch	(1)
133	q0056_0006	Nuva Ring	(1)
134	q0056_0007	Condom	(1)
135	q0056_0008	Depo Provera (shots)	(1)
136	q0056_0009	IUD	(1)
137	q0056_0010	Withdrawal (pulling	
		out)	
138	q0056_0011	Natural Family Planning/Not having sex while ovulating	(1)
139	q0056_0012	Other	(1)
140	q0056_0013	Nothing	(1)
141	q0057	57. When you have sexual contact, how often do you use a barrier method (condom, dental dam) to prevent sexually transmitted infections?	(1) Never (2) Sometimes (3) Always use one
142	q0058	58. How many times have you been pregnant or gotten a girl	(1) 0 (2) 1 (3) 2 or more times

		pregnant?	
143	q0059	59. If you have children, how many do you have?	(1) None (2) 1 (3) 2 or more
144	q0060	60. Have you or a sexual partner ever had an abortion?	(1) Yes (2) No
145	q0061	61. How likely is it that you will get a sexually transmitted infection (STI)?	(1) It's not likely at all (2) It's somewhat likely (3) It's very likely I will get a sexually transmitted infection
146	q0062	62. Have you ever been tested for a sexually transmitted infection (STI)?	(1) Yes (2) No (3) Not sure
		63. Please click the answer you believe to be true for the questions below. (STI means sexually transmitted infection)	
147	q0063_0001	Untreated STIs can cause serious health problems	(1) Yes (2) No (3) Not sure
148	q0063_0002	I could tell if my sexual partner had an STI	(1) Yes (2) No (3) Not sure
149	q0063_0003	Birth control pills prevent a girl from getting an STI	(1) Yes (2) No (3) Not sure
150	q0063_0004	Using condoms often prevents STIs	(1) Yes (2) No (3) Not sure
151	q0063_0005	Withdrawal (pulling out) during sex prevents pregnancy	(1) Yes (2) No (3) Not sure
152	q0063_0006		(1) Yes (2) No (3) Not sure
153	q0064	64. Have you ever been forced, either verbally or physically, to take part in a sexual activity?	(1) Yes (2) No

154	q0065	65. How old were you when your parent first talked with you about sex?	(1) Age 9 or younger (2) Age 10 (3) Age 11 (4) Age 12 (5) Age 13 (6) Age 14 (7) Age 15 (8) Age 16 (9) Age 17+ (10) I have not talked with my parents about sex
		66. Have you had a good talk with your parents about . . .	
155	q0066_0001	Waiting to have sex	(1) Yes (2) No
156	q0066_0002	Healthy dating relationships	(1) Yes (2) No
157	q0066_0003	Birth control and STIs	(1) Yes (2) No
158	q0067	67. About how many people your age do you think have ever had sexual intercourse?	(1) None (2) Less than half (3) Half (4) More than half (5) All
159	q0068	68. How old were you when you smoked a whole cigarette for the first time?	(1) I have never smoked a cigarette **[skip to q0078]** (2) 8 years old or younger (3) 9 to 10 years old (4) 11 to 12 years old (5) 13 to 14 years old (6) 14 to 16 years old (7) 17 years old or older (8) I don't know
160	q0069	69. During the past 30 days, on the days you smoked cigarettes, on average how many did you smoke per day?	(1) I did not smoke cigarettes in the last 30 days (2) Less than 1 a day (3) 1 a day (4) 2-5 a day (5) 6-10 a day (6) 11-20 a day (7) More than 20 a day
		70. If you smoked during the past 30 days, how did you usually get your cigarettes? (Check all that apply)	
161	q0070_0001	I did not smoke cigarettes in the last 30 days.	(1)
162	q0070_0002	I bought them from a store.	(1)
163	q0070_0003	I gave someone else money to buy them for me.	(1)

