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Drug Testing in Schools: Attitudes of High School Students

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**DRUG TESTING IN SCHOOLS:
ATTITUDES OF HIGH SCHOOL STUDENTS**

A Dissertation

Submitted to the Graduate Faculty of the
University of New Orleans
in partial fulfillment of the
requirements for the degree of

Doctor of Philosophy
in
The Counselor Education Program

by

Kimberly L. Mason

B.A., University of New Orleans, 1995
M.Ed., University of New Orleans, 1997

May 2003

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DEDICATION

This dissertation is dedicated to the following three people.

Special thanks and appreciation goes to my husband, Todd Mason, who has endured and understood the time I needed to complete my educational journey. Thank you for your patience, love, and sacrifice as I completed this study. I love you very much.

Zachary and Jordan, thanks for allowing Mommy to take periodic “Time Outs.” You both are my inspirations. I love both of you with all of my heart.

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TABLE OF CONTENTS

DEDICATION.....	iii
ACKNOWLEDGEMENTS	iv
TABLE OF CONTENTS	vi
LIST OF TABLES.....	ix
ABSTRACT.....	xi
CHAPTER ONE: INTRODUCTION.....	1
Background.....	1
Purpose of the Study.....	6
Importance of the Study	7
Conceptual Framework	8
Research Questions.....	11
Limitations	11
Delimitations.....	12
Assumptions of the Study.....	12
Definition of Terms	12
CHAPTER TWO: LITERATURE REVIEW	15
Introduction.....	15
Legal Background for Drug Testing	15
Individual, Suspicionless Searches of Students.....	16
Mandatory, Suspicionless Workplace Drug Testing.....	17
Random, Suspicionless Searches of Students.....	18
Individual, Random Drug Testing of Student Athletes	19
Mass, Suspicionless Searches of Student-Athletes.....	20
Schools to Drug Test Non-Athletic, Extracurricular Participants.....	21
A Violation of Fourth and Fourteenth Amendments.....	22
Random, Suspicionless Drug Testing Extracurricular Activities	24
Drug Use and Abuse Among Adolescents	25
Gender Differences.....	27
Grade Differences.....	28
Ethnic Differences	28

Implementation of Drug Prevention Programs	30
Estimated Effectiveness of Drug Testing Programs.....	37
Drug Testing and Attitudes	38
Summary of the Literature.....	43
CHAPTER THREE: METHODOLOGY	45
Introduction.....	45
Purpose of the Study	45
Research Questions.....	46
Research Hypotheses.....	47
Sample.....	48
Variables of Interest.....	49
Data Collection Method	50
Procedure	50
Instrumentation	52
Development of the Survey	53
Phase 1	53
Phase 2	60
Phase 3	61
Phase 4	68
Data Analysis.....	69
Descriptive Analysis.....	69
Inferential Analysis.....	70
CHAPTER FOUR: RESULTS	71
Introduction.....	71
Characteristics of Sample	71
Personal Characteristics.....	72
Participants' Gender	72
Participants' Grade	73
Participants' Ethnicity	74
Cross Tabulations for Grade, Ethnicity, and Gender.....	75
Participants' Experience Being Drug Tested.....	80
Participants' Illegal Drug Use	80
Participants' Alcohol Use.....	81
Participants' Involvement in Extracurricular Activities.....	81
Summary of Respondent's Characteristics	82
Attitudes Toward Drug Testing Scores.....	82
Descriptive Statistics for Items on the ATSDT	86
Inferential Analysis.....	88
Research Question 1	88
Research Hypothesis 1.1	88
Research Question 2	89
Research Hypothesis 2.1	89

Research Hypothesis 2.2	90
Research Hypothesis 2.3	91
Research Hypothesis 2.4	92
Research Hypothesis 2.5	93
Research Hypothesis 2.6	94
Research Hypothesis 2.7	95
Summary of the Results.....	96
CHAPTER FIVE: DISCUSSION.....	98
Introduction.....	98
Summary of the Study	98
Characteristics of Participants	99
Conceptual Framework	101
Discussion of the Findings	104
Limitations of the Study	114
Implications.....	115
Drug Testing Policy and Procedures	115
Implementing A Drug Testing Policy	117
School Counselors	119
Recommendations for Further Research.....	120
Conclusion	122
CHAPTER SIX: JOURNAL ARTICLE DRAFT	123
Method	130
Results	133
Discussion	139
Limitations	146
Implications.....	147
Recommendation for Further Research	151
Conclusion	153
REFERENCES	154
APPENDICES	163
Appendix A: Letter to Human Subjects Committee.....	163
Appendix B: Letter to the Principal	165
Appendix C: Letter to Teachers	167
Appendix D: Letter to Students.....	169
Appendix E: Attitudes Toward High School Drug Testing Survey.....	171
Appendix F: ATSDT Validity and Reliability.....	175
VITA	179

LIST OF TABLES

Table 1	Attitudes Towards High School Drug Testing Survey	54
Table 2	Direction of Items on the ATSDT	58
Table 3	ATSDT Score Interpretation.....	60
Table 4	Factor Analysis.....	62
Table 5	Likert's Criterion of Internal Consistency	65
Table 6	Needs and Negative Effects Subscale 1	67
Table 7	Needs and Positive Effects Subscale 2	67
Table 8	Interpretations Related to the Results Subscale 3	67
Table 9	Policy Related to the Use of the Results Subscale 4	68
Table 10	Frequency Distribution of Participants by Gender.....	73
Table 11	Frequency Distribution of Participants by Grade.....	73
Table 12	Frequency Distribution of Participants by Ethnicity	74
Table 13	Cross Tabulations for Grade, Ethnicity, and Gender	75
Table 14	Frequency Distribution by Experience Being Drug Tested	80
Table 15	Frequency Distribution by Illegal Drug Use	80
Table 16	Frequency Distribution by Alcohol Use.....	81
Table 17	Frequency Distribution by Involvement in Extracurricular Activities at School.....	82
Table 18	Descriptive Statistics for Gender, Ethnicity, Grade, Experience Being Drug Tested, Illegal Drug Use, Alcohol Use, and Involvement in Extracurricular Activities	84

Table 19	One-Sample T-Test Summary Table for ATSDT	86
Table 20	Mean and Standard Deviation for Items on the ATSDT	89
Table 21	ANOVA Summary Table for Gender.....	90
Table 22	ANOVA Summary Table for Grade.....	91
Table 23	ANOVA Summary Table for Ethnicity.....	92
Table 24	ANOVA Summary Table for Experience Being Drug Tested	93
Table 25	ANOVA Summary Table for Illegal Drug Use	94
Table 26	ANOVA Summary Table for Alcohol Use	95
Table 27	ANOVA Summary Table for Extracurricular Activities	96

ABSTRACT

This research investigation examined high school students' attitudes toward drug testing prevention programs, and examined the extent to which those attitudes vary according to gender, grade, ethnicity, exposure to experiences related to a drug testing program, illegal drug use, alcohol use, and involvement in extracurricular activities at school. The results of this exploratory study are intended to help school administrators and counselors have an increased understanding of high school students' attitudes toward drug testing prevention programs.

The participants in this study were drawn from a convenience sample comprised of high school students in grades 8, 9, 10, 11, and 12 at a co-educational, parochial school located in the metropolitan New Orleans, Louisiana area during the 2002-2003 school year. Each participant completed survey packets which contained the Attitudes Toward High School Drug Testing (ATSDT) survey and personal demographic data.

The results of this study indicated that high school students generally have neutral attitudes toward drug testing prevention programs. There appear to be significant statistical differences between high school students' attitudes toward drug testing prevention programs based on their gender, grade, ethnicity, exposure to experiences related to a drug testing program, illegal drug use, and alcohol use; however, students'

involvement in extracurricular activities at school was not related to their attitudes toward drug testing prevention programs.

This information may be used to assist school administrators and school counselors in designing drug-free schools that engender respect and approval from the greatest possible number of students, faculty, and public, and provide needed information for school counselors in providing drug related prevention services, interventions, and after-care to adolescents.

CHAPTER ONE

INTRODUCTION

The contextual stage and the rationale for this study are provided in this chapter. The background of the study is presented, with the conceptual framework. The importance and the purpose of the study are described and the research questions are identified. The chapter closes with a discussion of the study's limitations, delimitations, assumptions, and definitions of terms.

Background

The problems of drug use and substance abuse are widespread among American young people. Substance abuse affects American children of all economic backgrounds in every geographic area. American high school-aged youth have a higher level of illicit drug use than those of any other industrialized nation (Johnston, O'Malley, & Bachman, 2002a). Today, over half (54%) of them have tried an illicit drug by the time they finish high school (Johnston et al.). In addition, among youth age 12 to 17, an estimated 1.1 million meet the diagnostic criteria for dependence on illicit drugs, and 915, 000 are dependent on alcohol ("Getting the facts about adolescent substance abuse and treatment," retrieved July 23, 2002 from <http://www.athealth.com/Consumer/adolescentsufacts.html>).

Research has linked drug use to a decline in academic performance, to truancy and dropping out, and to crime and misconduct (Gaustad, 1993). The use of drugs and alcohol impairs judgment, reflexes, inhibitions, and emotions (Drugs and Teen Substance Abuse, retrieved on September 15, 2002 from www.focusas.com/SubstanceAbuse.html; Office of National Drug Control Policy, 2002; Szyjan, 2002). Poor concentration, productivity, and motivation lead to missed assignments and missed classes. Lowered inhibitions lead to poor judgment in the areas of violence, unplanned and unsafe sex, suicide, and respect for law-abiding behavior. Furthermore, drugs can cause serious problems with memory and learning, as well as difficulty in thinking and problem solving (Office of National Drug Control Policy, 2002). Additional studies show that drug users have poorer grades, are more likely to dislike school, have discipline problems in schools, and are more likely to drop out (Oetting, Edwards, Kelly, & Beauvais, 1997).

Throughout the United States, the drug problem among the nation's youth and the prevention of substance abuse has been major issues for school administrators, teachers, parents, and the courts. School administrators are feeling the pressure from the community and parents to adopt urgent measures to keep drugs from further endangering the physical, emotional, and mental well being of their students (Klauke, 1990). As a result, they are struggling with policy concerning the implementation of the most effective methods to decrease overall substance use among students.

Extensive substance abuse prevention programs such as Drug Abuse Resistance Education, "Dare" and "Just Say No to Drugs" have been undertaken over the past several years, but have produced little effect in curtailing drug use among students (Lawler, 2000; Lindsey, 2000). As a result, high schools across the nation have turned to

drug testing, a controversial method of combating drug use among our nation's youth.

As a last resort, many school districts have instituted drug testing policies to help remedy the overwhelming substance abuse problem among students.

Drug testing in schools was preceded by drug testing in the workplace.

According to a recent report by the Office of National Drug Control Policy (2002), employers who followed the Federal model of drug testing have seen a 67% drop in positive drug test results. Furthermore, drug testing in the workplace has been justified on the grounds of preventing accidents and injury, increasing worker productivity, identifying problematic drug users, reducing prevalence of drug use, and reducing absenteeism (Crant & Bateman, 1990; Murphy & Thornton, 1991; Murphy, Thornton, & Reynolds, 1990; Office of National Drug Control Policy, 2002; Stone & Kotch, 1989).

Using the Federal drug testing policy as a model, the practice of drug testing high school students has been implemented on the premise that it will help schools create a safe and healthy learning environment, deter drug use among students, guide students who test positive into counseling or treatment, and give students a legitimate reason to withstand peer pressure to use drugs (Lawler, 2000; Newton, 1999; Office of National Drug Control Policy, 2002). According to the Office of National Drug Control Policy, if drug testing can reduce students' use of illicit drugs, it will remove a significant barrier to academic achievement.

Drug testing has recently become the subject of increased public debate, after a number of high profile schools began implementing drug-testing policies. As expected, civil libertarians immediately had a negative reaction to the spread of drug testing programs in schools (ACLU, 2000). They have challenged drug testing in schools on

several grounds. They charged that the policies violate privacy rights, are unwarranted searches and seizures, force self-incrimination, and lack confidentiality and reliability in drug testing methods (ACLU, 2000; Lawler, 2000). Furthermore, critics of drug testing state that drug testing can create negative and hostile feelings among students, administration, and faculty. It has also been argued that drug testing in schools focuses on punishment, not prevention or rehabilitation of students, produces inaccurate results, causes users to switch drugs, and is too expensive (Lawler, 2000).

Despite the concerns about the practice of drug testing high school students, the courts have upheld the school's legal right to implement a policy that will help create a safe and healthy learning environment that is free from drug use (Office of National Drug Control Policy, 2002). These rulings give high schools even more encouragement to implement drug testing policies as a way to combat student drug use. Since the June, 1995 Supreme Court ruling in support of random interscholastic student-athlete drug testing, many school districts have put drug-testing policies into practice (Lawler, 2000; Newton, 1999).

On June 26, 1995, in *Vernonia School District 47J v. Acton* (1995), the United States Supreme Court upheld a public school district's mandatory, suspicionless drug testing of student athletes as a condition for participation in athletics (Jensen, 2000; McCray, 2000; Roberts & Fossey, 2002; Russo & Gregory, 2000; Shutler, 1996). The drug testing program required students to submit to random urinalysis if they wished to participate in interscholastic athletic programs (Jensen; McCray; Roberts & Fossey; Shutler). This ruling removed a major constitutional roadblock to the adoption of such programs for public schools nationwide.

In the past few years, the number of schools engaging in drug testing has been steadily increasing with more states adopting drug testing policies for high school students. In 1996, the Rush County, Indiana, School Board approved a mandatory, random suspicionless urinalysis drug testing of students who voluntarily participated in extracurricular activities (Jensen, 2000; McCray, 2000; Roberts & Fossey, 2002; Shutler, 1996). In 1999, a board policy in Arkansas approved a more extensive program calling for mandatory drug and alcohol screening as a condition of student participation in any extracurricular activities, which covered about 80% of high school students (*Miller v. Wilkes*, 1999; National Association of Secondary School Principals, 2001b).

A recent Supreme Court ruling has provided schools with greater flexibility in implementing drug-testing policies. On June 27, 2002, in *Board of Education of Independent School District No. 92 of Pottawatomie County et. al v. Earls et. al* (01-332 U.S.), the Supreme Court upheld an Oklahoma school drug testing policy that established random, suspicionless urinalysis testing of any students participating in extracurricular or co-curricular competitive activities (Drug & Alcohol Testing Industry Association, 2002b; National Association of Secondary School Principals, 2002a; Office of National Drug Control Policy, 2002). Justice Clarence Thomas wrote for the majority, stating, “We find that testing students who participate in extracurricular activities is a reasonably effective means of addressing the school district’s legitimate concern in preventing, deterring, and detecting drug use” (Office of National Drug Control Policy, 2002, unpaginated; The Desert Sun Publishing Company, retrieved September 12, 2002 www.thedesertsun.com/news/stories/local/1025233495.html, unpaginated). While this decision does broaden the scope of permissible drug testing policies in schools, each

school district must carefully assess its needs and concerns in developing valid methods for deterring drug use among students.

Currently, literature that addresses the drug testing issues in high school is scarce. One study was found that examined mandatory drug testing as an effective measure to decrease the overall drug use among students at Santa Margarita Catholic High School. Peterson (2000) found 47% of students believed drug testing did not deter drug use and 43% of students did not think mandatory drug testing was an effective prevention strategy. However, 51% of the students in this study stated that mandatory drug testing had provided them with a reason to say “no” to illicit drug use at parties or social gatherings.

Presently, many schools and communities are grappling with issues surrounding drug testing high school students. The decision whether to implement a drug testing prevention program should not be left to one individual, or even the school board. By making the effort to include all parties involved in drug testing, a school can greatly increase its chances of achieving and adopting a successful testing program (Office of National Drug Control Policy, 2002).

Purpose of the Study

Even though schools have a strict, no tolerance policy regarding drug use, it continues to be a problem. Many schools have implemented various drug prevention programs to deter students from using drugs. Students participate in National Red Ribbon Week and drug education in their classes. Schools also have guest speakers to promote a safe and sober prom. Yet, with the many opportunities for students to make an

informed decision regarding using illicit drugs, the problems of drug use among students continue; consequently, drug testing, as a preventive measure has become more prevalent in high schools. Many schools have decided to implement drug testing policies as a part of their prevention programs to prevent, deter, and detect drug use. The practice of testing high school students to determine whether they have recently used certain drugs has been implemented on the premise that it will help schools create a safe and healthy learning environment, deter drug use among students, guide those students who test positive into counseling or treatment, and give students a legitimate reason to withstand peer pressure to use drugs (Lawler, 2000; Newton, 1999; Office of National Drug Control Policy, 2002).

Therefore, the purpose of this study was to explore the attitudes of high school students toward drug testing prevention programs. In particular, this study explored to determine whether those attitudes were related according to gender, ethnicity, grade, exposure to experiences related to a drug testing program, illegal drug use, alcohol use, and involvement in extracurricular activities at school. The knowledge gained from this study can help school administrators and counselors understand make informed decisions concerning the implementation of drug testing in high schools. This research project provides needed information for school counselors in providing drug related prevention services, interventions, and after-care of students.

Importance of the Study

As the prevalence of drug testing programs in the workplace has increased, so has the literature about this issue (Crant & Bateman, 1990). Because drug testing in high

schools is a relatively new phenomenon, no research has been conducted to date on high school students' attitudes toward drug testing prevention programs. Since drug testing is becoming more prevalent and remains controversial, high school students are likely to develop their own attitudes regarding the procedures. These attitudes, positive or negative, can affect students' behaviors (Mastrangelo, 1993).

Results of this study provide insight for school administrators who are considering implementing drug testing in high schools and assist them in developing sound drug testing prevention policies with the most benefit to the students and the least risk of challenge. In addition, this research provides the needed information for school counselors who are involved in policy decisions of whether to implement drug testing programs, and aid them in providing prevention services, interventions, and after-care for students.

Conceptual Framework

Defining the Construct "Attitude"

This study examined attitudes about drug testing prevention policy in high schools; therefore, it was beneficial to define attitude and review literature on attitudes in general. This section includes the definition of attitude, characteristics of attitudes, and its different levels of intensity. Lastly, the tri-componential viewpoint of attitudes and the role it plays in shaping one's attitudes is discussed.

Attitudes are one of the most studied concepts in social science. The literature on attitudes is both widespread and ambiguous. The differing definitions of attitudes reflect the differing theoretical emphasis of the definer. Some definitions have centered on their

evaluative nature, learned nature, physiological basis, or permanence, and numerous other dimensions depending on the theory being discussed (Oskamp, 1991).

Ajzen (1988) has defined attitude as an evaluative reaction toward an object, person, institution, or event. It is a learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object. An attitude is not a behavior by itself (Andersen, 1981). Rather, an attitude is a predisposition to behave in a certain way. The complex series of decisions and behaviors people engage in every day is determined in part by their attitudes (Brigham, 1991).

According to Oskamp (1991), a person's attitude towards an object is a summary (evaluation) of all of his or her beliefs about the object. These evaluative beliefs are defined as value judgments about some object (e.g., "Drug testing is useful"). In other words, evaluative beliefs consist of an individual's feelings about an object (affect) and his or her thoughts about the object (cognition). The combination of these specific beliefs forms the overall attitude towards the object (e.g., "Drug testing is needed in schools").

Brigham (1991) stated attitudes are comprised of several basic characteristics. First, attitudes are inferred from the way people behave. Second, attitudes are directed towards a psychological object or category. People's schemas determine how they categorize the objects toward which attitudes are directed. Third, attitudes are learned by observing other people who are important role models, or by being rewarded or punished for expressing some attitudes. Fourth, attitudes are in some way formed through a person's experience. Finally, attitudes influence behavior. Holding an attitude toward an object gives a person a reason to behave toward the object in a certain way.

Andersen (1981) stated that an attitude can be either favorable or unfavorable and the degrees of favorableness would indicate the intensity of an attitude. Some attitudes are stronger than others and generally have a moderate level of intensity. Furthermore, attitudes are learned (Anderson). That is, people learn to attach these feelings to particular targets such as drug testing. Finally, the association between the feelings and a particular target (drug testing) is learned. Once the attitude is learned, the feelings are consistently experienced in the presence of the target.

The conceptualization of attitudes has been a difficult task. However, I will use Oskamp's (1991) definition in defining students' attitudes towards drug testing in high schools. Utilizing his tri-componential viewpoint, attitudes are a single entity made up of three components: an affective component (the feelings one has towards an object); a cognitive component (the ideas, thoughts, and beliefs one has toward the object); and a behavioral component (action tendencies toward the object).

Attitudes play an important role in defining and determining the actions, feelings, and beliefs students will display toward the implementation of drug testing in schools. Furthermore, attitudes will affect the intensity of positive or negative affect for or against responses students will give regarding the implementation of drug testing. Due to these relationships among attitudes, actions, beliefs, and affect schools should be concerned with attitudes if they are concerned with students' reactions to the implementation of drug testing. As a result, this study could be utilized to assist school administrators in designing drug-free schools that engender respect and approval from the greatest possible number of students, faculty, and the public.

Research Questions

Research Question 1:

What are high school students' attitudes toward drug testing prevention programs?

Research Question 2:

To what extent do the attitudes of high school students toward drug testing prevention programs vary according to gender, grade, ethnicity, exposure to experiences related to a drug testing program, illegal drug use, alcohol use, and involvement in extracurricular activities at school?

Limitations

A limitation of this study was the paucity of information about high school drug testing. All prior research exploring attitudes toward drug testing programs has focused on employees in the workplace, and on college athletes. The survey instrument used to collect data in this study may have posed a threat to internal validity because it was researcher-constructed and designed with the purpose of fulfilling the specific needs of this study. To address this limitation, the Attitudes Toward High School Drug Testing (ATSDT) survey has been tested for both validity and reliability in order for accurate conclusions to be drawn regarding the study's hypotheses.