164	q0070_0004	I borrowed (or bummed) them from someone else.	(1)
165	q0070_0005	A person 18 years old or older gave them to me.	(1)
166	q0070_0006	I took them from a store or family member.	(1)
167	q0070_0007	I got them some other way.	(1)
168	q0071	71. During the past 30 days, on how many days did you use chewing tobacco, snuff, SNUS or dip?	(1) 0 days (2) 1-2 days (3) 3-5 days (4) 6-9 days (5) 10-19 days (6) 20-29 days (7) All 30 days
169	q0072	72. During the past 7 days, were you exposed to cigarette smoke at home?	(1) Yes (2) No
170	q0073	73. How old were you the first time you had your first drink of alcohol other than a few sips?	(1) 8 years old or younger (2) 9 or 10 years old (3) 11 or 12 years old (4) 13 or 14 years old (5) 15 or 16 years old (6) 17 years old or older (7) I have never had a drink of alcohol other than a few sips **[skip to q0077]**
		74. Where do you most frequently get alcohol? (Check all that apply to you)	
171	q0074_0001	I don't drink.	(1)
172	q0074_0002	I sneak it from home.	(1)
173	q0074_0003	My parents give it to me.	(1)
174	q0074_0004	At parties.	(1)
175	q0074_0005	From friends	(1)
176	q0074_0006	From older brother or sister	(1)
177	q0074_0007	Someone else buys it for me.	(1)
178	q0074_0008	I buy it myself.	(1)
179	q0074_0009	I steal it from a store.	(1)
180	q0074_0010	I get it some other way.	(1)

181	q0075	75. In the past 12 months how many times have you drank alcohol? (More than a few sips)	**(1)** Never, not at all **[skips to q0077]** (2) Less than 1 time per year (3) 1 time per month or more
		76. In the past 30 days, how many days did you . . .	
182	q0076_0001	Have at least 1 drink of alcohol (more than a few sips)	(1) 0 days (2) 1 to 2 days (3) 3 to 6 days (4) 6 days or more
183	q0076_0002	Have 5 or more alcoholic drinks at one time, in a row, that is within a couple of hours	(1) 0 days (2) 1 to 2 days (3) 3 to 6 days (4) 6 days or more
184	q0076_0003	Get drunk from drinking	(1) 0 days (2) 1 to 2 days (3) 3 to 6 days (4) 6 days or more
185	q0077	77. How old were you the first time you tried marijuana?	(1) 8 years old or younger (2) 9 or 10 years old (3) 11 or 12 years old (4) 13 or 14 years old (5) 15 or 16 years old (6) 17 years old or older (7) I have never tried marijuana **[skips to q0080]**
186	q0078	78. In the past 12 months, how many times did you use marijuana?	(1) Never, not at all (2) Less than 1 time per year (3) 1 time per month or more
187	q0079	79. In the past 30 days, on how many days did you use marijuana?	(1) 0 days (2) 1 to 2 days (3) 3 to 6 days (4) 6 days or more
188	q0080	80. Have you ever ridden in a car driven by someone (including yourself) who had been drinking alcohol?	(1) Yes (2) No **[skips to q0082]**

		81. If "yes" who was driving? (Check all that apply)	
189	q0081_0001	Me	(1)
190	q0081_0002	My parent	(1)
191	q0081_0003	Another adult	(5)
192	q0081_0004	Another teen	(1)
		82. In the past 12 months, how many times have you used the following . . .	
193	q0082_0001	Over-the-counter drugs to get high	(1) Not at all (2) Less than 1 time per month (3) 1 time per month or more
194	q0082_0002	Prescription drugs not prescribed for you	(1) Not at all (2) Less than 1 time per month (3) 1 time per month or more
195	q0082_0003	Cocaine or crack	(1) Not at all (2) Less than 1 time per month (3) 1 time per month or more
196	q0082_0004	Inhalant (like glue, paint, spray cans, markers)	(1) Not at all (2) Less than 1 time per month (3) 1 time per month or more
197	q0082_0005	Speed, crystal meth, crank	(1) Not at all (2) Less than 1 time per month (3) 1 time per month or more
198	q0082_0006	Heroin (smack, junk, china white)	(1) Not at all (2) Less than 1 time per month (3) 1 time per month or more
199	q0082_0007	Ecstasy	(1) Not at all (2) Less than 1 time per month (3) 1 time per month or more
200	q0082_0008	Bath salts (ivory white, Bliss, white lightening)	(1) Not at all (2) Less than 1 time per month (3) 1 time per month or more
201	q0082_0009	Synthetic marijuana (K-2, spice, blaze)	(1) Not at all (2) Less than 1 time per month (3) 1 time per month or more
202	q0082_0010	Steroids, HGH	(1) Not at all (2) Less than 1 time per month (3) 1 time per month or more
203	q0083	83. In my lifetime I have used alcohol (more than a few sips) or illegal drugs at least once.	(1) Yes (2) No **[skips to q0090]**
204	q0084	84. Have you ever used alcohol or drugs to relax, feel better about yourself, or fit in?	(1) Yes (2) No (3) I have never used drugs or alcohol