Because the questionnaire was a self-reported instrument, a respondent can provide misinformation in two ways: (1) social desirability, which means people may respond to a statement in ways that they believe to be socially acceptable; and (2) acquiescence, which means the tendency of people to agree with a statement (or answer yes to a statement) when they are unsure or ambivalent (Andersen, 1981). Finally, the

quality of responses ascertained from the survey was limited by how knowledgeable the respondent was about drug testing programs.

Delimitations

Because the participants were high school students' who attend a co-educational, parochial high school located in the Metropolitan New Orleans, Louisiana area the sample may be not be representative of high school students in general. Therefore, caution should be exercised when generalizing the results from this study to other states, parochial, private, and public schools.

Assumptions of the Study

It is assumed that the researcher has identified from the professional literature the major factors affecting the attitudes of students toward drug testing prevention programs in high schools. It is also assumed the survey instrument was understandable to the participants and it was easy to use. Finally, it is assumed that the participants answered the questions honestly and their responses provided accurate data for analysis.

Definition of Terms

To avoid terminology that may be confusing or misleading within the context of this study, relevant terms are defined as follows:

Deterrent

School program intended to give a clear "no-use" message regarding substance abuse.

Drug Screen

A panel of drugs that a certified laboratory targets for analysis. In this panel, the drugs tested are marijuana, cocaine, amphetamine/methamphetamine, morphine/codeine, and PCP (phencyclidine).

False Negative

A student receives a negative result when in fact he or she had taken an illegal drug.

False Positive

A student obtains a positive test result when he or she had not taken any illegal drugs.

Fourth Amendment

Protects citizens from arbitrary or unreasonable search and seizures.

Illegal/Illicit Drugs

Drugs that have not been prescribed by a physician for medical purposes. These include alcohol and tobacco for young people under 21 years of age.

Mandatory Drug Testing

Students have no choice; they must provide a urine or hair sample upon request of the school administration.

Method of Collection

The manner in which the drug sample is collected by using either urine, hair, oral fluids, sweat patch, and breath for alcohol.

Prevention Strategy

A specific method used to give students a reason to say “no” to drug use.

Random, Suspicionless Drug Testing

Students may be drug tested without any suspicion that they have used drugs.

Voluntary Drug Testing

Students volunteer to be drug tested.

Zero Tolerance

A policy under which the possession, use, or sale of any controlled substance is prosecuted, regardless of the amount of drug, the type of drug involved, or other circumstances.

CHAPTER TWO

REVIEW OF THE LITERATURE

The problem under investigation in this study was high school students' attitudes toward drug testing prevention programs and to determine the extent their attitudes vary according to gender, ethnicity, grade, exposure to experiences related to a drug testing program, illegal drug use, alcohol use, and involvement in extracurricular activities at school. It has been noted in previous research that, to date, attitudes toward drug testing programs have rarely been investigated (Stone & Kotch, 1989).

In order to show the need for the present study, the following review of the professional literature is offered. The review is divided into four major sections. The first section focuses on the legal history of drug testing. The second section discusses drug use among the adolescent population and the statistics related to the national rise in incidents of student drug use. The third section of this chapter discusses the implementation of drug testing programs followed by a review of the literature on the effectiveness of drug testing programs. The fourth section of this chapter focuses on a review of previous research on attitudes about drug testing. A summary concludes this chapter.

Legal Background for Drug Testing

Drug testing of a student by a public official is a search that must comply with the requirements of the Fourth Amendment of the U. S. Constitution. The Fourth

Amendment prohibits all unreasonable searches and seizures by State officers.

Reasonableness is determined by balancing the governmental reasons for the search against the privacy intrusion of the search. Historically, the Supreme Court has adhered to two basic principles in its Fourth Amendment jurisprudence. First, warrantless searches are *per se* unreasonable, subject to only a few specifically delineated and well-recognized exceptions, and second, highly intrusive searches are reasonable only on a showing of probable cause to believe that a crime has been committed and that evidence of the crime will be found in the place of the search (Jensen, 2000). However, prior to 1985, public school teachers and administrators were not subjected to these Fourth Amendment requirements. According to the doctrine of “in loco parentis,” teachers and administrators acted under the authority of the parent, not the state (Jensen).

Individual Suspicionless Searches of Students

In 1985, the Supreme Court, in *New Jersey v. T.L.O.*, held that the actions of public school teachers and administrators are governed by the Fourth Amendment (Jensen, 2000; Newton, 1999; Russo & Gregory, 2000). In the *New Jersey v. T.L.O.* case (1985), an assistant principal searched the purse of a high school student for cigarettes in violation of a school rule and found marijuana (Chad, 1998; Jensen; Russo & Gregory; Shutler, 1996). The Supreme Court reasoned that, in assessing the constitutionality of such a search, courts must balance the student’s privacy interests against school officials’ interests in maintaining discipline on school grounds (Jensen, 2000; Newton, 1999; Russo & Gregory, 2000; Shutler, 1996). The Court held that because schoolchildren have legitimate privacy expectations, school officials could not search students without some individualized suspicion of wrongdoing. In other words, school officials must have

reasonable grounds for suspecting that a search would reveal evidence of rule violations and the school's search measure is not excessively intrusive.

In defining "reasonableness," the Court conducted a twofold inquiry: (1) whether school officials justified the search at its inception, and (2) whether the search was reasonably related in scope to the circumstances that justified the interference (McCray, 2000). Crafting a standard for searches in the context of public schools, the Supreme Court found this search to be legal. As a result of this decision, students' privacy rights in schools are afforded a lower standard of protection than is usually given to citizens.

Mandatory, Suspicionless Drug Testing in the Workplace

Four years after T.L.O. provided a mechanism for extending Fourth Amendment jurisprudence to the school setting, the Supreme Court extended the reasonableness test to mandatory drug testing within the employment context (McCray, 2000). When railway labor organizations sought to enjoin the Federal Railroad Administration from requiring workers to undergo mandatory drug and alcohol testing, the Supreme Court held in *Skinner v. Railway Labor Executives' Association* (1989) that even though breath, blood, and urine testing of the employees is intrusive, the government's interest in safety outweighed the employees' individual privacy interests (McCray; Newton, 1999; Shutler, 1996). Furthermore, the Court found that railroad employees held significantly lower privacy expectations due to their participation in a highly regulated industry with the potential to seriously impact public safety (Shutler).

In the *National Treasury Employees v. Von Raab* (1989), the Supreme Court extended the "special needs" rationale to allow the suspicionless drug testing of employees applying for promotion to positions involving drug interdiction or the carrying

of firearms (McCray, 2000; Newton, 1999). Using *Skinner's* rationale, the court reaffirmed the abandonment of the warrant and probable cause requirements, finding that the government's safety interest outweighed individual privacy interests (Shutler, 1996). Additionally, the Court found that the government had a "compelling" need in drug testing the employees in order to ensure their effectiveness in stopping drug smugglers, as well as to protect national security interests (Shutler).

Thus, by 1989, the Supreme Court had set forth two major components of a new Fourth Amendment paradigm: (1) allowing random, suspicionless searches within the school context, and (2) allowing random, suspicionless drug testing of individuals within the employment context, with the only limitation on testing being the evolving Fourth Amendment reasonableness test (McCray, 2000).

Random, Suspicionless Searches of Students

In *Brooks v. East Chambers Consolidated Independent School District* (1989), the school board unanimously enacted a drug-testing program requiring mandatory, random urinalysis testing of students participating in extracurricular activities (McCray, 2000; Shutler, 1996). A senior who participated in the high school's Future Farmers of America (FFA) program sought injunctive relief to prevent the school from precluding his participation in an upcoming FFA competition due to his refusal to undergo urinalysis. The United States District Court for the Southern District of Texas held the school drug-testing program was unconstitutional because the school failed to demonstrate a compelling need (McCray; Shutler).

The district court found very little evidence of a demonstrated substance abuse problem within the school district. Yet, the school enacted the drug-testing program in

reaction to public opinion that a general drug problem existed (McCray, 2000). The court relied upon *Skinner* and *Von Raab* in arguing that students in extracurricular activities do not pose the same risks to public safety or national security as do railroad or customs employees (McCray).

Individual, Random Drug Testing of Students Athletes

In *Schail v. Tippecanoe County School Corporation* (1989), the Seventh Circuit Court set the stage for future Supreme Court jurisprudence in the Fourth Amendment arena when it became the first federal appellate court to uphold random, suspicionless urinalysis testing of interscholastic athletes (Jensen, 2000; Klauke & Hadderman, 1990; McCray, 2000; Roberts & Fossey, 2002; Shutler, 1996). On the claim that the school's district drug-testing policy was both offensive and intrusive, two students sought declaratory and injunctive relief from the courts. However, invoking the reasonableness test, the Court observed that student athletes possess diminished expectations of privacy because of the "communal undress" inherent in athletic participation, along with extensive athletic regulations (Jensen, 2000; McCray, 2000; Russo & Gregory, 2000).

Furthermore, the Courts stated students who participate in athletics receive the benefit of prestige and status within the school community for their efforts. In upholding the drug-testing program, the court found it relevant that students could avoid the drug-testing program by choosing not to participate in athletics (Jensen, 2000; McCray, 2000; Russo & Gregory, 2000). Finally, the fact that drug usage exacerbates athletic injuries formed a health and safety rationale to seal the Seventh Circuit's reasoning why drug-testing students voluntarily enrolling in athletic and cheerleading activities is reasonable.

These characteristics distinguish athletics from other nonathletic activities (McCray; Jensen; Russo & Gregory).

Mass, Suspicionless Searches of Student-Athletes

The issue of random, suspicionless drug testing of student groups was first addressed by the Supreme Court in *Vernonia School District 47J v. Acton* (1995). School administrators established that student athletes were the leaders of the drug culture, and after several failed attempts to curb the problem, resorted to the random drug testing via student urinalysis of students' participating in athletics (Jensen, 2000; McCray, 2000; Russo & Gregory, 2000). Acton filed suit after he was denied the chance to play football because he refused to consent to a drug test (Roberts & Fossey, 2002). Although the Vernonia District Court dismissed Acton's claim that the suspicionless drug test violated his privacy and civil rights, the Ninth Circuit Court held that Vernonia's policy violated Acton's Fourth and Fourteenth Amendment rights to be free from unreasonable searches and seizures (Jensen, 2000; McCray, 2000; Roberts & Fossey, 2002; Shutler, 1996). However, the Supreme Court upheld the public school's district's mandatory, suspicionless drug testing of student athletes.

Reversing the Ninth Circuit Courts ruling, the Supreme Court applied a three-part balancing test affirming the constitutionality of the policy (Jensen, 2000; McCray, 2000; Roberts & Fossey, 2002; Shutler, 1996). First, it found that students have a lesser expectation of privacy than ordinary citizens. Second, the Court indicated the urinalysis was minimally intrusive since it was coupled with safeguards that allowed little encroachment on students' privacy. Third, given the perception of increased drug use, the Court maintained that there was a significant need for the policy. Furthermore, it

found that the public school's interest in maintaining a safe learning environment decisively outweighed the individual's privacy rights (Jensen; McCray; Roberts & Fossey; Shutler). Consequently, this case has become the touchstone of the Supreme Court's evolving Fourth Amendment school drug testing jurisprudence (Jensen; McCray; Russo & Gregory; Shutler).

Schools to Test Non-Athletic, Extracurricular Participant

Because of the decision in *Vernonia*, many other districts have instituted similar policies. Some districts have taken the leeway granted in *Vernonia* to include drug testing for students in all extracurricular activities, not just student athletes. For example, in 1996, the Rush County, Indiana, School Board approved a random, suspicionless drug-testing program. In order to participate in any extracurricular activity or drive to and from school, the student and a parent or guardian had to consent to the student being tested for drugs in random, unannounced urinalysis examinations (Jensen, 2000; Russo & Gregory, 2000; Shutler, 1996).

In *Todd v. Rush County Schools* (1998), Todd, a student who was active in non-athletic extracurricular activities, refused to consent to drug testing; consequently, the school barred him from future participation in those activities. Todd claimed the testing violated his Fourth Amendment rights and the state's constitutional provisions. He contended that there was insufficient evidence of a drug problem and that there were significant differences between non-athletic and athletic extracurricular activities. However, the Seventh Circuit Court held that mandatory, random suspicionless urinalysis drug testing of students who voluntarily participate in extracurricular activities (not just athletics) did not violate students' Fourth Amendment rights (Jensen, 2000; McCray,

2000; Roberts & Fossey, 2002). The Circuit Court reasoned that since the board was responsible for the welfare of its students, it was justified in requiring drug testing of all participants in all extracurricular activities (Russo & Gregory, 2000.)

Furthermore, applying *Vernonia*, the Court held that appropriate drug testing programs have non-punitive and prophylactic purposes, seeking only to protect the student as well as other students (McCray, 2000) and drug testing programs do not criminalize the individual student's behavior, but only protect students from injury and health risks associated with drug abuse (McCray).

A Violation of Fourth and Fourteenth Amendments:

Finding in Favor of the Student

The Seventh Circuit was once again faced with a case involving suspicionless drug testing of students. In *Willis v. Anderson Community School Corporation* (1998), Willis was suspended from school for fighting and when he refused to submit to urinalysis testing to determine whether he violated the school's policy against drug and alcohol use, he was once again suspended from school (Russo & Gregory, 2000). School officials informed Willis that he would be expelled if he continued to refuse to submit to the drug test. In response, Willis took Anderson Community School Corporation to court. As a result, the federal trial court in Indiana entered a judgment in favor of the school, but on appeal, the Seventh Circuit Court unanimously reversed the previous ruling in favor of Willis. The Court stated the school's policy violated Willis' rights under the Fourth and Fourteenth Amendments by forcing him to submit to an unreasonable search and seizure. Additionally, simply being suspended for fighting did

not provide the individualized suspicion necessary to negate student's Fourth Amendment rights (Russo & Gregory).

While *Todd* signaled that public schools may test students wishing to participate in extracurricular activities, *Trinidad School District No. 1 v. Lopez* (1998) confused the issue. The Colorado Supreme Court upheld a constitutional challenge to the Trinidad School District's drug testing policy after Lopez was suspended from two for-credit band classes as well as the marching band for failure to consent to mandatory drug testing (McCray, 2000; Roberts & Fossey, 2000). Under the policy, all students must pass an annual drug test before participating in their first extracurricular activity of the year. In applying the *Vernonia* three-prong analysis, the Colorado Supreme Court held the district's policy was in violation of the Fourth Amendment (McCray; Roberts & Fossey).

The Court emphasized two points in formulating its decision (McCray, 2000; Roberts & Fossey, 2000). First, marching band members are not subjected to the same communal undress and showering as athletes. Second, not all participation in extracurricular activities is voluntary. At Trinidad, students must enroll in an academic band class to be eligible for marching band (Roberts & Fossey). Furthermore, the Court found there was no demonstrated problem of drug usage and extracurricular activities were an essential component of a quality education and necessary for those students wishing to pursue post-secondary education (Roberts & Fossey).

In March of 2001, the case of *Tannahill v. Lockney Independent School District*, a district court in the Northern District of Texas ruled that a mandatory drug testing policy, which applied to the entire student population of junior and senior high schools, was unreasonable (Roberts & Fossey, 2000). The court found the district did not have a

compelling interest that outweighed students' privacy interests because drug use had not increased prior to the adoption of the policy (Roberts & Fossey). The court held the school district was not justified in forcing students to undergo unreasonable search and seizure and failed to meet the special requirements to justify drug testing without suspicion.

*Random, Suspicionless Testing of Students in Extracurricular or
Co-curricular Competitive Activities*

The most recent Supreme Court ruling provides schools with greater applicability in implementing drug-testing policies. In *the Board of Education of School District No. 92 v. Earls* (2002), Lindsay Earls, a senior in Tecumseh Oklahoma, challenged the school district's policy to implement suspicionless, drug testing of students who participate in non-athletic extracurricular activities (Lawler, 2000; Roberts & Fossey, 2002; Walsh, 2002). At first, the Tenth Circuit Court struck down the drug-testing policy and decided in favor of Earls (Bell, 2001), but, on June 27, 2002, the Supreme Court reversed the lower court's decision. The Supreme Court decided in favor of the school district in allowing the Oklahoma school drug testing policy that established random, suspicionless urinalysis testing of any students participating in extracurricular or co-curricular competitive activities (Drug & Alcohol Testing Industry Association, 2002b; Greenhouse, 2002; Lewis, 2002; Locy, 2002; National Association of Secondary School Principals, 2002a; Office of National Drug Control Policy, 2002).

The Supreme Court held that the Tecumseh School District Drug Testing Policy "is a reasonable means of furthering the School District's important interest in preventing and deterring drug use among its school children and does not violate the Fourth

Amendment” (National Association of Secondary School Principals, Retrieved on September 12, 2002, from http://www.principals.org/services/legal_drugtstng.html). Moreover, in applying *Vernonia*, the Supreme Court upheld the school’s drug testing policy when they determined that students have a lesser interest in privacy when they participate in school activities. The government has a greater interest in ensuring that students are in a safe learning environment; thus, the ruling in favor of the school district. Finally, the Supreme Court emphasized the “custodial” duties that schools have in lieu of parents to protect “the safety and health” of students, thereby supporting the suspicionless, drug testing policy (Locy, 2002).

Drug Use and Abuse Among Adolescents

Adolescents use alcohol, tobacco, and other drugs at alarmingly high rates. Despite the fact that federal spending on the drug war increased from \$1.65 billion in 1982 to \$17.7 billion in 1999, more than half (54%) of the students in the United States in 1999 tried an illegal drug before they graduated from high school (Johnston, O’Malley, & Bachman, 2002a; National Drug Control Strategy, 2000). Approximately 4.6 million 12- to 17-year olds (60%) are at moderate or high risk of substance abuse (The National Center on Addiction and Substance Abuse at Columbia University, [CASA], 2002). Nearly 2.1 million youths aged 12 to 17 had used inhalants at some time in their lives as of 2000 (Substance Abuse and Mental Health Services Administration, [SAMHSA], 2001a).

Among adolescents who admit to smoking, drinking, or having tried marijuana by 15 years of age: 95 % have smoked their first cigarette, 93% have tried their first drink,

and 86% have tried their first joint (Califano, 2002). According to the CASA (2002), exposure to Ecstasy (MDMA) continues to grow: 33% of adolescents know a friend or classmate who has used this drug, up from 28% in the 2000 survey. In 2000, Ecstasy use began to rise among eighth graders to 3.1%, in tenth graders to 5.4%, and in twelfth graders to 8.2% (Johnston, O'Malley, & Bachman, 2002a).

According to the Monitoring the Future Survey (2001), three out of ten (29%) students have used some illicit drug other than marijuana by the end of twelfth grade, and two of those three (20% of all twelfth graders) have done so in just the 12 months prior to the survey (Johnston, O'Malley, & Bachman, 2002a). Even though alcohol use fell from 52.1% annual use during the 2000-2001 school year to 50.4%, four out of every five students are consuming alcohol by the end of high school, and about half have done so before the eighth grade (Gleaton, 2001; Johnston et al., 2002a). In addition, PRIDE survey data indicated that approximately 5.7 million students used an illegal drug during the 1999-2000 school year, down from 6.2 million during the 2000-2001 school year. Despite the progress, nearly one in four twelfth grade students reported they drank alcohol weekly (22.5%) and 17.6% smoked cigarettes daily (Gleaton).

According to the National Household Survey on Drug Abuse, [NHSDA], in 2000, approximately 61% of youths aged 12 to 17, or more than 14 million, participated in team sports during the past year, and the rates of past month of use of tobacco, alcohol, or illicit drugs were generally lower among team sports participants than nonparticipants (SAMHSA, 2002a). Past research suggests that unfavorable attitudes about substance use are linked with lower rates of use among youths (Hawkins, Catalano, & Miller, 1992). Furthermore, according to the PRIDE Survey, students involved in school

activities are less likely to use drugs and students are more likely to use drugs and alcohol at home than at school (Gleaton, 2001). Drug use for students who frequently participate in school activities (16.9%) was almost half the rate for students who never participate in school activities (31.8%), and 24.4% of students use drugs at home compared to 0.9% of students who engage in drugs at school (Gleaton). These two studies have linked sports participation among youths to a decreased risk of substance use and team sports participants were more likely than nonparticipants to disapprove of peer substance use (SAMHSA, 2002a).

Gender Differences. According to the Monitoring the Future Survey (2001), males have higher rates of illicit drug use than do females, much higher rates of smokeless tobacco and steroid use, higher rates of heavy drinking, and roughly equivalent rates of cigarette smoking (Johnston, O'Malley, & Bachman, 2002a). According to the National Household Survey on Drug Abuse, males are more likely to engage in illegal drug use than females, 7.7% v. 5.0%, in 2000 (SAMHSA, 2001). However, the rates of nonmedical use of psychotherapeutic drugs (pain relievers, tranquilizers, stimulants, and sedatives) were similar for males (1.85%) and females (1.7%). Women on the average are more likely to be intolerant of substance use, to find experimental or occasional use of hallucinogenic substances and the use of prescription drugs risky, and disapprove of the daily use of alcohol (Spigner, Hawkins, & Lowen, 1993).

Between 1999 and 2000, the rate of past month marijuana use among women aged 12 and older increased from 3.1% to 3.5%. Moreover, among youths aged 12 to 17 in 2000, the rate of current illicit drug use was similar for boys (9.8%) and girls (9.5%) (SAMHSA, 2001). Males aged 12 to 20 were more likely than their female peers to

report binge drinking in 2000 (21.3% compared to 15.9%). These gender differences appear to emerge as students grow older.

Grade Differences. In 2001, past year rates of marijuana use were 15.4% of eighth graders, 32.7% for tenth graders, and 54.6% for twelfth graders (Johnston, O'Malley, & Bachman, 2002b). A majority of high school seniors feel regular use of any illicit drugs can cause "great harm" to the user. Specifically, 61% of them perceived regular use of marijuana to be a great risk (Johnston et al., 2002b). However, when asked about experimentation, fewer of them perceived it to be a risk. According to the Partnership for a Drug Free America (1998), 18% of adolescents believe trying marijuana is risky.

Research indicates that attitudes towards drug use change with age (Johnston, O'Malley, & Bachman, 2002a). The higher the grade level, the lower the rate of disapproval. For example, in 1995, 57% of seniors disapproved of trying marijuana compared to almost three-fourths of eighth graders. Overall, the percentage of seniors saying they disapprove of using marijuana regularly, occasionally, or once or twice, has been declining since the early 1990's (Johnston et al.). However, in the same time frame, use increased significantly.

Ethnic Differences. The rates of current illicit drug use for major ethnic groups in 2000 were 6.4% for Whites, 5.3% for Hispanics, and 6.4% for Blacks (SAMHSA, 2001a). Asians had the lowest rate (2.7%). Among adolescents aged 12 to 20, past month alcohol use rates ranged from 13.5% for Asians, 30.7% for Whites, and 29.3% for Native American (SAMHSA, 2002b). Among seniors in high school, 43.1% of Whites, 31.7% of Blacks, and 41.8% of Hispanics reported using an illicit drug within the past

year (Johnston, O'Malley, & Bachman, 2001). Furthermore, 21.4% of underage Whites, and 20.3% of underage Native American reported binge drinking, but only 7.9% of underage Asians and 10.3% of underage Blacks reported binge drinking. In general, minorities for the most part do not make up a disproportionate number of drug users. However, this varies by drug. For example, while Blacks are more likely than Whites to have reported the use of marijuana in the last month (1.1% to .6%), and are more likely to have reported heroin use in the last year (.5% to .2%), Whites are more likely to have used hallucinogens (.2% to .8%), stimulants (.2% to .4%), or inhalants (.1% to .5%). Hispanics have substance abuse rates that tend to fall between Blacks and Whites in the twelfth grade, usually closer to Whites than for Blacks (Johnston, O'Malley, & Bachman, 2002a). Hispanics in the twelfth grade have the highest reported rates of use for some drugs, crack and ecstasy, and their level of heroin use is equivalent to that of Whites. White and Hispanic students (19.1% and 17.5%, respectively) were significantly more likely than Black students (3.4%) to have ever used illegal drugs (National Drug Control Strategy, 2000).

Although research has found differences in the rates of current illicit drug use for the major ethnic groups, national data show that there is no significant difference among ethnic groups and their attitudes towards drug use (Johnston, O'Malley, & Bachman, 2001). This finding is contrary to popular assumptions that there is a difference in attitudes among ethnic groups. For instance, Blacks and Hispanic teens were just as likely as Whites to associate marijuana use as risky, not quite as likely to consider cocaine or crack as risky (Whites 93%, Blacks 82%, and Hispanics 88%, respectively),

and more likely to report being scared of taking drugs (Whites 32%, Blacks 43%, and Hispanics 33%, respectively) (Johnston, et al., 2002b).

Implementation of Drug Prevention Programs

With the passage of the Anti-Drug Abuse Act of 1986, the federal government significantly expanded the delivery of drug prevention programs to school-aged youth (Mohai, 1991). During the past decades, a number of strategies have been employed to change the attitudes and behaviors of children and adolescents regarding drug use. Research has shown that programs relying solely on providing information are not only ineffective, but may actually result in a greater likelihood of drug experimentation (Bangert-Drowns, 1988; Fustukjian, 1990). However, an annual survey conducted for 16 years by the University of Michigan Institute for Social Research (Johnston, 1990) concluded that providing youth with information about health risks in conjunction with other prevention approaches is highly effective. The key to the effectiveness of this method is giving information that emphasizes the more immediate, short-term consequences of drug use. In an effort to prevent substance use among school-aged youths, schools have adopted a variety of strategies ranging from classroom curricula to peer helper programs, to the more recent addition of prevention strategies such as drug testing.

Some programs that have shown mixed results include those seeking to strengthen drug-use resistance by bolstering “life skills” (decision-making ability, coping skills, and self-esteem) and those striving to address the unmet social and psychological needs of youth (Ellickson, 1990; Fustukjian, 1990; U.S. Dept. of Education, 1987). Although the

assessment of many prevention programs has been flawed, several programs have provided valid evidence that certain approaches are effective.

Project ALERT is based on the theory that adolescents turn to drugs because of perceived social norms, because media images and the influence of peers make drug use appear attractive, and because, being kids, they want to appear mature and independent (Ellickson, 1990). To combat these powerful forces, the Project ALERT curriculum seeks to modify norms about drug use, give students reasons not to use, and help them identify and resist pro-drug pressures--both internal and external. To build resistance skills, it equips them with a repertoire of strategies and builds their confidence in using them. To build motivation not to use drugs, the curriculum helps students to understand that most teenagers do not use drugs and to recognize the multiple ways in which drugs affect students now--socially, emotionally, and physically. It is designed to motivate adolescents against drug use and help them acquire the skills they need to resist pro-drug pressures (Helping adolescent resist drugs: Project ALERT, retrieved November 15, 2002, from <http://www.rand.org/publications/RB/RB4518/>).

The Life Skills Training (LST) program is an effective tobacco, alcohol, drug abuse, and violence prevention program for upper elementary and middle or junior high students (National Health Promotion Associates, Inc., retrieved November 15, 2002, from <http://lifeskillstraining.com>). It is based on the latest scientific evidence regarding causes of drug abuse and how to best prevent it. It is designed to provide students with the necessary skills to resist social (peer) pressures to smoke, drink and use drugs; to help them to develop greater self-esteem, self-mastery, and self- confidence; to enable them to effectively cope with social anxiety; to increase their knowledge of the immediate

consequences of substance abuse; and to enhance cognitive and behavioral competency to reduce and prevent a variety of health risk behaviors. The main goals of the LST program are to teach prevention-related information, promote anti-drug norms, teach drug refusal skills, and foster the development of personal self-management skills and general social skills.

The Midwestern Prevention Project (MMP), also known as Project STAR, is a comprehensive school- and community-based drug abuse prevention program designed to reduce and prevent tobacco, alcohol, and marijuana use by young adolescents and, secondarily, by their parents and other community residents (MacKinnon, 1991). To reach its goals, MMP targets individual-, situational-, and environmental-level factors related to elevated levels of drug use, including prior drug use, perceived norms for use, peer pressure, and, conversely, social support for non-use, and mass media communications about prevention (Nexuskids: The Midwestern Prevention Project National Model Program, retrieved November 15, 2002, from <http://www.nexuskids.org/National%20Programs/Midwestern%20Prevention.htm>).

MMP employs active social learning strategies such as role playing, group feedback, and mentoring to reshape adolescents' attitudes about drug use. It also extends its influence to the family through homework assignments that challenge family drug-use beliefs and habits (MacKinnon). Junior high school students involved in the program have shown a significant change in their drug-use attitudes and behavior (MacKinnon).

More recently, random drug testing programs have been implemented in schools as a way to protect students against the nation's growing drug problem. On January 8, 2002, President George Bush signed into law the *No Child Left Behind Act of 2001*, the

first time that legislation authorized the use of federal funds for school drug testing has been signed into law (Drug & Alcohol Testing Industry Association, 2002c; U.S. Department of Education, 2002).

Title IV of the Elementary and Secondary Education Act, Part A, reauthorized by the *No Child Left Behind Act* of 2001, authorizes the Safe and Drug-Free Schools programs. This program provides states with federal funds to support programs that prevent violence in and around schools, and to strengthen programs that prevent the illegal use of alcohol, tobacco, and drugs, and to involve parents in the war against drugs (Drug & Alcohol Testing Industry Association, 2002c; U.S. Department of Education, 2002). Furthermore, a major component of the Safe and Drug-Free Schools program is the State formula grant program that provides funds to State and local educational agencies, as well as governors, for a wide range of school- and community-based education and prevention activities (U.S. Department of Education, 2002). Thus, the Safe and Drug-Free Schools program has become the Federal Government's primary vehicle for reducing drug, alcohol, and tobacco use, and violence, through education and prevention activities in our nation's schools.

Because of the availability of federal funds for drug prevention programs, United States Congressman John Peterson (R-PA/5) unveiled legislation that seeks to provide school districts with the necessary financial and technical assistance to develop and implement random drug testing policies (Drug & Alcohol Testing Industry Association, 2002d). According to Peterson, drug and alcohol testing has shown to be a very effective means of deterring drug use, and the nation's children deserve to live healthy and drug and alcohol free lives (Drug & Alcohol Testing Industry Association, 2002d). According

to the Drug & Alcohol Testing Industry Association (DATIA), over 10% of DATIA members and over 5% of school districts already have student drug and alcohol testing programs in place (Drug & Alcohol Testing Industry Association, 2002a).

In August of 2002, the White House Office of National Drug Control Policy issued a drug testing policy guide (CNN.com/HEALTH, 2002; Office of National Drug Control Policy, 2002). According to John Walters, Director of the Office of National Drug Control Policy (2002), the guide “is not aimed to trap and punish students who use drugs. It is, in fact, counterproductive simply to punish them without trying to alter their behavior” (CNN.com/HEALTH, 2002, unpaginated). High school students who use drugs should be treated and counseled, and not simply suspended or expelled, according to the new guidelines from the Bush administration (CNN.com/HEALTH, 2002). The guidelines strongly caution against suspending or expelling students without treating them, noting that expulsion can create “drug-using dropouts,” an even bigger problem. Likewise, Kathleen Lyons, spokeswoman for the National Education Association, stated her group would back the new guidelines (CNN.com/HEALTH, 2002). “It doesn’t do anybody any good just to take a drug test and kick the kid out of school ... where’s he going to go? It doesn’t solve anyone’s problem and may in fact worsen it” (CNN.com/HEALTH, 2002, unpaginated).

Using the Federal drug testing policy, “What You Need To Know About Drug Testing in Schools,” (Office of National Drug Control Policy, 2002) as a model, the practice of drug testing high school students has been implemented on the premise that it will help schools create a safe and healthy learning environment, deter drug use among students, guide students who test positive into counseling or treatment, detect drug use,

and give students a legitimate reason to withstand peer pressure to use drugs (Borack; 1989; Crow & Hartman, 1992; Franz, 1997a, 1999b; Griffin, Keller, & Cohn, 2001; Hawkins, 1999; Lawler, 2000; Murray & Storm, 1995; Newton, 1999; Office of National Drug Control Policy, 2002; West & Ackerman, 1993). According to the Office of National Drug Control Policy (2002), testing can reduce students' use of illicit drugs, thus removing a significant barrier to their academic achievement.

According to Franz (1999c), the biggest benefit of the student drug testing programs reported from various schools is the fact that students were given a legitimate reason to say "no" when offered illicit or banned substances. Additionally, Coombs and Ryan (1990) found drug testing provided athletes a socially acceptable excuse for refusing drugs offered in friendship. Lawler (2000) stated that drug testing could help deter students from ever starting, and it could even persuade casual users to stop.

Although drug testing has many benefits associated with implementing programs into schools (Borack; 1989; Crow & Hartman, 1992; Franz, 1999b; Griffin, et al., 2001; Hawkins, 1999; Lawler, 2000; Murray & Storm, 1995; Newton, 1999; Office of National Drug Control Policy, 2002; West & Ackerman, 1993), various aspects have also been condemned (ACLU, 2000; Comer, 1994; CNN.com/HEALTH, 2002, unpaginated; Crow & Hartman, 1992; Griffin, et al., 2001; Hawkins, 1999; Lawler, 2000; Principal Leadership, 2001; West & Ackerman, 1993).

Civil libertarians immediately had a negative reaction to the spread of drug testing programs in schools (ACLU, 2000). They have challenged drug testing in schools on several grounds. Opponents have charged that drug-testing policies violate the students' privacy rights, are unwarranted search and seizures, force self-incrimination, lack

confidentiality, and lack reliability in drug testing methods (ACLU, 2000; Comer, 1994; Crow & Hartman, 1992; Griffin, et al., 2001; Hawkins, 1999; Lawler, 2000; McCarthy, 2001; West & Ackerman, 1993). Furthermore, critics of drug testing state that it can create negative and hostile feelings among students, administration, and faculty, thereby creating a negative school environment (Cavanaugh & Prasad, 1994; Jardine-Tweedie & Wright, 1998; Lawler, 2000; Winfred & Doverspike, 1997).

Critics have noted that drug testing often focuses on punishment, not prevention or rehabilitation of students (Franz, 1999b; Jardine-Tweedie & Wright, 1998; Lawler, 2000; West & Ackerman, 1993), produces inaccurate results (Hawkins, 1999; Jardine-Tweedie & Wright; Lawler; West & Ackerman), causes users to switch drugs (Hawkins; Lawler), and is too expensive (Hawkins; Lawler; West & Ackerman). Students who use drugs may attempt to mask drug use to avoid detection (Franz, 1999a; Lawler). Critics have argued that keeping students out of extracurricular activities because they use drugs will lead more students to abandon the activities (CNN.com/HEALTH, 2002).

Moreover, schools must be respectable of their students' autonomy and privacy, and they should maintain that students have a right to be free from unreasonable searches and seizures. In making sure students are not using drugs, collecting urine from someone not suspected of a crime is much more invasive and embarrassing than asking someone to walk, fully clothed, through a metal detector (Lawler). Finally, schools need to respect the rights of students to be free from being treated unfairly and being subjected to drug-tests that assume they are guilty.

Drug testing has been criticized regarding the accuracy of the results because it is possible to get a false positive result (Cohen, 1990; Lawler, 2000; Newton, 1999). In

1985, the Centers for Disease Control studied 13 drug-testing laboratories and found wide ranges in the accuracy of their results (Cohen). Furthermore, according to the American Civil Liberties Union, between 10% and 20% of all drug-test results are false positives (Lawler). This means that someone tested positive for an illegal drug that he or she has not used. In addition, legitimate food and legal drugs may produce unreliable, false drug test results (Lawler). For example, Ginseng tea and ibuprofen can show up as marijuana and poppy seeds can show up as heroin. A false positive drug test could seriously damage a student's academic life, personal life, reputation, and future. Therefore, caution must be taken to ensure that no harm will unnecessarily come to the students.

Estimated Effectiveness of a Drug Testing Program

In his article, *Student Drug Testing Survey – Narrative*, Franz (1999c) made an effort to better understand how schools view the total effect of their testing program on the drug use behavior of their students. Schools were asked to rate the drug use patterns of their students prior to initiation of a testing program and their current use. For the school with a mandatory athletic testing program, prior to testing, 60% described their drug problems as “bad as most” and 13% as “worse than most.” For those schools with voluntary testing programs, 86% stated their drug problems were “bad as most.” However, after a mandatory program's first year, 27% reported less use, 27% report significantly less use, and 7% reported markedly less use. The voluntary program schools also reported “significantly less use”(57%), and “marked less use” (14%) (Franz). The majority of schools who instituted either a mandatory or voluntary drug

testing program, 93% and 85% respectively, reported less use of illicit drugs by the groups tested.

Peterson (2000) examined mandatory drug testing as an effective measure to decrease the overall drug use among students at Santa Margarita Catholic High School. She surveyed 226 students and found that overall, 47% of students believed drug testing did not deter drug use and 43% of students did not think mandatory drug testing was an effective prevention strategy. However, 53% of girls and 49% of boys felt mandatory drug testing had provided them with a reason to say “no” to illicit drug use at parties or social gatherings, with the 12th grade girls representing the largest group to support this view at 88%. In contrast, 58% of 12th grade boys felt that it did not provide them with a reason to say “no.” Additionally, 61% of the 11th grade boys did not believe that mandatory testing is a positive prevention strategy. At 76%, the 12th grade girls seem to be the largest group favoring drug testing, followed by 47 % of the 9th grade girls and 59% of 9th grade boys. Furthermore, the results showed that there was only a 1% difference in the total support rate for boys and girls, with boys at 46% and girls at 47% (Peterson). Finally, the findings suggested that mandatory drug testing is a good way to deter and prevent students from using drugs at school and at social situations.

Drug Testing and Attitudes

Crant and Bateman (1989) theorized that procedural and distributive justice interact to affect the attitudes of individuals toward drug testing policies. Procedural justice involves procedures, and is judged on how accurate, ethical, correctable, bias-free, and consistent procedures are, and distributive justice involves how fairly outcomes are

distributed (Leventhal, 1980). Their findings showed that employees have a more positive attitude when drug testing policies are rehabilitative, accurately discriminate users of substances from non-users, offer an opportunity to correct their record after rehabilitation are consistent (people not singled out), and are ethical (punishments for failing a drug test are not excessively punitive).

Crant and Bateman (1990) found that potential applicants' attitudes and intentions to apply to a company were affected negatively by whether the company tested for drugs and had a demonstrable need for such a program. The drug testing requirements produced a more negative attitude towards the company and less intent to apply for the job. In their model, these factors related mainly to perceptions of distributive justice (i.e., the perceived fairness of outcomes received from a decision). This stands in contrast to the findings of Khan, Chawla, & Cianciolo (1995). Their study revealed that employees agree that companies have a right to test job applicants for use of illegal drugs. Furthermore, employees felt companies have a right to fire employees who test positive for drug use and a right to test all employees for drug use.

Temper (1994) surveyed college students' fairness of drug testing policies that called for termination from a variety of occupations, some of which were safety-sensitive occupations. The results of the study showed that for more dangerous occupations, termination was seen as a fairer outcome than for less dangerous positions, and confirmed past findings that more punitive policies are viewed more negatively in general. In order to generalize results to actual workers, separate studies were done with 100 employees of an airplane and utility firm. Employees who actually experienced drug testing were compared to employees who did not, and those who did experience drug testing were

separated by punitiveness of their policies. The attitudes of drug testing and fairness were explored. Results showed several interesting findings: it was found that non-tested individuals were more likely to evoke distributive justice concerns (costs of participation, such as invasion of privacy, against benefits of participation, such as workplace safety) while those who were tested in punitive programs were much more concerned with issues of procedural justice (for instance, that employees are not singled out).

Potential applicants' perceptions about drug testing were also assessed by Murphy, Thornton, and Reynolds (1990). Participants included 371 college students who indicated the extent to which they approved of drug testing for several jobs under different circumstances and testing procedures. The results revealed that most applicants do not object to drug testing unless it is perceived as unrelated to the job. Furthermore, the circumstances that lead to testing also affected attitudes. As both applicants and incumbents, subjects perceived random drug tests as most objectionable, and tests of known drug users as most favorable. Participants also favored confidential results and less severe consequences.

A similar study was conducted by Mastrangelo (1993) to test the effects of specific drug testing policies on potential applicant's attitudes, behavioral intentions, and climate perceptions. Participants included 267 college students who read a description of a fictitious company. Descriptions manipulated the type of drug testing (no testing requirements, probable cause testing, or random testing) and the consequences of detected use (rehabilitation, reduce evaluations, or termination). Results indicated that the type of drug testing policies did not effect climate perceptions and behavioral intentions. In addition, participants were more likely to apply for or accept a job, if the

company did test for drug use than if it did not. Finally, Mastrangelo also found that the consequences for detected drug use did not directly affect participants' perceptions of the testing.

In contrast to Mastrangelo's findings regarding consequences of detected drug use, Stone and Kotch (1989) concluded that consequences for detected drug use did affect perceptions of testing. They examined the effects of advanced notice of drug testing and the consequences of drug use detected by drug testing on attitudes about the fairness and invasiveness of drug testing. The study revealed that both the consequences of detected drug use and advance notice of drug testing influenced attitudes toward drug testing negatively. They noted empirical research on information privacy that found that employees were less likely to perceive invasions of privacy when they had greater control over personal information and suggested that knowledge of drug testing constitutes further control for an individual. They also found that employees had a more positive attitude toward drug testing policies when prior warning was given and when the consequence of detected drug use was rehabilitative rather than punitive (termination).

Sujak and Villanova (1995) hypothesized that employees would have more negative attitudes and less intention to apply for employment for organizations with less rigorous procedures to ensure that testing results would be confidential; that attitudes and intent to apply would be a function of whether organizational drug testing was mandatory, random testing or testing only on reasonable grounds; and that procedural fairness would mediate the effects of confidentiality and program type.

The results from Sujak and Villanova's study indicated that while confidentiality did affect intention to apply, it did not affect attitudes towards the company. This study

revealed that lack of control over the release of confidential information in employment application situations was perceived as an invasion of privacy. The researchers also found that program type did not affect either intent to apply or attitudes towards the organization. The authors speculated that this finding might have been due to the strongly negative attitudes towards drug use of the sample combined with their very low self-reported drug usage. In support of this finding, strongly negative attitudes towards drug use in general have been found to be highly correlated with support for drug testing (Latessa, Travis, & Cullen, 1988). Lastly, perceived procedural fairness partially mediated the effects confidentiality on applications intentions, and, in turn, an applicant's attitude toward the organization completely mediated the effects of perceived procedural fairness.

A study conducted by Thombs and Scaffa (1990) examined college students' attitudes toward a campus drug testing program at the University of Maryland, College Park (UMCP). The results of the survey revealed how many times in the past month students used an illegal substance. In the past month, 94% had used alcohol, 55% had used marijuana, 20% had used cocaine, 16% had used amphetamines, 14% had used LSD, and 13% had used inhalants. Furthermore, students were asked to what extent they agreed with the drug testing policy. Of the students surveyed, 25.7% indicated that they agreed with the drug testing policy and 24.1% disagreed. A slight majority of the sample supported drug testing when limited to students who have been found responsible for possession of an illicit drug.