205	q0085	85. Have you ever ridden in a car driven by someone (including yourself) who had been using marijuana?	(1) Yes (2) No
206	q0086	86. Have you ever used alcohol or drugs while you are by yourself, alone?	(1) Yes (2) No
207	q0087	87. Have you ever forgotten things you did while using alcohol or drugs?	(1) Yes (2) No
208	q0088	88. Has your family or friends ever told you that you should cut down on your drinking or drug use?	(1) Yes (2) No
209	q0089	89. Have you ever gotten into trouble while you were using alcohol or drugs?	(1) Yes (2) No
210	q0090	90. How often have you been at someone's home where teens were drinking alcohol and the parents knew it?	(1) Never (2) Rarely (3) Sometimes (4) Often (5) Very Often
211	q0091	91. How often have you been at someone's home when the parents knowingly provided the alcohol?	(1) Very often (2) Often (3) Sometimes (4) Rarely (5) Never
		92. How much do people risk harming themselves physically and in other ways when they...	
212	q0092_0001	Smoke cigarettes regularly	(1) No risk (2) Slight risk (3) Moderate risk (4) Great risk
213	q0092_0002	Drink alcohol once a month or more	(1) No risk (2) Slight risk (3) Moderate risk (4) Great risk
214	q0092_0003	Have 5 or more drinks of alcohol in a row	(1) No risk (2) Slight risk (3) Moderate risk (4) Great risk

215	q0092_0004	Smoke marijuana regularly	(1) No risk (2) Slight risk (3) Moderate risk (4) Great risk
		93. How wrong do your parents feel it would be for you to . . .	
216	q0093_0001	Smoke marijuana	(1) Not wrong (2) A little wrong (3) Wrong (4) Very wrong (5) Not sure
217	q0093_0002	Smoke cigarettes	(1) Not wrong (2) A little wrong (3) Wrong (4) Very wrong (5) Not sure
218	q0093_0003	Drink alcohol	(1) Not wrong (2) A little wrong (3) Wrong (4) Very wrong (5) Not sure
		94. How many people your age do you think . . .	
219	q0094_0001	Drink alcohol	(1) 0-25% (2) 26-50% (3) 51-75% (4) 76-100%
220	q0094_0002	Get drunk once a month or more	(1) 0-25% (2) 26-50% (3) 51-75% (4) 76-100%
221	q0094_0003	Use marijuana	(1) 0-25% (2) 26-50% (3) 51-75% (4) 76-100%
222	q0094_0004	Smoke cigarettes	(1) 0-25% (2) 26-50% (3) 51-75% (4) 76-100%
223	q0095	95. What grades do you usually get on your report card?	(1) Mostly As (2) Half As and half Bs (3) Mostly Bs (4) Half Bs and half Cs (5) Mostly Cs (6) Half Cs and half Ds (7) Mostly Ds (8) Mostly below D
224	q0096	96. What do you think you will do after you finish high school? (Choose only one)	(1) I probably won't finish high school (2) Go to vocational/technical school (3) Go to a 2-year college (community college) (4) Go to a 4-year college (5) Get a full-time job (6) Join the military (Army, Navy, Air Force, Marines) (7) Get married and be financially supported by my wife/husband/partner (8) Don't know yet (9) Other

225	q0097	97. Do you currently receive special education support or have an IEP?	(1) Yes (2) No (3) Don't know
226	q0098	98. Are you eligible for free or reduced lunch at school?	(1) Yes (2) No (3) Don't know
		99. How strongly do you agree or disagree with each statement about your school?	
227	q0099_0001	The rules and expectations are clearly explained	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
228	q0099_0002	I usually enjoy going to school	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
229	q0099_0003	It is important to me that I graduate	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
230	q0099_0004	Teachers and other adults treat me fairly	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
231	q0099_0005	There are adults I can talk to at school if I have a problem	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
232	q0099_0006	I feel like I belong at this school	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
233	q0100	100. In the past 30 days, how often have you skipped or cut classes (absent without permission)?	(1) Never (2) 1 or 2 times per month (3) More than 1 or 2 times per month
234	q0101	101. During this school year, how many times have you been suspended from school?	(1) 0 times (2) 1 time (3) 2 times (4) 3 or more times
		102. How much do you agree or disagree with the following statements?	
235	q0102_0001	I don't like going to a school where there are gay and lesbian students.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree

236	q0102_0002	I have at least one good friend I can trust	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
		103. During this school year, how many times have you seen any of the following at your school?	
237	q0103_0001	Students using drugs or alcohol	(1) Never (2) 1 or 2 times (3) 3 or 4 times (4) 5 or more times
238	q0103_0002	Students with weapons	(1) Never (2) 1 or 2 times (3) 3 or 4 times (4) 5 or more times
239	q0103_0003	Gang activity	(1) Never (2) 1 or 2 times (3) 3 or 4 times (4) 5 or more times
240	q0103_0004	Students bullying other students	(1) Never (2) 1 or 2 times (3) 3 or 4 times (4) 5 or more times
241	q0103_0005	Students selling or distributing drugs	(1) Never (2) 1 or 2 times (3) 3 or 4 times (4) 5 or more times
242	q0104	104. During the past 30 days, on how many days did you carry a weapon onto school property?	(1) I did not carry a weapon on school property (2) 1 day (3) 2 or 3 days (4) 4 or 5 days (5) 6 or more days
243	q0105	105. Are you a member of an organized gang?	(1) No, and I have never been asked or pressured to join (2) No, but I have been asked or pressured to join (3) I was in a gang but am no longer (4) Yes, I am currently in a gang
244	q0106	106. Have you tagged or vandalized private or public property in the past 12 months?	(1) No, never (2) 1 or 3 times (3) 4 or 5 times (4) 6+ times
		107. How many times were you involved in any of these activities in the past 30 days?	
245	q0107_0001	I got hit and pushed by other students	(1) Never (2) 1 or 2 times (3) 3 or 4 times (4) 5 or more times

246	q0107_0002	I upset other students for the fun of it	(1) Never (2) 1 or 2 times (3) 3 or 4 times (4) 5 or more times
247	q0107_0003	Other students picked on me	(1) Never (2) 1 or 2 times (3) 3 or 4 times (4) 5 or more times
248	q0107_0004	I helped harass other students	(1) Never (2) 1 or 2 times (3) 3 or 4 times (4) 5 or more times
249	q0107_0005	I told someone to stop harassing another student	(1) Never (2) 1 or 2 times (3) 3 or 4 times (4) 5 or more times
250	q0107_0006	I spread rumors about other people	(1) Never (2) 1 or 2 times (3) 3 or 4 times (4) 5 or more times
251	q0107_0007	I started arguments or conflicts	(1) Never (2) 1 or 2 times (3) 3 or 4 times (4) 5 or more times
252	q0107_0008	Other students made fun of me	(1) Never (2) 1 or 2 times (3) 3 or 4 times (4) 5 or more times
253	q0107_0009	In a group I made fun of other students	(1) Never (2) 1 or 2 times (3) 3 or 4 times (4) 5 or more times
254	q0107_0010	Other students called me names	(1) Never (2) 1 or 2 times (3) 3 or 4 times (4) 5 or more times
255	q0107_0011	I excluded other students from my group of friends	(1) Never (2) 1 or 2 times (3) 3 or 4 times (4) 5 or more times
256	q0107_0012	I got into a physical fight	(1) Never (2) 1 or 2 times (3) 3 or 4 times (4) 5 or more times
		108. Has a boy/girlfriend ever done any of the following?(Check all that apply)	
257	q0108_0001	Hit, slapped or physically hurt you on purpose.	(1)

258	q0108_0002	Forced you to have sexual contact.	(1)
259	q0108_0003	Called you names or put you down	(1)
260	q0108_0004	Kept you from spending time with friends or family.	(1)
261	q0108_0005	Threatened to hurt you.	(1)
		109. In the past 12 months, how often have you been bullied, threatened or harassed . . .	
262	q0109_0001	Through the internet or text messaging	(1)
263	q0109_0002	By others thinking you're gay, lesbian or bisexual	(1)
264	q0109_0003	About your race or ethnic background	(1)
265	q0109_0004	About how you look	(1)
		110. Thinking about the way you use social networking sites, like Facebook, have you ever . . . (Check all that apply)	
266	q0110_0001	Changed your privacy settings to limit what you share with others	(1)
267	q0110_0002	Deleted someone from your friends list because they were harassing or bullying you	(1)
268	q0110_0003	Removed your name from photos tagged to	(1)