Summary of the Literature

Statistics show that student use of illicit drugs is on the rise. Among high school seniors, 41.4% of students reported they had used at least one illegal drug during the 2000-2001 school year, an increase from 40.2% the year before and nearly the same rate as in the 1996-1997 school year (Gleaton, 2001). In addition to the prevalence of students' illicit drug-taking, there are many reasons that might lead schools to adopt drug testing as a means to deter, detect, and prevent drugs from invading the schools.

First, the desire to protect children from the negative consequences of illicit drugs has been a primary concern of the drug war. To a large extent, the drug war is waged on behalf of the nation's youth, with the schools being a major focus of attention. Secondly, with fear of drug use by youth so strong and with drug testing becoming so widespread, the educational establishment has considered adopting drug testing policies to prevent further drug use in their schools. Drug use interrupts the school environment and has a destructive effect on learning. In addition, drugs are blamed for exacerbating disciplinary problems and creating an atmosphere of apathy, disruption, and disrespect for others. A drug-ridden environment is a strong deterrent to learning.

The purpose of instituting drug testing programs has been based on the premise that it will deter young adults from beginning or continuing drug abuse, and identify young adults who are involved in drugs so that they may be directed into appropriate drug treatment programs. The goal of the program is to help children who need it, and to reduce the collateral social costs attendant to drug abuse, such as uneducated youth, youth crime and violence, spiraling health care costs, and teenage pregnancy. On the other hand, drug testing has been criticized grounds such as false positives, violating

students' privacy rights, unwarranted search and seizures, forced self-incrimination, lack of confidentiality, and lack of reliability in drug testing methods.

The review of the literature revealed that, since the June 1995 Supreme Court ruling in support of random, interscholastic student-athlete drug testing, many school districts have put drug testing policies in place. In addition, the recent July 2002 ruling in *Tecumseh*, Oklahoma expanded drug testing policy to include all students who participate in any extracurricular or co-curricular competitive activity (athletic and nonathletic) to be subjected to random, suspicionless drug testing.

Research has found that a potential applicant's attitudes and intentions to apply were not affected negatively by whether the company tested for drugs and had a demonstrable need for such a program. In addition, researchers have found that both advanced notification of testing and rehabilitative (as opposed to punitive) consequences of detected use correlated positively with acceptance of drug testing. While confidentiality did affect intention to apply to a company, it did not affect attitudes towards the company. Finally, strongly negative attitudes towards drug use in general have been found to be highly correlated with support for drug testing. Overall, prior research has revealed positive attitudes towards drug testing policies when policies are fair and consistent, and negative attitudes when policies are instituted haphazardly and without suspicion.

Drug testing may not be the cure for the nation's substance abuse problems among youth, but many school districts and companies have reported a profound impact on reducing the number of students and employees involved in the use of illicit drugs.

CHAPTER THREE

METHODOLOGY

Introduction

This research investigation examined high school students' attitudes toward drug testing prevention programs, and examined the extent to which those attitudes vary according to gender, grade, ethnicity, exposure to experiences related to a drug testing program, illegal drug use, alcohol use, and involvement in extracurricular activities at school. This chapter includes the purpose of this study; the research design including subsections describing hypotheses and variables; the study's participants and sampling procedure; instrumentation, including reliability and validity issues associated with the measurement of this study's key concepts; and the data analysis plan.

Purpose of the Study

The purpose of this study was to describe high school students' attitudes toward drug testing prevention programs. The practice of testing high school students to determine whether they have recently used certain drugs has been implemented on the premise that it helps schools create a safe and healthy learning environment, deter drug use among students, guide those students who test positive into counseling or treatment,

and give students a legitimate reason to withstand peer pressure to use drugs (Lawler, 2000; Newton, 1999; Office of National Drug Control Policy, 2002). This study investigated high school students attitudes toward drug testing programs, and whether their attitudes toward drug testing prevention programs were related according to gender, ethnicity, grade, exposure to experiences related to a drug testing program, illegal drug use, alcohol use, and involvement in extracurricular activities at school. The knowledge gained from this study can help school administrators and counselors understand the history of drug testing in schools, as well as help them to make informed decisions concerning the implementation of drug testing in high schools. This research project also provides needed information for school counselors in providing drug related prevention services, interventions, and after-care of students.

Research Questions

Two research questions guided this study:

Research Question 1:

What are high school students' attitudes toward drug testing prevention programs?

Research Question 2:

To what extent do high school students' attitudes toward drug testing prevention programs vary according to gender, grade, ethnicity, exposure to experiences related to a drug testing program, illegal drug use, alcohol use, and involvement in extracurricular activities at school?

Research Hypotheses

Research Question 1:

What are high school students' attitudes toward drug testing prevention programs?

Research Hypothesis 1.1:

High school students' attitudes toward drug testing prevention programs would be neutral.

Research Question 2:

To what extent do high school students' attitudes toward drug testing prevention programs vary according to gender, ethnicity, grade, exposure to experiences related to a drug testing program, illegal drug use, alcohol use, and involvement in extracurricular activities at school?

Research Hypothesis 2.1:

There are differences in high school students' attitudes toward drug testing prevention programs based on the gender of the participants.

Research Hypothesis 2.2:

There are differences in high school students' attitudes toward drug testing prevention programs based on the grade level of the participants.

Research Hypothesis 2.3:

There are differences in high school students' attitudes toward drug testing prevention programs based on the ethnicity of the participants.

Research Hypothesis 2.4:

There are differences in high school students' attitudes toward drug testing prevention programs based on their exposure to experiences related to a drug testing program.

Research Hypothesis 2.5:

There are differences in high school students' attitudes toward drug testing prevention programs based on illegal drug use of the participants.

Research Hypothesis 2.6:

There are differences in high school students' attitudes toward drug testing prevention programs based on alcohol use of the participants.

Research Hypothesis 2.7:

There are differences in high school students' attitudes toward drug testing prevention programs based on the participants' involvement in extracurricular activities at school.

Sample

The participants in this study were drawn from a convenience sample comprised of high school students in grades 8, 9, 10, 11, and 12 at a co-educational, parochial school located in the Metropolitan New Orleans, Louisiana area during the 2002-2003 school year. This school was chosen for this study because it had a drug testing policy in effect for the past five years. The sample in this study was similar to the sample used in the pilot study. Both samples were co-educational, parochial high schools located in the Metropolitan New Orleans, Louisiana area, and have had drug testing prevention programs in place for at least three years. Both high schools were similar in size, grade level, and ethnic background.

A sample of 620 high school students was used in this study. The sample size was appropriate for the purpose of this research as suggested by McMillan and

Schumacher (2001). They suggest a minimum of 100 participants in each major subgroup; therefore, the sample size was sufficient for this study.

Variables

Variables of Interest

The variables relevant to the topic are provided on the Attitudes Toward High School Drug Testing (ATSDT) survey. In Section I of the ATSDT, high school students' attitudes toward drug testing prevention programs are measured. Participants indicated the extent to which they agree or disagree with the items regarding drug testing prevention programs. These statements cover seven dimensions of drug testing programs that include legal issues, testing process, integrity of the school, deterrence to drug use, prevalence of drug use, effects of intervention, and characteristics of the drug-testing program (ACLU, 2000; Borack, 1989; Cavanaugh & Prasad, 1994; Comer, 1994; Crow & Hartman, 1992; Franz, 1997, 1999b; Griffin, Keller, & Cohn, 2001; Hawkins, 1999; Jardine-Tweedie & Wright, 1998; Lawler, 2000; McCarthy, 2001; Murray & Storm, 1995; Newton, 1999; Office of National Drug Control Policy, 2002; West & Ackerman, 1993; Winfred & Doverspike, 1997).

In Section II of the ATSDT, gender, grade, ethnicity, exposure to experiences related to a drug testing program, illegal drug use, alcohol use, and involvement in extracurricular activities at school are measured. Although a review of the professional literature revealed no studies that surveyed the attitudes of high school students toward drug testing prevention programs in high schools, several studies provided guidance as to the variables which may have demographic relevance in this study (Gleaton, 2002;

Johnston, O'Malley, & Bachman, 2001; National Institute on Drug Abuse, 2001; Peterson, 2000). Responses to each item involved checking the appropriate box next to each item that best described the participant's personal characteristics.

Method

Survey Research

Because this study focused on high school students' attitudes toward drug testing prevention programs, it was appropriate to utilize survey research as the methodological approach. The survey method gathers data that is used to describe characteristics of certain populations (McMillan & Schumacher, 2001). Although survey research most often measures characteristics of samples and makes inferences about the larger population, survey methodology is also used to collect large amounts of information from specifically defined, small populations. Survey research is often employed to learn about people's attitudes, beliefs, values, demographics, behavior, opinions, desires, and habits, with the goal of understanding the relationships among these variables (McMillan & Schumacher). Thus, the methodological approach of survey research fit the designed purpose of this study.

Procedure

Following dissertation committee approval, a letter (Appendix A) was submitted to the University of New Orleans (UNO) Human Subjects Review Committee requesting permission to conduct the proposed study. Once permission was granted, the principal of the school was contacted to obtain school-level cooperation for the study. An on-site contact person was designated to ensure that procedures were in place to protect student anonymity in the data collection process. A procedure to distribute and collect the

surveys was established and a school representative was selected to store the completed surveys until the researcher collected them.

Once permission was granted, the principal of the school received a packet containing a cover letter (Appendix B) explaining the purpose of the study, and the ATSDT survey. Teachers that administered the survey received a packet containing a cover letter (Appendix C) explaining the purpose of the study, and the procedure for distributing and collecting the completed surveys along with the ATSDT survey. The researcher hand delivered the principal's and teachers' packets prior to data collection. The students' packet included a single page cover letter (Appendix D) that explained the study that their participation was voluntary and confidential, that the study was useful, that their responses were important, and thanked them for completing the survey. The ATSDT survey along with an envelope was included in the students' packets.

The cover letter was printed on University of New Orleans letterhead and cosigned by the dissertation committee chair. The cover letter included in the packet distributed to the participants explained that the surveys had no identifying marks and were kept completely anonymous. The principal assigned the school representative. Once the representative was identified, the school's representative ensured consent forms were on file in students' school records.

The school administration held a special assembly requesting that students fill out the surveys as a normal and usual evaluation of the school's drug testing prevention program. It is not out of the ordinary for the school to solicit feedback from students. An additional consent form was not required because the surveys were administered as a part

of regular evaluation for feedback purposes and parents had given consent at the beginning of the school year.

Once the consent forms were verified, the researcher hand delivered the students' packets to the school representative. The school representative distributed the packet to the identified teachers. The teachers administered the survey to all students at the beginning of their class period. They explained that student participation was voluntary and would not affect their grade in the class. All students who were present at the time of the survey were asked to participate. Students who were absent on the day the survey was not given an opportunity to participate.

Students were asked to complete both sections of the survey. They were asked not to write their names on any survey. Students placed the completed survey in the envelope, sealed it, and gave it to the teacher. Having the students seal the envelope helped to protect their anonymity and assured confidentiality of their responses.

When the last student turned in his or her completed survey, the teacher returned all of the students' packets to the school representative. The researcher collected all of the envelopes from the schools' representative. Any envelope that was tampered with or had the appearance of having been opened was discarded.

Instrumentation

The instrument that was utilized in this study was the Attitudes Toward High School Drug Testing (ATSDT) survey, constructed by the researcher. The instrumentation section was divided into four major sub-sections. The first sub-section focused on the development of the ATSDT. The second sub-section focused on the

validity of the survey. The third sub-section focused on the reliability of the survey. The fourth sub-section focused on the scoring procedures and interpretation of the survey.

Development of Survey

Prior to the development of the survey, the professional literature related to attitudes toward drug testing was reviewed. A few studies were found that addressed attitudes toward employee drug testing and attitudes toward drug testing college student athletes, but no studies were found that related to attitudes of high school students toward high school drug testing. Thus, an instrument to gather information on these issues was developed. A number of steps were taken by the researcher to increase the validity and reliability of the instrument, as suggested by Anderson (1981).

Phases of Instrument Development

Development of the ATSDT consisted of four phases. In Phase 1, items were generated based on a review of the literature. In Phase 2, a panel of experts reviewed the initial draft of the survey for validity, format, and clarity. Any recommended revisions were incorporated into the instrument. In Phase 3, a pilot study to verify content and construct validity was conducted. Finally, in Phase 4, any deletions or revisions deemed necessary was made based on the results of the pilot test. A discussion of each phase follows.

Phase 1 - Developing the initial scale. The ATSDT was designed as a measure to describe students' attitudes toward high school drug testing prevention programs. It was developed around seven dimensions of drug testing programs found in the literature (ACLU, 2000; Borack, 1989; Cavanaugh & Prasad, 1994; Comer, 1994; Crow & Hartman, 1992; Franz, 1997, 1999b; Griffin, Keller, & Cohn, 2001; Hawkins, 1999;

Jardine-Tweedie & Wright, 1998; Lawler, 2000; McCarthy, 2001; Murray & Storm, 1995; Newton, 1999; Office of National Drug Control Policy, 2002; West & Ackerman, 1993; Winfred & Doverspike, 1997). The seven dimensions are (1) legal issues, (2) testing process, (3) integrity of the school, (4) deterrent to drug use, (5) experience using drugs, (6) adverse effects, and (7) testing characteristics. Table 1 summarizes the dimensions and the 16 related items that were generated.

Table 1

Attitudes Towards High School Drug Testing Survey

Dimension	Item(s)
Testing Process	Four statements focus on the process of conducting a drug test. The items assess the extent to which students are concerned with the accuracy of the test, the confidentiality of the results, who gets drug tested, and the obtrusiveness of the drug test.
Deterrent to Drug Use	Three statements focus on drug testing as a deterrent to drug use. The items assess the extent to which students believe drug testing provides them with a reason to withstand peer pressure to use drugs, prevents them from using drugs, and is effective in reducing drug use.

Table 1 (continued)

Attitudes Towards High School Drug Testing Survey

Dimension	Item(s)
Experience Using Drugs	Three statements focus on drug use among students. The items assess the extent to which students believe drug testing can identify drug users and the students' perceived need for drug testing.
School Integrity	Two statements focus on the school's reason for implementing a drug testing program. The items assess the extent to which students believe drug testing creates a favorable impression of the school and creates a safe environment.
Legal Issues	One statement focuses on the legality of drug testing. The item assesses the extent to which students find the test to be a violation of their privacy versus the school's right to drug test.
Adverse Effect	One statement focuses on the potential adverse effects of drug testing. The item assesses the extent to which students believe drug testing will undermine trust among students, teachers, and administrators.
Testing Characteristics	Three statements focus on the characteristics of drug testing. The items assess the extent to which students believe drug testing is fair, helpful, and rehabilitative.

Note. The ATSDT Survey consisted of sixteen (16) Likert scale items. These items were separated into seven dimensions. Each dimension focused on a specific aspect of drug testing programs.

A common response choice for such items is the Likert scale. Typically, an equal number of positive and negative items appear on the scale. The available response options usually include “strongly agree,” “agree,” “neutral,” “disagree,” and “strongly disagree.” A person responding to such a scale places himself or herself on the underlying continuum by the direction and intensity of the response. For this study, a Likert scale was chosen because it is an appropriate response format to measure evaluative beliefs and because it is familiar to many individuals.

In the first section of the ATSDT, participants were asked to respond to 16 items dealing with their attitudes toward aspects of drug testing prevention programs. The first section of the survey asked participants to indicate the extent to which they agree or disagree with issues related to drug testing prevention programs. For each item, the participant indicated the strength of his or her attitude towards drug testing prevention programs using a 5-point Likert scale, (i.e., Strongly Disagree (SD), Disagree (D), Neutral (N), Agree (A), and Strongly Agree (SA). Statements were developed to be clearly either favorable or unfavorable with respect to each issue.

The second section of the ATSDT gathered demographic data on each participant. The demographic data consisted of gender, ethnicity, grade, exposure to experiences related to a drug testing program, illegal drug use, alcohol use, and involvement in extracurricular activities at school. Responses to each item involved checking the appropriate box next to each item that best described the participant’s personal characteristics. The survey was carefully constructed in collaboration with the researcher’s methodologist, chair, and other committee members. The instrument can be found in Appendix E.

Scoring Procedures and Score Interpretation

The ATSDT has 16 items in Likert format, and each item has five response alternatives (Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree). Each item on the ATSDT required an answer indicating the extent to which the respondent agreed or disagreed with the item. The following sample items exemplify those on the ATSDT.

Sample Item 1

Drug tests are accurate.				
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

Sample Item 2

There is no real need for drug testing in high schools.				
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

Scoring for items that were positively worded (e.g., Sample Item 1) is straightforward. Scoring for negatively worded items (e.g., Sample Item 2) required reversing the scores or a conversion of a 1 to a 5, 2 to a 4, 3 to a 3, 4 to a 2, and 5 to a 1. This conversion was necessary for negatively oriented items only. A list of the positive and negative worded items can be found in Table 2. After reversing the scores of the negative items, the scores for all non-missing items were divided by the number of non-missing items to algebraically transform the score back to the underlying 1-5 response

scale. Total scores were calculated only for participants responding to 13 (i.e., approximately 80%) or more of the items. Overall, a higher score on the ATSDT indicates positive attitudes toward drug testing and a lower score on the ATSDT indicates negative attitudes toward drug testing programs.

Table 2

Direction of the Items on the ATSDT

Direction	Item Number	Statement
Positive	1	Drug use is a significant problem among high school students.
Positive	3	Drug tests accurately differentiate drug users from non-users.
Positive	4	Drug testing should test for all drugs, including alcohol.
Positive	5	Drug testing gives students a legitimate reason to resist using illegal drugs.
Positive	6	Drug testing decreases illegal drug use among high school students.
Positive	7	Drug testing is helpful.
Positive	9	Drug tests are accurate.
Positive	10	Drug testing contributes to a safe school environment.

Table 2 (continued)

Direction of the Items on the ATSDT

Direction	Item Number	Statement
Positive	13	Every high school student should be drug tested.
Positive	14	A drug testing program creates a favorable impression of the school.
Positive	16	The results of a drug test should be kept confidential.
Negative	2	There is no real need for drug testing in high schools.
Negative	8	High schools do <u>not</u> have the right to drug test students.
Negative	11	Drug testing is <u>not</u> fair.
Negative	12	Drug testing creates mistrust among high school students.
Negative	15	Drug testing is humiliating.

The scoring of the ATSDT resulted in each item score, all of which ranged from 1 to 5. A score of 3 represented a neutral position. Scores above 3 indicated general agreement with the presence of the drug testing dimension. Scores falling below 3 indicated general disagreement that the dimension was represented in drug testing

programs. Table 3 describes the verbal description of agreement levels associated with particular scoring ranges.

Table 3

ATSDT Score Interpretation

Score	Agreement Level
1.0 – 1.50	Strong disagreement / very negative
1.51 – 2.50	Disagreement / somewhat negative
2.51 – 3.50	Neutral / neither positive or negative
3.51 – 4.50	Agreement / somewhat positive
4.51 – 5.00	Strong agreement / very positive

To exemplify the interpretation of subscale scores, assume a student had a total score of 4.8. The correct interpretation of this score would be that this student generally feels very positive that drug testing reduces drug use among students. If a student scored 2.3, the correct interpretation would suggest the student generally feels somewhat negative towards the drug testing prevention program.

Phase 2 – Expert Review. The review of the instrument tested the face validity of the Attitudes Toward High School Drug Testing (ATSDT) survey. The ATSDT was sent to a panel of experts who have knowledge in issues related to substance use and abuse in the adolescent population. These experts were asked for feedback about the instrument, including whether the experts believed the major drug testing issues in high schools have been identified in the survey. The panel also reviewed the survey for functional

reliability and face validity and made suggestions and recommendations for changes to the survey questions. Based upon their review and analysis, any changes deemed appropriate were made.

Phase 3 – A pilot test. Pilot testing is necessary to establish the validity and reliability of an instrument (Creswell, 1994). This testing enabled the researcher to improve the format, questions, and scales (Creswell). A convenience sample of 125 high school students in grades 9, 10, 11, and 12 was used for the pilot study. The sample was selected from a co-educational, parochial school located in the Metropolitan New Orleans, Louisiana area. This school was selected because it has been drug testing students for at least three years.

The purpose of this pilot test was to conduct a trial of the ATSDT instrument. Information about the instrument's clarity, the problems experienced when completing the instrument, and the amount of time that was required to complete the instrument was requested. Any changes deemed appropriate was made.

Validity

A factor analysis of the pilot study data using a Principal Components Analysis with Varimax Rotation was used to confirm empirically the underlying constructs around which the instrument was developed. Factor analysis is an empirical, mathematical method used to reduce the number of variables by grouping moderately to highly correlated variables into groups, or sets of variables, called factors (Gall, Gall & Borg, 2003). When applying the results of factor analysis, the researcher may select the level of factor loading, although typically the minimum factor loading to retain a variable in a factor is .30 (Tabachnick & Fidell, 1983).

Attitudes toward drug testing were measured with sixteen (16) five-point Likert items which were developed around seven dimensions. The factor analysis produced four factors (see Table 4). Items were considered to load on a dominant factor based on the magnitude of the factor coefficient. Considering the highest loadings for each item, the original seven dimensions were regrouped into the following four factors: (1) Needs and Negative Effects, (2) Needs and Positive Effects, (3) Interpretations Related to the Results, and (4) Policy Related to the Use of the Results.

Table 4

Principal Component Factor Analysis with Varimax Rotation (N=125)

Items on the ATSDT	Factor			
	1	2	3	4
There is no real need for drug testing in high schools. (R)	.62			
High schools do not have the right to drug test students. (R)	.78			
Drug testing is not fair. (R)	.78			
Drug testing creates mistrust among students. (R)	.75			
Every high school student should be drug tested.	.68			
Drug testing is humiliating. (R)	.71			
Drug use is a significant problem among high school students.		.43		
Drug testing gives students a legitimate reason to resist using illegal drugs.		.72		

Table 4 (continued)

Principal Component Factor Analysis with Varimax Rotation (N=125)

Items on the ATSDT	Factor			
	1	2	3	4
Drug testing decreases illegal drug use among high school students.		.82		
Drug testing is helpful.		.63		
Drug testing contributes to a safe school environment.		.70		
A drug testing program creates a favorable impression of the school.		.61		
Drug tests accurately differentiate drug users from non-users.			.66	
Drug testing should test for all drugs, including alcohol.			.67	
Drug tests are accurate.			.74	
The results of a drug test are kept confidential.				.97

Note: (R) indicates reverse-scored items

The first factor for the ATSDT scale was needs and negative effects. This factor relates to the need to implement drug testing prevention programs in high schools and the potential negative effects associated with the program. This factor relates to the extent to which students believe drug testing is humiliating, not needed, not fair, and creates mistrust.

The second factor for the ATSDT scale was needs and positive effects. This factor relates to the need to implement drug testing prevention programs in high schools and the potential positive effects associated with the program.

This factor relates to the extent to which students believe drug testing is helpful, rehabilitative, reduces drug use, and creates a safe environment.

The third factor for the ATSDT scale was interpretations related to the results. This factor relates to the outcome of the results, and the extent to which students are concerned with the accuracy of the drug test, who gets drug tested, and differentiates users from non-users.

The fourth factor for the ATSDT scale was policy related to the use of the results. This factor relates to the confidential nature of the results, and the extent to which students believe the results of the drug test should be kept private and not a part of their school record.

Reliability

Internal consistency was estimated with Cronbach alpha for the total scale. Internal consistency was calculated to be .92. This level of reliability was sufficiently high to warrant the use of this instrument in this study. The total mean score of the ATSDT was used to analyze the data.

Likert's Criterion of Internal Consistency was used to show a correlation between the total mean score and each individual item on the instrument (Andersen, 1981). Any item that had a correlation of .30 or higher was retained in the instrument, and any item with a negative correlation or a correlation below .30 was removed from the instrument. Table 5 presents the Likert's Criterion of Internal Consistency for each item.

Table 5

Likert's Criterion of Internal Consistency

Item	Statement	Coefficients
1	Drug use is a significant problem among high school students.	.64
2	There is no real need for drug testing in high schools.	.72
3	Drug tests accurately differentiate drug users from non-users.	.51
4	Drug testing should test for all drugs, including alcohol.	.60
5	Drug testing gives students a legitimate reason to resist using illegal drugs.	.69
6	Drug testing decreases illegal drug use among high school students.	.63
7	Drug testing is helpful.	.83
8	High schools do <u>not</u> have the right to drug test students.	.84
9	Drug tests are accurate.	.52
10	Drug testing contributes to a safe school environment.	.80

Table 5 (continued)

Likert's Criterion of Internal Consistency

Item	Statement	Coefficients
11	Drug testing is <u>not</u> fair.	.84
12	Drug testing creates mistrust among high school students.	.53
13	Every high school student should be drug tested.	.85
14	A drug testing program creates a favorable impression of the school.	.66
15	Drug testing is humiliating.	.67
16	The results of a drug test should be kept confidential.	.27

Analysis of Subscales

Likert's Criterion of Internal Consistency was used to calculate the correlation between the total mean ATSDT score and each of the four subscales. Internal consistency was estimated with Cronbach alpha for the subscales. Tables 6, 7, 8 and 9 represents the correlations for each subscales, respectively.

Table 6

Needs and Negative Effects – Subscale 1

Subscale 1	Item 2	Item 8	Item 11	Item 12	Item 13	Item 15
Correlation	.64	.89	.89	.67	.85	.78

Note: Internal consistency was calculated to be .91.

Table 7

Needs and Positive Effects - Subscale 2

Subscale 2	Item 1	Item 5	Item 6	Item 7	Item 10	Item 14
Correlation	.72	.79	.77	.84	.87	.72

Note: Internal consistency was calculated to be .91.

Table 8

Interpretations Related to the Results - Subscale 3

Subscale 3	Item 3	Item 4	Item 9
Correlation	.76	.76	.75

Note: Internal consistency was calculated to be .81.

Table 9

Policy Related to the Use of the Results - Subscale 4

Subscale 4	Item 16
Correlation	1.00

Note: Internal consistency was calculated to be 1.00.

The results of the four factors were not consistent with a-priori in the development of the factors for the ATSDT survey. However, these factors from the negative perspective interpretations were legitimate relative to the students' attitudes toward drug testing prevention programs. As a result, the sub-scales were not used in the analysis of the data.

Phase 4 – Revisions. The data obtained from the administration of the ATSDT was analyzed for construct validity and reliability. The following changes deemed appropriate on the basis of these analyses were made.

While Item 16 resulted with a correlation of .27, the correlation was significant at the .01 level; therefore, the item was retained. One problem with Item 16 could be the wording of the item. Rather than being stated as, “The results of a drug test are kept confidential” the item was reworded to read, “The results of a drug test should be kept confidential.”

Although Item 17 resulted with a correlation higher than .30, it correlated negatively with the total score for the scale. This inverse relationship meant that students who scored positively on the item scored negatively relative to the total score, and students who scored negatively on the item scored positively relative to the total score.

Obviously this item was not contributing to the construct validity of the instrument. Item 17 was removed from the original ATSDT instrument. The revised ATSDT survey consists of sixteen (16) items.

Data Analysis

Statistical Analyses

Once the surveys have been collected, all data was organized and entered into a database. Statistical software that was used in this study was SPSS (11.1) for Windows. Appropriate descriptive statistics was used to fully describe the characteristics of the sample, and inferential statistics was used to answer the stated hypotheses. The procedures chosen and their applicability for the study are discussed in this section.

Descriptive Analysis

Sample characteristics. Descriptive statistics was reported on the seven variables of interest from Section II of the survey. Categories of each variable (e.g., gender - male and female; grade - 8, 9, 10,11, and 12; ethnicity – Black, White, and Other Ethnic Group; exposure to experiences related to a drug testing program, illegal drug use, alcohol use, and involvement in extracurricular activities at school) are identified and frequencies and percentages of the total sample falling into these categories are reported. Narrative summaries of these results are included.

Survey results. Two levels of descriptive analyses were used. The first provided summary descriptive statistics (i.e., n, means, and standard deviations) for the total sample. The second provided similar summaries for each category of the seven variables

of interest from Section II of the ATSDT. For example, a summary of the results for male and females was reported. Narrative summaries of all results are included.

Inferential Analysis

Factor analysis. One variable of interest in this study was high school students' attitudes toward drug testing prevention programs. From a review of the professional literature, I determined there was not an instrument that could be used to measure this construct. Principal components factor analysis was used to confirm empirically the underlying constructs around which the instrument was developed. This assisted in establishing the construct validity of the instrument. Internal consistency was estimated with Cronbach alpha for the resulting scale.

ANOVA. Univariate analysis of variance was used to examine differences among mean scores associated with the variables of interest, which included gender, ethnicity, grade, exposure to experiences related to a drug testing program, illegal drug use, alcohol use, and involvement in extracurricular activities at school. According to Gall, Gall, and Borg (2003), the purpose of analysis of variance is to determine whether groups differ significantly among themselves on the variables being studied. In cases where a significant difference has occurred among three or more groups, a comparative analysis was used to determine where the difference occurred and between which groups. Statistical significance was established at the .05 level of significance.

CHAPTER FOUR

RESULTS

Introduction

In this chapter the results of the analysis of the data collected in this investigation are presented. The chapter is divided into two sections. In the first section a description of the participants is reported. In the second section statistical results from the tests of the research hypotheses are reported. The research questions and corresponding hypotheses are restated and the data analyses are presented.

The purpose of this study was to determine high school students' attitudes toward drug testing prevention programs and to determine whether those attitudes varied according to gender, ethnicity, grade, exposure to experiences related to a drug testing program, illegal drug use, alcohol use, and involvement in extracurricular activities at school.

Characteristics of the Sample

The participants in this study were drawn from a convenience sample comprised of high school students in grades 8, 9, 10, 11, and 12 at a co-educational, parochial school located in the Metropolitan New Orleans, Louisiana area during the 2002-2003 school year. This school was chosen for this study because it had a drug testing policy in effect

for the past five years. The sample in this study was similar to the sample used in the pilot study referred to in Chapter 3. Both samples were co-educational, parochial high schools located in the Metropolitan New Orleans, Louisiana area, and both had drug testing prevention programs in place for at least three years. Both high schools were similar in size, grade level, and ethnic background.

A total of 730 survey packets were given to the teachers to distribute to students. Of the 730 surveys, 680 were returned. Of these 680 surveys, 60 were blank and consequently were discarded. No completed survey was missing more than three items. Data were entered on the remaining 620 surveys. Thus, the return rate of usable surveys was 85%.

Personal Characteristics

Descriptive statistics are reported on the seven variables of interest from Section II of the survey. Categories are identified and frequencies and percentages of the total sample falling into these categories are reported. Narrative summaries of the results are included.

Participants' Gender

Participants were asked to indicate their gender. Descriptive data for the participants' responses are presented in Table 10.

Table 10Frequency Distribution of Participants by Gender

Gender	Frequency	Percent
Male	400	64.50
Female	220	35.50
Total	N = 620	100.00

These results indicate that almost two-thirds of the participants were male, while approximately one-third of the participants were female.

Participants' Grade

Participants were asked to indicate their current grade in school. Descriptive data for the participants' responses are presented in Table 11.

Table 11Frequency Distribution of Participants by Grade

Grade	Frequency	Percent
8 th	61	9.80
9 th	148	23.90
10 th	155	25.00
11 th	121	19.50
12 th	135	21.80
Total	N = 620	100.00

These results indicate there were slightly more 9th and 10th grade students than 11th or 12th grade students. Each of these grades accounted for about one-fifth to one-fourth of the total sample. In contrast to this, the eighth-grade class had less than one half the number of the students of the other grades and compromised less than one-tenth of the entire sample. This is not unusual in the parochial high schools because many students do not enter high school until the ninth grade, as eighth-grade is offered in most parochial middle schools.

Participants' Ethnicity

Participants were asked to indicate their ethnic background. Descriptive data for the participants' responses are presented in Table 12.

Table 12

Frequency Distribution of Participants by Ethnicity

Ethnicity	Frequency	Percent
Black	131	21.10
White	372	60.00
Other Ethnic Groups	114	18.40
No Response	3	0.50
Total	N = 620	100.00

These results indicate there were approximately three times as many Whites as Blacks. Slightly less than one-fifth of the participants identified themselves with other ethnic groups. Three participants (0.5%) did not respond to this question.

Cross Tabulations Across Gender, Grade, and Ethnicity. Cross tabulations were analyzed between gender and grade, gender and ethnicity, and grade and ethnicity.

Descriptive data for the participants' personal characteristics are represented in Table 13.

Table 13

Cross Tabulations for Grade, Ethnicity, and Gender

		Ethnicity			Total	
Gender	Grade		White	Black	Other	
Male	8	N	24	10	9	43
		% within Grade	55.80	23.30	20.90	100.00
		% within Ethnicity	9.80	12.00	12.90	10.80
		% of Total	6.00	2.50	2.30	10.80
	9	N	44	16	21	81
		% within Grade	54.30	19.80	25.90	100.00
		% within Ethnicity	18.00	19.30	30.00	20.40
		% of Total	11.10	4.00	5.30	20.40

Table 13 (continued)Cross Tabulations for Grade, Ethnicity, and Gender

Gender	Grade		Ethnicity			Total
			White	Black	Other	
Male	10	N	57	25	18	100
		% within Grade	57.00	25.00	18.00	100.00
		% within Ethnicity	23.40	30.10	25.70	25.20
		% of Total	14.40	6.30	4.50	25.20
	11	N	55	17	10	82
		% within Grade	67.10	20.70	12.20	100.00
		% within Ethnicity	22.50	20.50	14.30	20.70
		% of Total	13.90	4.30	2.50	20.70
	12	N	64	15	12	91
		% within Grade	70.30	16.50	13.20	100.00
		% within Ethnicity	26.20	18.10	17.10	22.90
		% of Total	16.10	3.80	3.00	22.90

Table 13 (continued)Cross Tabulations for Grade, Ethnicity, and Gender

			Ethnicity			Total	
Gender	Grade		White	Black	Other		
Male	Total	N	244	83	70	397	
		%within	61.50	20.90	17.60	100.00	
	Grade						
		%within	100.00	100.00	100.00	100.00	
	Ethnicity						
		% of Total	61.50	20.90	17.60	100.00	
Female	Grade	8	N	10	2	6	18
			% within	55.60	11.10	33.30	100.00
	Grade						
			% within	7.80	4.20	13.60	8.20
	Ethnicity						
			% of Total	4.50	.90	2.70	8.20
		9	N	29	16	22	67
			% within	43.30	23.90	32.80	100.00
	Grade						
			% within	22.70	33.30	50.00	30.50
	Ethnicity						
			% of	13.20	7.30	10.00	30.50
			Total				

Table 13 (continued)Cross Tabulations for Grade, Ethnicity, and Gender

Gender	Grade		Ethnicity			Total
			White	Black	Other	
Female	10	N	28	16	10	54
		% within Grade	51.90	29.60	18.50	100.0
		% of Total	12.70	7.30	4.50	240
	11	N	29	7	2	38
		% within Grade	76.30	18.40	5.30	100.0
		% within Ethnicity	22.70	14.60	4.50	17.30
		% of Total	13.20	3.20	.90	17.30
	12	N	32	7	4	43
		% within Grade	74.40	16.30	9.30	100.00
		% within Ethnicity	25.00	14.60	9.10	19.50
		% of Total	14.50	3.20	1.80	19.50

Table 13 (continued)Cross Tabulations for Grade, Ethnicity, and Gender

			Ethnicity			Total
Gender	Grade		White	Black	Other	
Female	Total	N	128	48	44	220
		% within Grade	58.20	21.80	20.00	100.00
		% within Ethnicity	100.00	100.00	100.00	100.00
		% of Total	58.20	21.80	20.00	100.00

With a few exceptions, the proportions of ethnic groups and gender remained stable across grade levels. That is, there did not appear to be any great fluctuations in the percentages of students in either of the ethnic categories across grade levels nor did there appear to be any fluctuations for the gender of the students across grade levels. However, the eighth-grade score percentages were slightly lower across gender and ethnicity due to the smaller of the students in this grade. Additionally, there are more Other Ethnic males and females represented in grades eight and nine, but not across grades ten, eleven, and twelve.

Participants' Experience Being Drug Tested

Participants were asked to indicate whether they had experienced being drug tested at school. Descriptive data for the participants' responses are represented in Table 14.

Table 14

Frequency Distribution by Experience Being Drug Tested

Tested For Drugs	Frequency	Percent
Yes	574	92.60
No	46	7.40
Total	N = 620	100.00

These results indicate that at least nine out of ten students surveyed had experienced being drug tested at school.

Participants' Illegal Drug Use

Participants were asked to indicate whether they had used any illegal drug in the past month. Descriptive data for the participants' responses are represented in Table 15.

Table 15

Frequency Distribution by Illegal Drug Use

Illegal Drug Use	Frequency	Percent
Yes	68	11.00
No	552	89.00
Total	N = 620	100.00

These results indicate that slightly approximately nine out of ten students surveyed reported they had not used an illegal substance within the past month. Obviously about one tenth of the students reported they had done so.

Participants' Alcohol Use

Participants were asked to indicate whether they had used alcohol in the past month. Descriptive data for the participants' responses are represented in Table 16.

Table 16

Frequency Distribution by Alcohol Use

Alcohol Use	Frequency	Percent
Yes	279	45.00
No	340	54.80
No Response	1	0.20
<hr/>		
Total	N = 620	100.00

These results indicate that slightly more than one-half of the participants reported that they had not use alcohol within the past month, suggesting that slightly less than a majority had done so. One participant (0.2%) did not respond to this question.

Participants' Involvement in Extracurricular Activities at School

Participants were asked to indicate whether they were involved in extracurricular activities at school. Descriptive data for the participants' responses are represented in Table 17.

Table 17Frequency Distribution by Involvement in Extracurricular Activities at School

Extracurricular Activities	Frequency	Percent
Yes	415	66.90
No	203	32.70
No Response	2	.30
Total	N = 620	100.00

These results indicate that about two-thirds of the participants surveyed were involved in extracurricular activities at school, while one-third were not. Two participants (0.3%) did not respond to this question.

Summary of Respondents' Characteristics

In summary, the majority of the students were White and enrolled in ninth through twelfth grades. Male and females were equally represented across all grades. Most students reported not using illegal drugs and slightly less than one-half reported using alcohol. There is an increase in the number of high school students from eighth grade to ninth grade; however enrollment levels off as students are promoted to a higher grade. These findings are consistent with most of the data reported for parochial high schools in the Metropolitan New Orleans area.

Attitudes Toward High School Drug Testing Scores

As part of the survey packet, participants completed the Attitudes Toward High School Drug Testing (ATSDT) scale. The ATSDT consists of 16 Likert scale items using a five point response scale ranging from "1" (Strongly Disagree) to "5" (Strongly

Agree). Of the 16 items, 5 statements are stated in the negative and the remaining 11 statements are stated in the positive. For each survey, the five negative statements were converted to positive scores. Thus, for these five negative statements the response of 1 was converted to a score of 5. Similarly, a response of 2 was converted to 4, 4 to 2, and 5 to a 1. A neutral response of 3 was scored as a 3.

The validity and reliability of the ATSDT had been established during the pilot study reported in Chapter 3. Factor analyses of the data in this sample proved similar to that of the pilot study. Reliability as estimated by Chronbach's Alpha was .88 for this sample. Appendix F presents the Principal Components Analysis with Varimax Rotation and Likert's Criterion of Internal Consistency for this sample.

A score of "1" reflects a strongly negative attitude toward drug testing prevention programs, a score of "3" reflects a neutral attitude toward drug testing prevention programs, and a score of "5" reflects a strongly positive attitude toward drug testing prevention programs. An interpretation of the actual score range is presented in Chapter 3.

The mean ATSDT score of 3.23 (SD = .68) indicated that high school students had a neutral attitude towards drug testing prevention programs. That is, students' attitudes were neither positive nor negative. Descriptive statistics for ATSDT scores across all personal characteristics are presented in Table 18. Analyses of the scores across each of the sample characteristics are presented in the following section.

Table 18

Descriptive Statistics for Gender, Ethnicity, Grade, Experience Being Drug Tested,
Illegal Drug Use, Alcohol Use, and Involvement in Extracurricular Activities

Characteristics	N	Mean ¹	Standard Deviation
Total Sample	620	3.23	.68
Gender			
Male	400	3.19	.70
Female	220	3.31	.63
Total	620	3.23	.68
Grade			
8 th	61	3.44	.70
9 th	148	3.32	.64
10 th	155	3.27	.70
11 th	121	3.14	.63
12 th	135	3.04	.68
Total	620	3.22	.68
Ethnicity			
Black	131	3.40	.55
White	372	3.20	.70
Other Ethnic Groups	114	3.30	.72
Total	617	3.23	.68
Drug Tested			
Yes	574	3.21	.68
No	46	3.51	.62
Total	620	3.22	.68
Illegal Drug Use			
Yes	68	2.62	.61
No	552	3.30	.65
Total	620	3.22	.68

Table 18 (continued)

Descriptive Statistics for Gender, Ethnicity, Grade, Experience Being Drug Tested, Illegal Drug Use, Alcohol Use, and Involvement in Extracurricular Activities

Characteristics	N	Mean ¹	Standard Deviation
Alcohol Use			
Yes	279	2.95	.64
No	340	3.51	.63
Total	619	3.22	.68
Extracurricular Activities			
Yes	415	3.30	.70
No	203	3.20	.63
Total	618	3.32	.68

¹ 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

In summary, males have somewhat lower scores than females, however, the two groups are equivalent with respect to the level of neutrality. It appears as though high school students' scores on the ATSDT become lower as students progress to higher grades. Furthermore, the Black population had higher ATSDT scores than other ethnic groups. Students who have not experienced being drug tested at school had higher ATSDT scores than those students who had been drug tested. Prior usage of illegal drugs and alcohol seemed to affect students' feelings more negatively than those students who refrained from using the illegal substances. Lastly, although high school students' attitudes toward drug testing programs appear not to be related to their involvement in extracurricular activities at school, students who are not involved in extracurricular activities at school had lower ATSDT scores than students who are involved.

Descriptive Statistics for Items on the ATSDT

Means and standard deviations for ATSDT items are presented in Table 19. The score for each item is interpreted using the rubric presented in Chapter 3.