		identify you	
269	q0110_0004	Posted updates, comments, photos or videos that you later regret	(1)
270	q0110_0005	Accepted a friend request from someone you didn't know	(1)
271	q0110_0006	None of the above	(1)
272	q0111		(1) Yes (2) No
		112. Have you ever done any of the following while you were driving?	
273	q0112_0001	Texted on cell phone or other device	(1)
274	q0112_0002	Accessed the internet on cell phone or other device	(1)
275	q0112_0003	Called someone on a cell phone	(1)
		113. Select the option that best describes your neighborhood or community.	
276	q0113_0001	I can ask my neighbors for help	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
277	q0113_0002	If I had to move, I would miss my neighborhood	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
278	q0113_0003	I feel safe in my neighborhood	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
279	q0113_0004	My neighbors are friendly to me	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
280	q0113_0005	I can count on the police if I need them	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree

281	q0114	114. How spiritual or religious would you say you are?	(1) Very (2) Somewhat (3) A little (4) Not at all
282	q0115	115. Not counting your parents, how many adults can you rely on if you have a problem and need help?	(1) No other adults (2) At least one other adult (3) At least two (4) At least three (5) Four or more adults

Appendix E: Frequency Tables

Table 1

Descriptive Statistics for Gender

	Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	9077	49.1	49.8	49.8
	Male	9149	49.5	50.2	100.0
	Total	18225	98.7	100.0	
Missing	System	246	1.3		
Total		18471	100.0		

Table 2

Descriptive Statistics for Gender and Age Group Ranges of Participants

	Gender		
Age	Female	Male	Total
12 years old or younger	24	57	81
13 years old	9	11	20
14 years old	1228	1140	2368
15 years old	2373	2321	4694
16 years old	2357	2334	4691
17 years old	2097	2177	4274
18 years old or older	973	1101	2074
Total	9061	9141	18202

Table 3

Frequency of Self-Reported Over-The-Counter Drugs To Get High Usage

Gender	Reporting Categories			
Female	Not at all	Less than 1 time per month	1 time per month or more	Total
12 years old or younger	3	0	14	17
13 years old	7	0	1	8
14 years old	1135	21	11	1167
15 years old	2186	52	36	2274
16 years old	2142	57	62	2261
17 years old	1946	64	33	2043
18 years old or older	870	19	29	918
Total	8289	213	186	8688
Gender	Reporting Categories			
Male	Not at all	Less than 1 time per month	1 time per month or more	Total
12 years old or younger	14	3	23	40
13 years old	10	0	1	11
14 years old	1028	15	15	1058
15 years old	2045	50	61	2156
16 years old	2086	74	59	2219
17 years old	1887	99	64	2050
18 years old or older	883	53	63	999
Total	7953	294	286	8533

Table 4

Frequency of Self-Reported Prescription Drugs Not Prescribed For You Usage

Gender	Reporting Categories			
Female	Not at all	Less than 1 time per month	1 time per month or more	Total
12 years old or younger	1	1	15	17
13 years old	7	0	1	8
14 years old	1134	15	13	1162
15 years old	2166	74	35	2275
16 years old	2085	86	86	2257
17 years old	1880	97	66	2043
18 years old or older	819	50	47	916
Total	8092	323	263	8678
Gender	Reporting Categories			
Male	Not at all	Less than 1 time per month	1 time per month or more	Total
12 years old or younger	14	1	25	40
13 years old	10	0	1	11
14 years old	997	40	21	1058
15 years old	2049	43	57	2149
16 years old	2077	85	48	2210
17 years old	1857	121	70	2048
18 years old or older	882	66	52	1000
Total	7886	356	274	8516

Table 5

Frequency of Self-Reported Inhalant (like glue, paint, spray cans, markers) Usage

Gender	Reporting Categories			
Female	Not at all	Less than 1 time per month	1 time per month or more	Total
12 years old or younger	3	0	14	17
13 years old	6	0	2	8
14 years old	1133	21	11	1165
15 years old	2216	43	17	2276
16 years old	2208	18	31	2257
17 years old	2006	21	13	2040
18 years old or older	897	10	10	917
Total	8469	113	98	8680
Gender	Reporting Categories			
Male	Not at all	Less than 1 time per month	1 time per month or more	Total
12 years old or younger	8	1	31	40
13 years old	9	1	1	11
14 years old	1027	17	13	1057
15 years old	2080	30	37	2147
16 years old	2141	36	37	2214
17 years old	1987	30	25	2042
18 years old or older	936	14	41	991
Total	8188	129	185	8502