Table 19

Mean and Standard Deviation for Items on the ADSDT

Level of Agreement	Statements	Mean ¹ & Standard Deviation
Neutral	Item 2 - There is no real need for drug testing in high schools.	3.38 (1.23)
Neutral	Item 3 - Drug tests accurately differentiate drug users from non-users.	3.00 (1.15)
Neutral	Item 5 - Drug testing gives students a legitimate reason to resist using illegal drugs.	3.44 (1.15)
Neutral	Item 6 - Drug testing decreases illegal drug use among high school students.	3.10 (1.20)
Neutral	Item 7 - Drug testing is helpful.	3.48 (1.13)
Neutral	Item 8 - High schools do <u>not</u> have the right to drug test students.	3.15 (1.28)
Neutral	Item 9 - Drug tests are accurate.	2.93 (1.08)
Neutral	Item 10 - Drug testing contributes to a safe school environment.	3.29 (1.14)

Table 19 (continued)Mean and Standard Deviation for Items on the ADSDT

Level of Agreement	Statements	Mean ¹ & Standard Deviation
Neutral	Item 11 - Drug testing is <u>not</u> fair.	3.27 (1.22)
Neutral	Item 13 - Every high school student should be drug tested.	3.04 (1.37)
Neutral	Item 14 - A drug testing program creates a favorable impression of the school.	3.32 (1.15)
Neutral	Item 15 - Drug testing is humiliating	3.27 (1.23)
Somewhat Positive	Item 1 - Drug use is a significant problem among high school students.	3.58 (1.07)
Somewhat Positive	Item 16 - The results of a drug test should be kept confidential.	4.21 (.99)
Somewhat Negative	Item 4 - Drug testing should test for all drugs, including alcohol.	2.37 (1.39)

¹ 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

An examination of this data indicates that responses to 13 of 16 items were in the “neutral” range, 2 in the “somewhat positive” range, and one in the “somewhat negative” range. An examination of the somewhat positive item indicates students believe drug use is a significant problem among students; hence, drug testing appears needed in order to

help reduce drug use among students. They feel that results should be kept confidential. Students somewhat disagreed with being drug tested for alcohol. Although they believe drug testing is necessary, it is not necessary to test for alcohol.

Inferential Analysis

There were two research questions for this study. Research Question 1 asked: “What are high school students’ attitudes toward drug testing prevention programs?” Research Question 2 asked: “To what extent do high school students’ attitudes toward drug testing prevention programs vary according to gender, ethnicity, grade, exposure to experiences related to a drug testing program, illegal drug use, alcohol use, and involvement in extracurricular activities at school?” The specific hypotheses testing each question and the results are discussed below.

Research Question 1

Research Hypothesis 1.1

Research Question 1 was examined by Hypothesis 1.1 which stated high school students’ attitudes toward drug testing prevention programs would be neutral. This hypothesis was tested by using a one-sample case in which high school students’ total mean score on the ATSDT was compared against the neutral value for the scale (3.00) using a t-test. While the results of the t-test presented in Table 20 indicated a statistically significant difference ($t_{619} = 8.40, p = .000$), a 95% confidence interval around the observed sample mean was obtained by adding and subtracting 1.96 standard errors of the mean. The resulting interval of 3.18 to 3.28 does not overlap the boundaries of the

neutral category (i.e., 2.51 to 3.50); therefore, it is responsible to conclude that the respondents' attitudes are neutral. Hypothesis 1.1 was supported.

Table 20

One Sample T-Test Summary Table for ATSDT

Total Mean Score	t	df	Mean Difference	Prob.
ATSDT	8.40	619	.23	.000*

$p = < .05$

Research Question 2

To what extent do high school students' attitudes toward drug testing prevention programs vary according to gender, ethnicity, grade, exposure to experiences related to a drug testing program, illegal drug use, alcohol use, and involvement in extracurricular activities at school? Seven hypotheses are associated with Research Question 2.

A univariate analysis of variance (ANOVA) was used to examine differences between the total mean ATSDT scores associated with the variables of interest. To examine the major assumptions of ANOVA, Levene's test of homogeneity of variance was examined for each hypothesis.

Research Hypothesis 2.1

Hypothesis 2.1 stated that there are differences in high school students' attitudes toward drug testing prevention programs based on the gender of the participants. The result of the homogeneity of variance assumption was met ($F = 2.70$, $p = .10$) as were all other assumptions of this procedure. The results of the ANOVA presented in Table 21

indicate a statistically significant difference between the ATSDT total mean scores by gender ($F = 4.76, p = .03$). In other words, there was a difference between male and female high school students' attitudes toward drug testing prevention programs. Females had a statistically higher score, but both males and females fell into the "neutral" category on average. Hypothesis 2.1 was supported.

Table 21

ANOVA Summary Table for Gender

Source	SS	df	MS	F	Prob.
Between	2.19	1	2.19	4.76	.03*
Within	283.62	619	.56		
Total	285.80	620			

$p = < .05$

Research Hypothesis 2.2

Hypothesis 2.2 stated that there are differences in high school students' attitudes toward drug testing prevention programs based on their grade level. The result of the homogeneity of variance assumption was met ($F = .53, p = .72$) as were all other assumptions of this procedure. The results of the ANOVA presented in Table 22 indicate a statistically significant difference between the total mean ATSDT scores by grade ($F = 5.51, p = .000$). That is, there is a difference in high school students' attitudes toward drug testing prevention programs by grade level of the students. Hypothesis 2.2 was supported.

Table 22ANOVA Summary Table for Grade

Source	SS	df	MS	F	Prob.
Between	9.89	4	2.47	5.51	.00*
Within	275.92	615	.45		
Total	285.80	619			

$p = < .05$

The mean scores across grades ranged from 3.05 to 3.45 (see Table 18). The overall pattern of mean scores showed consistent drops in scores from eighth to twelfth grade, even though all means are in the “neutral” category. A post-hoc analysis using Scheffe’s test of pair-wise comparison was used to ascertain the significant differences across all five grade levels. This analysis showed that significant differences existed between 8th and 12th grade and between 9th and 12th grade. No significant differences existed between any of the other grade levels. It appears as though, over time, high school students’ attitudes gradually become less positive as they move through grades.

Research Hypothesis 2.3

Hypothesis 2.3 stated that there are differences in high school students’ attitudes toward drug testing prevention programs based on their ethnic background. The result of the homogeneity of variance assumption has not been met ($F = 3.33, p = .04$) all other assumptions of this procedure were met, though. In order to interpret the results it is necessary to recognize the alpha level associated with the F-test is too liberal. Given the observed significance value of .004, and adjustments to the alpha level more than compensates for this problem.

The results of the ANOVA presented in Table 23 indicated a statistically significant difference between the ATSDT total mean scores by ethnic backgrounds of the participants ($F = 3.49, p = .004$). That is, there is a difference between in high school students' attitudes toward drug testing prevention programs based on their ethnicity. Hypothesis 2.3 was supported.

Table 23

ANOVA Summary Table for Ethnicity

Source	SS	df	MS	F	Prob.
Between	7.89	5	1.58	3.49	.004*
Within	275.97	611	.45		
Total	283.86	616			

$p = < .05$

Black, White, and Other Ethnic Groups represented the three subcategories of ethnicity. Mean scores ranged from 3.26 to 3.40 (see Table 18). The overall pattern of mean scores showed the Black population has slightly more positive attitudes than the other ethnic group, although all means are in the “neutral” category. A post-hoc analysis using Scheffe’s test of pair-wise comparisons was used to ascertain the significant differences between White and Black ethnic groups. No significant differences existed between any other groups. It appears that the Black population has more positive attitudes toward drug testing than the White population.

Research Hypothesis 2.4

Hypothesis 2.4 stated that there are differences in high school students' attitudes toward drug testing prevention programs based on their experience being drug testing.

The result of the homogeneity of variance assumption was met ($F = .70, p = .40$) as were all other assumptions of this procedure. The results of the ANOVA presented in Table 24 indicated a statistically significant difference between the ATSDT total mean score and students exposure to experiences related to a drug testing program ($F = 5.33, p = .021$). That is, there is a difference between in high school students' attitudes toward drug testing prevention programs based on their experience being drug tested at school. Students who reported not having been tested for illegal drugs had statistically higher scores than those who reported having been tested. Scores in the former category are considered "somewhat positive" while those in the latter are interpreted as "neutral." Hypothesis 2.4 was supported.

Table 24ANOVA Summary Table for Experience Being Drug Tested

Source	SS	df	MS	F	Prob.
Between	2.44	1	2.44	5.33	.021*
Within	283.36	618	.46		
Total	285.80	619			

$p = < .05$

Research Hypothesis 2.5

Hypothesis 2.5 stated that there are differences in high school students' attitudes toward drug testing prevention programs based on their illegal drug use. The result of the homogeneity of variance assumption was met ($F = 1.81, p = .18$) as were all other assumptions of this procedure. The results of the ANOVA presented in Table 25 indicated a statistically significant difference between the ATSDT total mean score and

reported illegal drug use of the students ($F = 67.52, p = .000$). There is a difference in students' attitudes toward drug testing prevention programs based on their reported illegal drug use. Students who report having not using illegal drugs had statistically higher scores than those reporting having used illegal drugs, although both means are considered "neutral." Hypothesis 2.5 was supported.

Table 25

ANOVA Summary Table for Illegal Drug Use

Source	SS	df	MS	F	Prob.
Between	28.15	1	28.15	67.52	.000*
Within	257.65	618	.42		
Total	285.80	619			

$p = < .05$

Research Hypothesis 2.6

Hypothesis 2.6 stated that there are differences in high school students' attitudes toward drug testing prevention programs based on their use of alcohol. The result of the homogeneity of variance assumption was met ($F = .000, p = .98$). The results of the ANOVA presented in Table 26 indicated a statistically significant difference between the ATSDT total mean score and students' reported use of alcohol ($F = 97.15, p = .000$) as were all other assumptions of this procedure. That is, there is a difference in students' attitudes toward drug testing prevention programs based on their reported alcohol use. Students who reported not using alcohol had statistically higher scores than those who reported having used illegal drugs. Scores in the former category are considered

“somewhat positive” while those in the latter are interpreted as “neutral,” although both means are considered “neutral.” Hypothesis 2.6 was supported.

Table 26

ANOVA Summary Table for Alcohol Use

Source	SS	df	MS	F	Prob.
Between	38.82	1	38.82	97.15	.000*
Within	246.56	617	.40		
Total	285.38				

$p = < .05$

Research Hypothesis 2.7

Hypothesis 2.7 stated that there are differences in high school students’ attitudes toward drug testing prevention programs based on their involvement in extracurricular activities at school. The result of the homogeneity of variance assumption was not met ($F = 4.50, p = .03$); however, all other assumptions of this procedure were met. In this situation, the alpha level associated with F-test is too conservative; however, because the observed value of alpha was not significant ($F = 1.09, p = .297$) the effect of making a Type I error is inconsequential.

The results of the ANOVA presented in Table 27 indicated that there was no statistically significant difference in the ATSDT total mean score by students’ involvement in extracurricular activities at school ($F = 1.09, p = .297$). This suggests students’ involvement in extracurricular activities do not appear to be related to their attitudes toward drug testing prevention programs. Mean scores for both groups were “neutral.” Hypothesis 2.7 was not supported.

Table 27ANOVA Summary Table for Extracurricular Activities

Source	SS	df	MS	F	Prob.
Between	.503	1	.503	1.09	.297*
Within	284.22	616	.461		
Total	284.73	617			

$p = > .05$

Summary of the Results

The results of the study were presented in this chapter. Participants in this study were high school students in grades 8, 9, 10, 11, and 12 at a co-educational, parochial school located in the Metropolitan New Orleans, Louisiana area during the 2002-2003 school year. This school had a drug testing policy in effect for the past five years.

The results of this study indicate that high school students have neutral attitudes toward drug testing prevention programs. There appear to be significant statistical differences between high school students' attitudes toward drug testing prevention programs based on their gender, grade, ethnicity, exposure to experiences related to a drug testing program, illegal drug use, and alcohol use; however, students' involvement in extracurricular activities at school was not related to their attitudes toward drug testing prevention programs.

In summary, males have somewhat lower scores on the ATSDT than females, and it appears as though high school students' scores on the ATSDT become lower or slightly negative as students' progress to higher grades. Furthermore, the Black population had higher ATSDT or more positive scores than other ethnic groups. Students who have not experienced being drug tested at school in school had higher ATSDT scores or more

positive attitudes than those students who had been drug tested. Prior usage of illegal drugs and alcohol seemed to affect students' attitudes negatively towards implementing drug testing prevention programs in schools. Lastly, although high school students' attitudes toward drug testing programs appear not to be related to their involvement in extracurricular activities at school, students who are not involved in extracurricular activities at school had lower ATSDT scores than students who are involved.

CHAPTER FIVE

DISCUSSION

Introduction

A summary of the study is included in this chapter. Results are discussed and limitations of the study are noted. The chapter concludes with a discussion of the implications for policy, school administrators, and school counselors involved in drug testing prevention programs and recommendations for further research.

Summary of the Purposes of the Study

The purpose of this study was to explore high school students' attitudes toward drug testing prevention programs and to determine whether those attitudes varied according to gender, ethnicity, grade, exposure to experiences related to a drug testing program, illegal drug use, alcohol use, and involvement in extracurricular activities at school. The results of this exploratory study were intended to provide information that would increase school administrators' and school counselors' understanding of high school students' attitudes toward drug testing prevention programs. This information could be utilized to assist school administrators and counselors in designing drug-free schools that engender respect and approval from the greatest possible number of students, faculty, and public. Furthermore, this research could assist school counselors in

providing prevention services, interventions, and after-care for students.

Participants

The participants in this study were drawn from a convenience sample comprised of high school students in grades 8, 9, 10, 11, and 12 at a co-educational, parochial school located in the Metropolitan New Orleans, Louisiana area during the 2002-2003 school year. This school was chosen for this study because it had a drug testing policy in effect for the past five years. The school is a co-educational, parochial high school. Teachers distributed 680 ATSDT surveys, and students completed 620 (85%) of these.

Characteristics of Participants

Demographic information detailing characteristics of the participants, as obtained from the Attitudes Toward High School Drug Testing (ATSDT) survey, is summarized below.

Gender

Males accounted for almost two-thirds of the participants who completed the survey (Table 13), while approximately one-third of the participants were female. Males have somewhat lower scores on the ATSDT than females. With the exception of ninth grade, there were twice as many males than females across grades. These results suggest that more males attend parochial school than females, and male students represented majority of the sample in each of the five grades. Males and females were equally represented across all ethnic groups; however, within each ethnic group there twice as many males than females. For example, there were fifty percent more Black males than Black females and fifty percent more White males than White females. This result

suggests that more the proportions of males and females remained stable across ethnic groups, but within each ethnic groups males accounted for one-half of the participants.

Grade Level

The sample was equally distributed across ninth through twelfth grades, but not grade eighth (Table 13). These results indicate there were twice as many students in ninth through twelfth grades than there were students in the eighth grade. Overall, less than ten percent (9.8%) of students were in the eighth grade. These results indicate there were slightly more ninth grade and tenth grade students than eleventh or twelfth grade students. Each of these grades accounted for about one-fifth to one-fourth of the total sample. In contrast, the eighth grade class was smaller than the other grades and comprised less than one-tenth of the entire sample. This is not unusual in the parochial high schools because many students do not enter high school until the ninth grade, as eighth grade is offered in most parochial middle schools.

Ethnicity

Black, White, and Other Ethnic Groups represented the three subcategories of ethnicity. The ethnic background of the sample was rather homogenous with the sample representing more than four times as many Whites (60%) as Blacks (21%) (Table 13). Students indicating “Other Ethnic Groups” as their race accounted for a little more than 18% of the participants. With a few exceptions, the proportions of ethnic groups and gender remained stable across grade levels. However, the eighth-grade score percentages were slightly lower across gender and ethnicity. Additionally, there are more Other Ethnic males and females represented in eighth and ninth grades, but not across tenth, eleventh, and twelfth grades. Overall, minority students are under-represented in the

parochial school surveyed. This finding is not surprising since the study was comprised predominately of White students. These findings are consistent with previous research conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA, 2001a; SAMHSA, 2002b). In general, minorities do not constitute a disproportionate number of drug or alcohol users.

Conceptual Framework

The conceptual framework for this study was based on Oskamp's tri-componential viewpoint of attitudes (Oskamp, 1991). He believes that attitudes are a single entity made up of three components: an affective component (the feelings one has towards an object); a cognitive component (the ideas, thoughts, and beliefs one has toward the object); and a behavioral component (action tendencies toward the object). According to Oskamp (1991), a person's attitude towards an object is a summary or evaluation of all of his or her beliefs about the object. These evaluative beliefs are defined as value judgments about some object (e.g., "drug testing is useful"). In other words, evaluative beliefs consist of an individual's feelings about an object (affect) and his or her thoughts about the object (cognition). The combination of these specific beliefs forms the overall attitude towards the object (e.g., "drug testing is needed in schools").

For this study, participants completed the Attitudes Toward High School Drug Testing (ATSDT) survey. The ATSDT consisted of 16 Likert scale questions that related to high school students' beliefs and opinions regarding drug testing, as an influence on their overall attitude toward drug testing prevention programs. To cite some examples,

deterrent to drug use is related to Item 5 on the ATSDT which states, “Drug testing gives students a legitimate reason to resist using illegal drugs.” Item 10 on the ATSDT which states, “Drug testing contributes to a safe school environment,” exemplifies safety. Drug use is related to Item 2 on the ATSDT which states, “There is no real need for drug testing in high schools.”

The results of this study lend support to the use of Oskamp’s tri-componential viewpoint of attitudes as a basis for understanding high school students’ attitudes toward drug testing prevention programs. His viewpoint of attitudes provided a framework for school administrators and school counselors to consider when assessing whether or not to implement a drug testing prevention program in their school.

For some students, drug testing, followed by nonpunitive, rehabilitative action, may come as a respite from out-of-control behavior. Other students may appreciate the removal of temptation to do drugs, due to fear of being drug tested. High school students grow through a period of reshaping identity, experimenting, challenging, and taking risks. What might have been passing curiosity or mild rebellion should not be construed as evidence of deviance in character. A negative public image can irreparably damage high school students' self-identity and self-esteem. Consequently, high school students’ attitudes will be affected by how the drug testing prevention program is developed, implemented, and evaluated.

Students who hold negative attitudes toward drug prevention programs will not embrace the implementation of drug testing. These students tend to believe mandatory drug testing is not an effective drug prevention strategy and is not needed in schools because a false positive drug test could seriously damage their academic life, personal

life, reputation, and future. On the other hand, students who have more positive views of drug testing tend to believe drug testing is useful and can help deter students from using illegal substances. These students tend to believe there is a need for drug testing in schools because it could help schools create a safer and healthier learning environment. In addition, students who have a positive attitude toward drug testing prevention programs feels more confident that these programs will help detect drug use, give students a legitimate reason to withstand peer pressure to use drugs, and guide students who test positive into counseling or treatment. Overall, the more positive attitudes students' possess, the more likely the drug testing prevention program will be a success.

In this study, students' reactions to drug testing were neither positive nor negative. That is, students have no real opinion that drug testing will decrease drug use among students, prevent them from beginning or using drugs, or detect drug use. An explanation for this finding is that students want to believe that implementing drug testing in schools will accomplish the goals of the prevention program; however they feel somewhat apprehensive toward these goals or standards.

It is possible as more school districts begin to implement drug testing prevention programs in their high schools, a significant difference will be noticed in the reduction of drug use among high school students, and in an improvement in school safety. On January 8, 2002, the *No Child Left Behind Act of 2001*, the first legislation authorizing the use of federal funds for school drug testing, was signed into law by President George Bush (Drug & Alcohol Testing Industry Association, 2002c; U.S. Department of Education, 2002). Because of the availability of federal funds for drug prevention programs, United States Congressman John Peterson (R-PA/5) has unveiled legislation

that seeks to provide school districts with the necessary financial and technical assistance to develop and implement random drug testing policies (Drug & Alcohol Testing Industry Association, 2002d). This law and legislation could result in students developing more positive attitudes toward drug testing prevention programs, thereby giving them a legitimate reason to withstand peer pressure to use drugs.

Discussion of the Findings

Attitudes Toward High School Drug Testing

The specific hypotheses investigating high school students' attitudes toward drug testing prevention programs included Hypothesis 1.1. In order to test the efficacy of the dimensions related to drug testing prevention programs, this study presented participants with sixteen statements on the ATSDT survey that reflected aspects of drug testing prevention programs. According to the literature, employees and college student athletes have slightly positive attitudes toward drug testing programs (Khan, Chawla, & Cianciolo, 1995; Murphy, Thornton, & Reynolds, 1990; Stone & Kotch, 1989; Temper, 1994), while other research has suggested that employees and college students have slightly negative attitudes toward drug testing programs (Crant & Bateman, 1990; Sujak & Villanova, 1995). Due to the inconsistency related to employees' and college students' attitudes toward drug testing, Hypothesis 1.1 expected high school students would have neutral, neither positive nor negative, attitudes toward drug testing prevention programs. The findings of this study supported Hypothesis 1.1. This finding was indicated by a statistically significantly mean score of 3.23 on the ATSDT.

One reason for the overall neutral attitudes of high school students, as contrasted to the positive or negative views of employees and college students, may be related to the

recent emergence of drug testing programs conducted in high schools. It is possible that high school students are unsure how they feel about drug testing because it has just recently impacted their rights in schools. Drug testing in the military has existed for the past thirty years, and workplace drug testing has in place since the 1980's (Lawler, 2000; Newton, 1999). However, drug testing in schools has been an accepted drug prevention alternative for the only past eight years. As recent as June 2002, drug testing in schools has been challenged (*Te Board of Education of School District No. 92 v. Earls*, 2002).

Another possible explanation for students' neutral attitudes toward drug testing prevention programs is that a few parochial and private schools have adopted some form of drug testing, typically based on "probable cause" or "reasonable rejection" of student drug use (Jacobs & Morag, 1992). According to the Drug and Alcohol Testing Industry Association (DATIA), over 10% of DATIA members and over 5% of school districts already have student drug and alcohol testing programs in place (Drug & Alcohol Testing Industry Association, 2002a). Recently, more and more schools are implementing random drug testing programs as a way to protect students from the nation's growing drug problem. They are not only drug testing student athletes, but drug testing students involved in any extracurricular activity (*Board of Education of School District No. 92 v. Earls*, 2002; Jensen, 2000; McCray, 2000; Russo & Gregory, 2000; Shutler, 1996).

Although majority of the items ATSDT fell in the "neutral" categories, the items that deviated from neutrality are worth noting. High school students somewhat agreed with two of the sixteen statements (see Table 19, Items 1 and 16). This finding suggests they have a somewhat positive attitude towards drug testing because they believe drug use is a significant problem among students; hence, drug testing is needed in order to help

reduce drug use among students. This outcome supports studies conducted by Franz (1999c), Coombs and Ryan (1990), and Peterson (2000). They found the biggest benefit of student drug testing programs reported from various schools was the fact that students were given a reason to say “no” when offered illicit or banned substances, and it provided athletes a socially acceptable excuse for refusing drugs offered in friendship. Lastly, this finding offers support as to why school administrators implement drug testing prevention programs in schools (Borack; 1989; Crow & Hartman, 1992; Franz, 1999b; Griffin, et al., 2001; Hawkins, 1999; Lawler, 2000; Murray & Storm, 1995; Newton, 1999; Office of National Drug Control Policy, 2002; West & Ackerman, 1993).

Furthermore, as expected, students somewhat agree that the results of their drug test should be kept confidential. That is, student feel positive that the results of their drug test should not be disclosed to non-essential people or people not directly involved in the drug testing prevention program such as teachers, non-teaching staff, and other students. It seems that students are concerned about the results of their drug test affecting their academic and social life, reputation, and future. This finding corresponds with the current literature that found students are concerned with the lack of confidentiality of drug testing results (ACLU, 2000; Comer, 1994; Crow & Hartman, 1992; Griffin, et al., 2001; Hawkins, 1999; Lawler, 2000; McCarthy, 2001; West & Ackerman, 1993).

Students disagreed with only one of the sixteen statements (see Table 19, Item 4). As expected, this finding suggests they had a somewhat negative attitude towards drug testing because, although they believed drug testing is necessary, it is not necessary to test for alcohol. It is possible that high school students’ believe alcohol use should not be tested because about half of the participants in this study was found using alcohol within

the past month (see Table 16). This finding coincides with previous studies that indicated about 51% of high school students consume alcohol each year (Gleaton, 2001; Johnston et al., 2002a). Lastly, many students use alcohol as a substitute for using illegal drugs because it is not tested; thus, they could get drunk on the weekend, return to school on Monday and get drug tested, and have a negative result (Hawkins, 1999; Lawler, 2000).

Attitudes Toward High School Drug Testing and Variables of Interest

The specific hypotheses investigating whether high school students' attitudes toward drug testing prevention programs varied according to gender, grade, ethnicity, exposure to experiences related to a drug testing program, illegal drug use, alcohol use, and involvement in extracurricular activities at school were explored. These hypotheses were investigated by comparing the total mean ATSDT scores associated with the variables of interest. Overall, the results of this study found high school students' gender, ethnicity, exposure to experiences related to a drug testing program, illegal drug use, and alcohol use are related to their attitudes towards drug testing prevention programs. However, high school students' involvement in extracurricular activities at school does not appear to be related to their attitudes towards drug testing prevention programs.

Gender

In this study, it was hypothesized that males and females would differ in their attitudes toward drug testing prevention programs, because research has shown that males have a higher rate of drug use. A significance difference was found. It appears males' attitudes differ from female attitudes regarding drug testing prevention programs. By examining the mean scores, it appears that females have higher ATSDT scores

($M = 3.31$) than males ATSDT scores ($M = 3.19$), although the two groups are equivalent with respect to the level of neutrality. This finding suggests that students do not respond with equal degrees of neutrality to drug testing prevention programs.

When comparing responses of males and females in regards to their use of illegal drugs, 8% of males, and 3% females reported using an illegal substance within the past month of completing the ATSDT survey. Males also accounted for a higher percentage of alcohol use compared to females, 30% compared to 14% respectively. These results are consistent with the literature that males are more likely to engage in illegal drug use than females (SAMHSA, 2001), and males are associated with higher rates of heavy drinking (Johnston, O'Malley, & Bachman, 2002a). These gender differences appear to emerge as students grow older.

The slight difference between males and females attitudes coincides with the current literature. Males were more likely than females to report binge drinking in 2001 (SAMHSA, 2001), and women on the average were more than likely to be intolerant of substance abuse, find experimental use too risky, and disprove of the daily use of alcohol; therefore, they are less likely to be ambivalent toward drug testing prevention programs (Spigner, Hawkins, & Lowen, 1993).

Grade Level

In this study, it was found that the students' grade level was related to their attitudes toward drug testing prevention programs. This finding revealed that high school students have neither positive or negative attitudes toward drug testing prevention programs; however, differences were found in the agreement level between students in the eighth and twelfth grades, and between students in the ninth and twelfth grades.

Eighth grade students showed the greatest support for drug testing ($M = 3.45$), followed by ninth grade students ($M = 3.32$) while twelfth grade students showed a slight apprehension for implementing drug testing in schools ($M = 3.04$), although all fell in the “neutral” category. That is, eighth and ninth grade students have higher ATSDT scores than twelfth grade students. It appears as though over time high school students’ attitudes gradually become less positive as they move through grades. In comparison the twelfth grade students, it seems that eighth and ninth grade students somewhat believe that drug testing prevention programs will help create a safer school environment, guide students who test positive into counseling or treatment, and help students resist using illegal drugs (Borack; 1989; Crow & Hartman, 1992; Franz, 1997a, 1999b; Griffin, Keller, & Cohn, 2001; Hawkins, 1999; Lawler, 2000; Murray & Storm, 1995; Newton, 1999; Office of National Drug Control Policy, 2002; West & Ackerman, 1993).

On the other hand, twelfth grade students feel not as positive than eighth and ninth grade students. It seems they feel more apprehensive about drug testing prevention programs because it may not act as a deterrent to student drug use, or reduce students’ use of illicit drugs. This result is contrary to research conducted by Johnston, O’Malley, and Bachman (2002) which found attitudes towards drug use change with age. They suggested the higher the grade level, the lower the rate of disapproval of drug use. For example, in 1995, 57% of seniors disapproved of trying marijuana compared to almost three-fourths of eighth graders. Overall, the percentage of seniors saying they disapprove of using marijuana regularly, occasionally, or once or twice, has been declining since the early 1990’s (Johnston et al.). However, in the same time frame, use increased significantly.

Ethnic Background

In this study, the ethnic background of the sample appeared to be related to their attitudes toward drug testing prevention programs. By examining the mean scores by ethnicity, it appears that across Black students' attitudes are somewhat more positive than the other ethnic groups, although all means are in the "neutral" category. Statistically significant differences were found in the agreement level between White and Black students. Black students showed the highest support for drug testing ($M = 3.40$), while White students showed a concern for implementing drug testing in schools ($M = 3.20$). Specifically, Black students feel positive that drug testing will help deter students from using illegal drugs, and consequently, prevent them from engaging in drug abusing behaviors.

One explanation for this finding is White students are significantly more likely than Black students to have ever used illegal drugs (National Drug Control Strategy, 2000), and Blacks students are more likely than White students to associate marijuana use as risky, and more likely to report being scared of taking drugs (Johnston, O'Malley, & Bachman, 2001). Past research suggests that unfavorable attitudes about substance use are linked with lower rates of use among youths (Hawkins, Catalano, & Miller, 1992). For example, this study asked students about their use of illegal substances and alcohol, about 8% of Whites, about 2% of the Other Ethnic Groups, and 0.8% of Blacks reported they have used an illegal drug within the past month. Blacks had lower rates of illegal drug use than Whites and Other ethnic groups; therefore, this finding concurs with the findings of Hawkins, Catalano, and Miller.

Experience Being Drug Tested

In this study, high school students' exposure to experiences related to drug testing prevention programs appeared to be related to their attitudes toward drug testing prevention programs. That is, students who have experienced being drug tested had neither positive nor negative attitudes toward drug testing prevention programs ($M = 3.22$); however, students who have not been drug tested had somewhat positive attitudes towards drug testing prevention programs ($M = 3.51$), compared to the neutral attitudes of students who had experienced being drug tested ($M = 3.21$). A possible explanation for this finding is students who have not experienced the process of being drug tested do not know how it really feels to give a drug sample. Conversely, students who have experienced being drug tested understand and are familiar with the feelings associated with handing over a drug sample. As expected, students' attitudes were affected by being exposed to being drug tested.

Still, with almost 93% of the participants having experienced being drug tested at school, it seems that students slightly agree that drug testing is necessary, and do not view their experience as being humiliating or offensive. This finding is contrary to the belief that drug testing is degrading, and creates negative and hostile feelings among students (Cavanaugh & Prasad, 1994; Jardine-Tweedie & Wright, 1998; Lawler, 2000; Winfred & Doverspike, 1997).

Illegal Drug Use

In this study, high school students' use of illegal drugs appeared to be related to their attitudes toward drug testing prevention programs. That is, there is a difference between students' attitudes toward drug testing prevention programs based on their

reported alcohol use. Students who reported using illegal drugs within the past month had a somewhat negative attitude towards drug testing prevention programs ($M = 2.62$), compared to those students who reported refrained from using illegal drugs within the past month, who had somewhat positive attitude ($M = 3.30$). Although both means are considered “neutral,” scores in the former category are considered “somewhat negative” while those in the latter are interpreted as “neutral,”

When comparing grade level responses to students’ use of illegal drugs, 4% of twelfth grade students stated they have used an illegal substance within the past month of completing the survey, compared to only 1% of eighth and ninth grade students. Two percent (2%) of tenth and (3%) eleventh grade students reported illegal drug use within the past month. When asked about their use of alcohol, 6.1% of eighth grade students compared to 14% of twelfth grade students reported using alcohol within the past month. This finding is consistent with previous research conducted by Johnston, O’Malley, and Bachman (2002), which suggests that as students progress to a higher grade level their use of illegal substances and alcohol increases.

As expected, self-reported drug use is negatively related to the acceptance of drug testing programs (Murphy, Thornton & Reynolds, 1990; Sujak & Villanova, 1995). This finding is consistent with the current literature. Those students who feel drug use is an especially negative act in and of itself will be more willing to accept certain drug testing policies, and have to positive attitude towards drug testing (Sujak & Villanova, 1995). On the other hand, students who are more accepting of drug use are less likely to agree with the implementation of drug testing in their school.

Alcohol Use

In this study, high school students' use of alcohol appeared to be related to their attitudes toward drug testing prevention programs. That is, those students who have used alcohol within the past month (almost 50%) had a somewhat negative attitude towards drug testing prevention programs ($M = 2.95$), compared to those students who refrained from using alcohol within the past month (about 50%), who had a somewhat positive attitude ($M = 3.50$). When asked about their use of alcohol, 33% of Whites reported using alcohol within the past month, the highest amount than any other group in this study. As expected, this finding relates to previous research on high school students' alcohol use (SAMHSA, 2001a; SAMHSA, 2002b). Hawkins, Catalano, and Miller (1992) found unfavorable attitudes about substance use were linked with lower rates of use among youths. Furthermore, since four out of every five high school students are consuming alcohol by the end of high school, they are less likely to accept a drug testing program, and accept drug testing programs that also tests for alcohol (Gleaton, 2001; Johnston et al., 2002a).

Involvement in Extracurricular Activities at School

No significant difference was found between high school students' attitudes toward drug testing prevention programs and their involvement in extracurricular activities. This suggests students' involvement in extracurricular activities does not appear to be related to their attitudes toward drug testing prevention programs. However, mean scores for both groups fell in the "neutral" category. By examining the ADSDT mean scores, students who responded to "yes" being involved in extracurricular activities at school had higher scores ($M = 3.30$) than those who responded to "no" ($M = 3.20$).

One explanation for this finding is that students who participate in extracurricular activities at school have the lowest rates of illegal drug use and disapprove of peer substance use (SAMHSA, 2002a); therefore, they are less likely to disagree with drug testing prevention programs. This finding challenges the assumption held by critics of drug testing that it will affect students' participation in extracurricular activities at school (CNN.com/HEALTH, 2002). The results of this study indicate that students were not deterred from participating in extracurricular activities because a drug testing prevention program was in place, rather slightly more than 65% of the students reported being involved in extracurricular programs at school.

Limitations of the Study

A limitation of this study was the paucity of information about high school drug testing. All prior research exploring attitudes toward drug testing programs has focused on employees in the workplace and on college athletes. The survey instrument used to collect data in this study may have posed a threat to internal validity because it was researcher-constructed and designed with the purpose of fulfilling the specific needs of this study. To address this limitation, the Attitudes Toward High School Drug Testing (ATSDT) survey has been tested for both validity and reliability so that accurate conclusions may be drawn regarding the study's hypotheses.

Furthermore, because the questionnaire was a self-reported instrument, a respondent can respond to a statement in ways that they believe to be socially acceptable or agree with a statement when they are unsure or ambivalent (Andersen, 1981). The

quality of responses ascertained from the survey was limited by how knowledgeable the respondent was about drug testing programs.

Lastly, threats to external validity are associated with the sample used in this study. Because the participants were high school students who attend a co-educational, parochial high school located in New Orleans, Louisiana, the sample may not be representative of high school students in general. Therefore, caution should be exercised when generalizing the results from this study to other states, parochial, private, and public schools.

Implications

Drug Testing Policy and Procedures

Presently, many schools and communities are grappling with issues surrounding drug testing high school students. In June 2002, the United States Supreme Court broadened the ability of public schools to test students for illegal drugs. This ruling allows random drug test for students in middle and high school students who participate in competitive extracurricular or co-curricular activities at school. This ruling expanded the scope of school drug testing, which began in June 1995 testing only student athletes.

In August 2002, the White House Office of National Drug Control Policy issued a drug testing policy guide that provides school districts, school administrators, and school counselors with information to help them when considering to drug test students (CNN.com/HEALTH, 2002; Office of National Drug Control Policy, 2002). It is imperative that school administrators and counselors have an understanding of the issues related to drug testing, and have solid, updated information on which to base their decision whether or not to implement drug testing in the school. Furthermore, it is

important that they are prepared to answer questions that students, parents, school officials, and individuals in the community will have regarding drug testing students.

The results of this study indicated high school students' attitudes toward drug testing prevention programs are neither positive nor negative, although statistically significance were found among six of the seven variables of interest. Males have somewhat lower scores than females, although the two groups are equivalent with respect to the level of neutrality. It appears as though high school students' scores on the ATSDT become lower as students progress to higher grades. Furthermore, the Black population had higher ATSDT scores than other ethnic groups. Students who have not experienced being drug tested at school had higher ATSDT scores than those students who had been drug tested. Prior usage of illegal drugs and alcohol seemed to affect students' feelings more negatively than those students who refrained from using the illegal substances. Lastly, although high school students' attitudes toward drug testing programs appear not to be related to their involvement in extracurricular activities at school, students who are not involved in extracurricular activities at school had lower ATSDT scores than students who are involved.

This finding suggests high school students are generally in somewhat in agreement that drug testing prevention programs are necessary in schools for various reasons. However, there appears to be a disagreement as to why students should be drug tested. Therefore, it is imperative that school administrators include students in the decision making process and provide them with information regarding the use of drugs among students, and educational strategies to resist using illegal drugs or alcohol. In addition, they should give students a rationale for implementing a drug testing prevention

program in the school. The decision whether to implement a drug testing prevention program should not be left to one individual, or even the school board. By making the effort to include all parties involved in drug testing, a school can greatly increase its chances of achieving and adopting a successful testing program (Office of National Drug Control Policy, 2002).

Implementing A Drug Testing Policy

Good planning will get the drug testing prevention program off to a good start. When implementing and/or maintaining a drug-testing prevention program, there are several key elements to ensure its success (Franz, 1999; Kerns, 2000; Elkin, 1999; Murray & Storm, 1995; Office of National Drug Control Policy, 2002). Schools considering drug testing should get public input. Listening to supporters and opponents, and including their views, can strengthen the testing program and increase its chance of being successful (Office of National Drug Control Policy, 2002).

The following aspects of the drug testing policy should be followed when a decision is made to implement drug testing in schools:

- (1) A statement of need and purpose must be articulated; clearly defined goals must be stated, which includes where the school stands on drug testing and what will happen if the policy is violated. A concise policy lets all students, parents, faculty, and staff know there is a commitment to a drug-free school.
- (2) Supporting data for implementing the drug test should be articulated to students, parents, faculty, staff, and community. Education and information are crucial.

- (3) The subsequent procedures for collecting the drug sample should be disseminated to students, parents, faculty, and staff at least six months prior to implementing the program. This should include when the test will be conducted and the frequency of testing; the techniques that will be used to collect the drug sample should be stated (i.e. urine, hair, saliva or blood); and the testing laboratory that will be utilized should be properly certified to collect and analyze the samples. Furthermore, the person performing the test should be properly trained. He or she should not be a faculty or staff school employee. The specific drugs that will be tested and the level of confidentiality of the results should be clearly stated, and the action that will be taken for a student's refusal to take the test. Finally the process a student endures for a positive test, and the process of appealing the results or decisions made by the administration should be articulated.
- (4) It is important that all parties involved understand that the goal of school-based drug testing is not to penalize students who use drugs, but to deter and guide those who test positive into counseling and treatment.
- (5) The results of the drug test pursuant to the policy stated above should not be documented in the students' academic record.

School Counselors

The counseling department in most schools is a place where students can go to disclose issues or problems of concern to them. As a result, the following information with help guide school counselors in providing drug related prevention services, interventions, and after-care for students.

School counselors must be aware that implementing mandatory drug testing policies in schools could cause students to become reluctant to talk to them about their drug use. They must be aware that taking away students' right to choose to participate in drug testing may create an atmosphere of rigidity and hostility. Students have a right to be treated with respect and dignity as human beings and a right to counseling services without prejudice. Drug testing may cause students to believe that they will not be treated fairly, as persons who have made a mistake, but rather labeled as a substance user. It is school counselors' ethical duty to ensure that the rights of students are adequately provided for and protected (ASCA, 1992). Drug testing in schools could potentially compromise that principle.

School counselors should not be involved in the process of obtaining the drug sample because this would place them in a dual role and a dual relationship. It is possible that students will no longer view the school counselor as a person with an understanding, empathetic ear, but rather as the person who will take their drug sample and potentially harm them. As a result, the trusting relationship between the counselor and student could be compromised. However, it is important that school counselors have knowledge of those students who test positive in order to offer support, coordinate intervention and after-care services, and offer supplemental counseling.

Lastly, it is unwise to rely on drug testing as a solution to students' drug usage because it is a singular approach to combating drugs in schools. Therefore, the following strategies are offered to help school counselors develop a more comprehensive substance abuse program: (1) hold school assemblies and have guest speakers to educate students about drug use, and ways to resist using drugs, (2) implement peer facilitator groups for students to share their thoughts, reactions, or drug use, and any other information deemed necessary, (3) implement parent educational seminars about drug use and prevention, (4) implement classroom guidance discussions that focuses on drug prevention topics and prevention strategies, and (5) implement teacher training workshops to help teachers identify student drug use and issues surrounding it.

Recommendations for Further Research

Because drug testing in high schools is a relatively new phenomenon, no research has been conducted to date on high school students' attitudes toward drug testing prevention programs. Since drug testing is becoming more prevalent and remains controversial, high school students are likely to develop their own attitudes regarding the procedures. These attitudes, positive or negative, can affect students' behaviors (Mastrangelo, 1993). Therefore, more research is needed in this area. Based on the results of this study, the following recommendations for further research are offered:

1. Further research exploring the attitudes of high school students toward drug testing prevention programs should be conducted in other states that have drug testing prevention programs.

2. Further research is needed comparing the attitudes of high school students toward drug testing prevention programs in Louisiana with those students from other states.
3. Because there was some variability in attitudes toward several characteristics of drug testing programs, further research is needed exploring attitudes of high school students in other parochial schools in other states.
4. Further research is needed examining public school students' attitudes toward drug testing prevention programs.
5. Further research is needed examining private school students' attitudes toward drug testing prevention programs.
6. Further research is needed comparing the attitudes and opinions of parochial, private, and public school students' attitudes toward drug testing prevention programs.
7. Further research is needed examining the attitudes of parents, teachers, administrators, and the community towards drug testing prevention programs.
8. Further research is needed comparing drug testing prevention programs to other prevention programs such as Project STAR, Life Skills Training, and Project ALERT.
9. Further research is needed comparing mandatory drug testing prevention programs to voluntary drug testing prevention programs.
10. Further research is needed exploring the effectiveness of drug testing prevention programs.

11. A qualitative approach to high school students' attitudes toward drug testing prevention programs could enhance researchers' knowledge of the issues surrounding drug testing.

Conclusion

This study was a descriptive, exploratory study of high school students' attitudes toward drug testing prevention programs. The findings of this study suggested that high school students tend to have neutral attitudes toward drug testing prevention programs, and that the gender, grade, ethnic background, exposure to experiences related to a drug testing program, illegal drug use, and alcohol use of high school students are related to those attitudes. No relationship was found between students' attitudes toward drug testing prevention programs and involvement in extracurricular activities at school.

These findings suggest high school students are generally somewhat in agreement that drug testing prevention programs are necessary in schools for various reasons. However, there appears to be disagreement as to why students should be drug tested. The knowledge gained from this study can help school administrators and counselors make informed decisions concerning the implementation of drug testing in high schools. Finally, these results provide needed information for school counselors in providing drug related prevention services, interventions, and after-care for students.