Appendix F: Multiple Comparison Dependent Variable

Multiple Comparison Dependent Variable Social Development

(I) Drug use_category		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
.00	1.00	.26650*	.01546	.000	.2224	.3106
	2.00	.34306*	.03705	.000	.2366	.4495
	3.00	.83193*	.11658	.000	.4807	1.1831
	4.00	.93282*	.10741	.000	.6081	1.2576
	5.00	.13454	.05987	.223	-.0384	.3074
1.00	.00	-.26650*	.01546	.000	-.3106	-.2224
	2.00	.07656	.03946	.380	-.0366	.1898
	3.00	.56543*	.11737	.000	.2124	.9185
	4.00	.66632*	.10827	.000	.3396	.9930
	5.00	-.13196	.06139	.268	-.3090	.0451
2.00	.00	-.34306*	.03705	.000	-.4495	-.2366
	1.00	-.07656	.03946	.380	-.1898	.0366
	3.00	.48887*	.12211	.003	.1245	.8533
	4.00	.58976*	.11338	.000	.2509	.9286
	5.00	-.20852*	.07002	.037	-.4096	-.0074
3.00	.00	-.83193*	.11658	.000	-1.1831	-.4807
	1.00	-.56543*	.11737	.000	-.9185	-.2124
	2.00	-.48887*	.12211	.003	-.8533	-.1245
	4.00	.10089	.15835	.988	-.3635	.5653
	5.00	-.69739*	.13085	.000	-1.0837	-.3110
4.00	.00	-.93282*	.10741	.000	-1.2576	-.6081
	1.00	-.66632*	.10827	.000	-.9930	-.3396
	2.00	-.58976*	.11338	.000	-.9286	-.2509
	3.00	-.10089	.15835	.988	-.5653	.3635
	5.00	-.79828*	.12275	.000	-1.1607	-.4359
5.00	.00	-.13454	.05987	.223	-.3074	.0384
	1.00	.13196	.06139	.268	-.0451	.3090
	2.00	.20852*	.07002	.037	.0074	.4096
	3.00	.69739*	.13085	.000	.3110	1.0837
	4.00	.79828*	.12275	.000	.4359	1.1607

*. The mean difference is significant at the 0.05 level.

Appendix G: Multiple Comparison Variable

Multiple Comparisons Dependent Variable Grades Collapsed

(I) Druguse_category		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
.00	1.00	.321*	.029	.000	.24	.40
	2.00	.644*	.092	.000	.38	.91
	3.00	.732	.274	.108	-.10	1.56
	4.00	1.520*	.433	.027	.13	2.91
	5.00	.262	.108	.151	-.05	.57
1.00	.00	-.321*	.029	.000	-.40	-.24
	2.00	.323*	.095	.011	.05	.60
	3.00	.411	.276	.671	-.42	1.24
	4.00	1.199	.433	.113	-.19	2.59
	5.00	-.059	.111	.995	-.38	.26
2.00	.00	-.644*	.092	.000	-.91	-.38
	1.00	-.323*	.095	.011	-.60	-.05
	3.00	.088	.289	1.000	-.77	.95
	4.00	.876	.442	.389	-.53	2.28
	5.00	-.382	.141	.075	-.79	.02
3.00	.00	-.732	.274	.108	-1.56	.10
	1.00	-.411	.276	.671	-1.24	.42
	2.00	-.088	.289	1.000	-.95	.77
	4.00	.788	.512	.643	-.77	2.34
	5.00	-.470	.294	.604	-1.35	.41
4.00	.00	-1.520*	.433	.027	-2.91	-.13
	1.00	-1.199	.433	.113	-2.59	.19
	2.00	-.876	.442	.389	-2.28	.53
	3.00	-.788	.512	.643	-2.34	.77
	5.00	-1.258	.446	.097	-2.67	.15
5.00	.00	-.262	.108	.151	-.57	.05
	1.00	.059	.111	.995	-.26	.38
	2.00	.382	.141	.075	-.02	.79
	3.00	.470	.294	.604	-.41	1.35
	4.00	1.258	.446	.097	-.15	2.67

*. The mean difference is significant at the 0.05 level.