CHAPTER SIX

DRUG TESTING IN SCHOOLS: ATTITUDES OF HIGH SCHOOL STUDENTS

[Manuscript prepared for submission to *Professional School Counseling*]

The problems of drug use and substance abuse are widespread among American young people. Substance abuse affects American children of all economic backgrounds in every geographic area. American high school-aged youth have a higher level of illicit drug use than those of any other industrialized nation (Johnston, O'Malley, & Bachman, 2002a). Today, over half (54%) of them have tried an illicit drug by the time they finish high school (Johnston et al.). In addition, among youth age 12 to 17, an estimated 1.1 million meet the diagnostic criteria for dependence on illicit drugs, and 915, 000 are dependent on alcohol (Getting the facts about adolescent substance abuse and treatment, retrieved July 23, 2002 from <http://www.athealth.com/Consumer/adolescentsufacts.html>). Statistics show that student use of illicit drugs is on the rise. Among high school seniors, 41.4% of students reported they had used at least one illegal drug during the 2000-2001 school year, an increase from 40.2% the year before and nearly the same rate as in the 1996-1997 school year (Gleaton, 2001).

Research has linked drug use to a decline in academic performance, to truancy

and dropping out, and to crime and misconduct (Gaustad, 1993). The use of drugs and alcohol impairs judgment, reflexes, inhibitions, and emotions (Drugs and Teen Substance Abuse, retrieved on September 15, 2002 from www.focusas.com/SubstanceAbuse.html; Office of National Drug Control Policy, 2002; Szyjan, 2002). Poor concentration, productivity, and motivation lead to missed assignments and missed classes. Lowered inhibitions lead to poor judgment in the areas of violence, unplanned and unsafe sex, suicide, and respect for law-abiding behavior. Furthermore, drugs can cause serious problems with memory and learning, as well as difficulty in thinking and problem solving (Office of National Drug Control Policy, 2002). Additional studies show that drug users have poorer grades, are more likely to dislike school, have discipline problems in schools, and are more likely to drop out (Oetting, Edwards, Kelly, & Beauvais, 1997).

Throughout the United States, the drug problem among the nation's youth and the prevention of substance abuse has been major issues for school administrators, teachers, parents, and the courts. School administrators are feeling the pressure from the community and parents to adopt urgent measures to keep drugs from further endangering the physical, emotional, and mental well being of their students (Klauke, 1990). As a result, they are struggling with policy concerning the implementation of the most effective methods to decrease overall substance use among students.

With the passage of the Anti-Drug Abuse Act of 1986, the federal government significantly expanded the delivery of drug prevention programs to school-aged youth (Mohai, 1991). During the past decades, a number of strategies have been employed to change the attitudes and behaviors of children and adolescents regarding drug use. Research has shown that programs relying solely on providing information are not only

ineffective, but may actually result in a greater likelihood of drug experimentation (Bangert-Drowns, 1988; Fustukjian, 1990). However, an annual survey conducted for 16 years by the University of Michigan Institute for Social Research (Johnston, 1990) concluded that providing youth with information about health risks in conjunction with other prevention approaches is highly effective. The key to the effectiveness of this method is giving information that emphasizes the more immediate, short-term consequences of drug use. In an effort to prevent substance use among school-aged youths, schools have adopted a variety of strategies ranging from classroom curricula to peer helper programs, to the more recent addition of prevention strategies such as drug testing.

Using the Federal drug testing policy, “What You Need To Know About Drug Testing in Schools,” (Office of National Drug Control Policy, 2002) as a model, the practice of drug testing high school students has been implemented on the premise that it will help schools create a safe and healthy learning environment, deter drug use among students, guide students who test positive into counseling or treatment, detect drug use, and give students a legitimate reason to withstand peer pressure to use drugs (Borack; 1989; Crow & Hartman, 1992; Franz, 1997a, 1999b; Griffin, Keller, & Cohn, 2001; Hawkins, 1999; Lawler, 2000; Murray & Storm, 1995; Newton, 1999; Office of National Drug Control Policy, 2002; West & Ackerman, 1993). The goal of the program is to help children who need it, and to reduce the collateral social costs attendant to drug abuse, such as uneducated youth, youth crime and violence, spiraling health care costs, and teenage pregnancy.

Although drug testing has many benefits associated with implementing programs into schools, various aspects have also been condemned. It has been criticized grounds such as false positives, violating students' privacy rights, unwarranted search and seizures, forced self-incrimination, lack of confidentiality, and lack of reliability in drug testing methods (ACLU, 2000; Comer, 1994; CNN.com/HEALTH, 2002, unpaginated; Crow & Hartman, 1992; Griffin, et al., 2001; Hawkins, 1999; Lawler, 2000; Principal Leadership, 2001; West & Ackerman, 1993). Furthermore, critics of drug testing state that it can create negative and hostile feelings among students, administration, and faculty, thereby creating a negative school environment (Cavanaugh & Prasad, 1994; Jardine-Tweedie & Wright, 1998; Lawler, 2000; Winfred & Doverspike, 1997).

Despite the concerns over the practice of drug testing high school students, the courts have upheld the school's legal right to implement a policy that will help create a safe and healthy learning environment that is free from drug use (Office of National Drug Control Policy, 2002). On June 26, 1995, in *Vernonia School District 47J v. Acton* (1995), the United States Supreme Court upheld a public school district's mandatory, suspicionless drug testing of student athletes as a condition of participating in athletics (Jensen, 2000; McCray, 2000; Roberts & Fossey, 2002; Russo & Gregory, 2000; Shutler, 1996). The drug testing program required students to submit to random urinalysis if they wished to participate in interscholastic athletic programs (Jensen; McCray; Roberts & Fossey; Shutler). This ruling removed a major constitutional roadblock to the adoption of such programs for public schools nationwide.

In the past few years, the number of schools engaging in drug testing has been steadily increasing with more states adopting drug testing policies for high school

students. In 1996, the Rush County, Indiana, School Board approved a mandatory, random suspicionless urinalysis drug testing of students who voluntarily participated in extracurricular activities (Jensen, 2000; McCray, 2000; Roberts & Fossey, 2002; Shutler, 1996). In 1999, a board policy in Arkansas approved a more extensive program calling for mandatory drug and alcohol screening as a condition of student participation in any extracurricular activities, which covered about 80% of high school students (*Miller v. Wilkes*, 1999; National Association of Secondary School Principals, 2001b).

A recent Supreme Court ruling has provided schools with greater flexibility in implementing drug-testing policies. On June 27, 2002, in *Board of Education of Independent School District No. 92 of Pottawatomie County et. al v. Earls* (01-332 U.S.), the Supreme Court upheld an Oklahoma school drug testing policy that established random, suspicionless urinalysis testing of any students participating in extracurricular or co-curricular competitive activities (Drug & Alcohol Testing Industry Association, 2002b; National Association of Secondary School Principals, 2002a; Office of National Drug Control Policy, 2002). While this decision does broaden the scope of permissible drug testing policies in schools, each school district must carefully assess its needs and concerns in developing valid methods for deterring drug use among students.

Because drug testing is becoming more prevalent and remains controversial, high school students are likely to develop their own attitudes regarding the procedures. These attitudes, positive or negative, can affect students' behaviors (Mastrangelo, 1993). Attitudes play an important role in defining and determining the actions, feelings, and beliefs students will display toward the implementation of drug testing in schools (Oskamp, 1991).

According to Oskamp (1991), a person's attitude towards an object is a summary (evaluation) of all of his or her beliefs about the object. These evaluative beliefs are defined as value judgments about some object (e.g., "Drug testing is useful"). In other words, evaluative beliefs consist of an individual's feelings about an object and his or her thoughts about the object. The combination of these specific beliefs forms the overall attitude towards the object (e.g., "Drug testing is needed in schools").

Attitudes influence behavior (Brigham, 1991). Holding an attitude toward an object gives a student a reason to behave toward an object in a certain way. Attitudes will affect the intensity of positive or negative affect for or against responses students will give regarding the implementation of drug testing. Due to these relationships among attitudes, actions, beliefs, and affect schools should be concerned with attitudes if they are concerned with students' reactions to the implementation of drug testing.

As the prevalence of drug testing programs in the workplace has increased, so has the literature regarding this issue (Crant & Bateman, 1990). Research has found that a potential applicant's attitudes and intentions to apply to a company were not affected negatively by whether it tested for drugs and had a demonstrable need for such a program (Khan, Chawla, & Cianciolo, 1995; Mastrangelo, 1993). In addition, researchers have found that both advanced notification of testing and rehabilitative (as opposed to punitive) consequences of detected use correlated positively with acceptance of drug testing (Stone & Kotch, 1989).

While confidentiality did affect intention to apply to a company, it did not affect attitudes towards the company (Murphy, Thornton, & Reynolds, 1990; Sujak & Villanova, 1995). Finally, strongly negative attitudes towards drug use in general have

been found to be highly correlated with support for drug testing (Latessa, Travis, & Cullen, 1988). Overall, prior research has revealed positive attitudes towards drug testing policies when policies are fair and consistent, and negative attitudes when policies are instituted haphazardly and without suspicion (Crant & Bateman, 1989; Murphy, Thornton, & Reynolds, 1990; Temper, 1994; Thombs & Scaffa, 1990; Stone & Kotch, 1989).

Because drug testing in high schools is a relatively new phenomenon, no research has been conducted to date on high school students' attitudes toward drug testing prevention programs. The decision whether to implement a drug testing prevention program should not be left to one individual, or even the school board. By making the effort to include all parties involved in drug testing, a school can greatly increase its chances of achieving and adopting a successful testing program (Office of National Drug Control Policy, 2002).

The purpose of this study was to determine high school students' attitudes toward drug testing prevention programs, and to determine whether those attitudes were related according to gender, ethnicity, grade, exposure to experiences related to a drug testing program, illegal drug use, alcohol use, and involvement in extracurricular activities at school. The knowledge gained from this study can help school administrators and counselors make informed decisions concerning the implementation of drug testing in high schools. This research project also provides needed information for school counselors in providing drug related prevention services, interventions, and after-care for students.

Two research questions were explored: (1) What are high school students' attitudes toward drug testing prevention programs? and (2) To what extent do high school students' attitudes toward drug testing prevention programs vary according to gender, ethnicity, grade, exposure to experiences related to a drug testing program, illegal drug use, alcohol use, and involvement in extracurricular activities at school?

Method

Participants

The participants in this study were drawn from a convenience sample comprised of high school students in grades 8, 9, 10, 11, and 12 at a co-educational, parochial school located in the Metropolitan New Orleans, Louisiana area during the 2002-2003 school year. This school was chosen for this study because it had a drug testing policy in effect for the past five years. The school is a co-educational, parochial high school.

Instrumentation

The instrument that was utilized in this study was the Attitudes Toward High School Drug Testing (ATSDT) survey, constructed by the researcher. In the first section of the ATSDT, participants were asked to respond to 16 items dealing with their attitudes toward aspects of drug testing prevention programs. The second section of the ATSDT gathered demographic data on each participant. The demographic data consisted of gender, ethnicity, grade, exposure to experiences related to a drug testing program, illegal drug use, alcohol use, and involvement in extracurricular activities at school. Responses to each item involved checking the appropriate box next to each item that best described the participant's personal characteristics.

The ATSDT has 16 items in Likert format, and each item has five response alternatives (Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree). Each item on the ATSDT requires an answer indicating the extent to which the respondent agrees or disagrees with the item. Of the 16 items, 5 statements are presented as negative (e.g., “There is no real need for drug testing in high schools”), and 11 statements are presented as positive (e.g., “Drug tests are accurate”). The scoring procedure requires a conversion of the negative items so that a high score indicates a positive attitude toward drug testing prevention programs.

Procedure

The principal of the school received a packet containing a cover letter explaining the purpose of the study, and the ATSDT survey. Teachers that administered the survey received a packet containing a cover letter explaining the purpose of the study, and the procedure for distributing and collecting the completed surveys along with the ATSDT survey. The students’ packet included a single page cover letter that explained the study that their participation was voluntary and confidential, that the study was useful, that their responses were important, and thanked them for completing the survey. The ATSDT survey along with an envelope was included in the students’ packets.

The school administration held a special assembly requesting that students fill out the surveys as a normal and usual evaluation of the school’s drug testing prevention program. It is not out of the ordinary for the school to solicit feedback from students. An additional consent form was not required because the surveys were administered as a part of regular evaluation for feedback purposes and parents had given consent at the beginning of the school year.

The school representative distributed the packet to the identified teachers. The teachers administered the survey to all students at the beginning of their class period. They explained that student participation was voluntary and would not affect their grade in the class. All students who were present at the time of the survey were asked to participate. Students who were absent on the day the survey was not given an opportunity to participate.

Students were asked to complete both sections of the survey. They were asked not to write their names on any survey. Students placed the completed survey in the envelope, sealed it, and gave it to the teacher. Having the students seal the envelope helped to protect their anonymity and assured confidentiality of their responses.

When the last student turned in his or her completed survey, the teacher returned all of the students' packets to the schools representative. The researcher collected all of the envelopes from the school's representative. Any envelope that was tampered with or had the appearance of having been opened was discarded.

A total of 730 survey packets were given to the teachers to distribute to students. Of the 730 surveys, 680 were returned. Of these 680 surveys, 60 were blank and consequently were discarded. No completed survey was missing more than three items. Data were entered on the remaining 620 surveys. Thus, the return rate of usable surveys was 85%.

Results

Personal Characteristics

Data collected on personal characteristics of the sample included gender, grade, ethnicity, exposure to experiences related to a drug testing program, illegal drug use, alcohol use, and involvement in extracurricular activities at school. Males comprised almost two-thirds (65%) of the participants, while approximately one-third (35%) of the participants were female. There were slightly more 9th and 10th grade students than 11th or 12th grade students. Each of these grades accounted for about one-fifth to one-fourth of the total sample. In contrast to this, the eighth-grade class had less than one half the number of the students of the other grades and compromised less than one-tenth of the entire sample. This is not unusual in the parochial high schools because many students do not enter high school until the ninth grade, as eighth-grade is offered in most parochial middle schools. There were approximately three times as many Whites as Blacks. Slightly less than one-fifth of the participants identified themselves with other ethnic groups.

Cross tabulations were analyzed between gender and grade, gender and ethnicity, and grade and ethnicity. With a few exceptions, the proportions of ethnic groups and gender remained stable across grade levels. However, the eighth-grade score percentages were slightly lower across gender and ethnicity due to the smaller of the students in this grade. Additionally, there are more Other Ethnic males and females represented in grades eight and nine, but not across grades ten, eleven, and twelve.

At least nine out of ten students surveyed had experienced being drug tested at school, and about 89% of the participants reported refraining from using illegal

substances within the past month. Eleven percent of the participants reported they had used an illegal substance within the past month, while almost half of the participants reported they used alcohol within the past month. Slightly more than 75% of the participants surveyed were involved in extracurricular activities at school.

Attitudes Toward High School Drug Testing Scores

The first research question was “What are high school students’ attitudes toward drug testing prevention programs?” It was predicted that high school students’ attitudes would be neutral. This was tested by comparing a one-sample case in which high school students’ total mean score on the ATSDT ($M = 3.23$) was compared against the neutral value for the scale (3.00). The difference ($M = 3.23$, $SD = .68$) was large enough to be statistically significant ($t_{619} = 8.40$, $p = .000$); therefore, it was concluded that high school students’ have neutral attitudes toward drug testing prevention programs.

The second research question was “To what extent do high school students’ attitudes toward drug testing prevention programs vary according to gender, grade, ethnicity, exposure to experiences related to a drug testing program, illegal drug use, alcohol use, and involvement in extracurricular activities at school?” A univariate ANOVA was used to examine these hypotheses.

Gender

It was predicted that there are differences in high school students’ attitudes toward drug testing prevention programs based on the gender of the participants. The result of the homogeneity of variance assumption was met ($F = 2.70$, $p = .10$) as were all other assumptions of this procedure. The results of the ANOVA indicated a statistically significant difference between the ATSDT total mean scores by gender ($F = 4.76$,

$p = .03$). In other words, there was a difference between male and female high school students' attitudes toward drug testing prevention programs. Females had a statistically higher score, but both males and females fell into the "neutral" category on average.

Grade

It was predicted that there are differences in high school students' attitudes toward drug testing prevention programs based on their grade level. The result of the homogeneity of variance assumption was met ($F = .53, p = .72$) as were all other assumptions of this procedure. The results of the ANOVA indicated a statistically significant difference between the total mean ATSDT scores by grade ($F = 5.51, p = .000$). That is, there is a difference in high school students' attitudes toward drug testing prevention programs by grade level of the students.

The mean scores across grades ranged from 3.05 to 3.45 (see Table 18). The overall pattern of mean scores showed consistent drops in scores from eighth to twelfth grade, even though all means are in the "neutral" category. A post-hoc analysis using Scheffe's test of pair-wise comparison was used to ascertain the significant differences across all five grade levels. This analysis showed that significant differences existed between 8th and 12th grade and between 9th and 12th grade. No significant differences existed between any of the other grade levels. It appears as though, over time, high school students' attitudes gradually become less positive as they move through grades.

Ethnicity

It was predicted that there are differences in high school students' attitudes toward drug testing prevention programs based on their ethnic background. The result of the homogeneity of variance assumption has not been met ($F = 3.33, p = .04$) all other

assumptions of this procedure were met, though. In order to interpret the results it is necessary to recognize the alpha level associated with the F-test is too liberal. Given the observed significance value of .004, and adjustments to the alpha level more than compensates for this problem. The results of the ANOVA indicated a statistically significant difference between the ATSDT total mean scores by ethnic backgrounds of the participants ($F = 3.49, p = .004$). That is, there is a difference between in high school students' attitudes toward drug testing prevention programs based on their ethnicity.

Black, White, and Other Ethnic Groups represented the three subcategories of ethnicity. Mean scores ranged from 3.26 to 3.40. The overall pattern of mean scores showed the Black population has slightly more positive attitudes than the other ethnic group, although all means are in the "neutral" category. A post-hoc analysis using Scheffe's test of pair-wise comparisons was used to ascertain the significant differences between White and Black ethnic groups. No significant differences existed between any other groups. It appears that the Black population has more positive attitudes toward drug testing than the White population.

Experience Being Drug Tested

It was predicted that that there are differences in high school students' attitudes toward drug testing prevention programs based on their experience being drug testing. The result of the homogeneity of variance assumption was met ($F = .70, p = .40$) as were all other assumptions of this procedure. The results of the ANOVA indicated a statistically significant difference between the ATSDT total mean score and students exposure to experiences related to a drug testing program ($F = 5.33, p = .021$). That is, there is a difference between in high school students' attitudes toward drug testing

prevention programs based on their experience being drug tested at school. Students who reported not having been tested for illegal drugs had statistically higher scores than those who reported having been tested. Scores in the former category are considered “somewhat positive” while those in the latter are interpreted as “neutral.”

Illegal Drug Use

With respect to participant’s illegal drug use, it was predicted that there are differences in high school students’ attitudes toward drug testing prevention programs based on their experience being drug testing. The result of the homogeneity of variance assumption was met ($F = .70, p = .40$) as were all other assumptions of this procedure. The results of the ANOVA indicated a statistically significant difference between the ATSDT total mean score and students’ exposure to experiences related to a drug testing program ($F = 5.33, p = .021$). That is, there is a difference between in high school students’ attitudes toward drug testing prevention programs based on their experience being drug tested at school. Students who reported not having been tested for illegal drugs had statistically higher scores than those who reported having been tested. Scores in the former category are considered “somewhat positive” while those in the latter are interpreted as “neutral.”

Alcohol Use

It was predicted that there are differences in high school students’ attitudes toward drug testing prevention programs based on their use of alcohol. The result of the homogeneity of variance assumption was met ($F = .000, p = .98$). The results of the ANOVA indicated a statistically significant difference between the ATSDT total mean score and students’ reported use of alcohol ($F = 97.15, p = .000$) as were all other

assumptions of this procedure. That is, there is a difference in students' attitudes toward drug testing prevention programs based on their reported alcohol use. Students who reported not using alcohol had statistically higher scores than those who reported having used illegal drugs. Scores in the former category are considered "somewhat positive" while those in the latter are interpreted as "neutral," although both means are considered "neutral."

Involvement In Extracurricular Activities

It was also predicted that there are differences in high school students' attitudes toward drug testing prevention programs based on their involvement in extracurricular activities at school. The result of the homogeneity of variance assumption was not met ($F = 4.50, p = .03$); however, all other assumptions of this procedure were met. In this situation, the alpha level associated with F-test is too conservative; however, because the observed value of alpha was not significant ($F = 1.09, p = .297$) the effect of making a Type I error is inconsequential.

The results of the ANOVA indicated that there was no statistically significant difference in the ATSDT total mean score by students' involvement in extracurricular activities at school ($F = 1.09, p = .297$). This suggests students' involvement in extracurricular activities do not appear to be related to their attitudes toward drug testing prevention programs. Mean scores for both groups were "neutral."

In summary, males have somewhat lower scores on the ATSDT than females, and it appears as though high school students' scores on the ATSDT become lower or slightly negative as students' progress to higher grades. Furthermore, the Black population had higher ATSDT or more positive scores than other ethnic groups. Students who have not

experienced being drug tested at school in school had higher ATSDT scores or more positive attitudes than those students who had been drug tested. Prior usage of illegal drugs and alcohol seemed to affect students' attitudes negatively towards implementing drug testing prevention programs in schools. Lastly, although high school students' attitudes toward drug testing programs appear not to be related to their involvement in extracurricular activities at school, students who are not involved in extracurricular activities at school had lower ATSDT scores than students who are involved.

Discussion

Attitudes Toward High School Drug Testing

In this study, high school students' attitudes toward drug testing prevention programs were found to be neutral as indicated by a mean score of 3.23 on the Attitudes Toward High School Drug Testing (ATSDT) scale. One reason for the overall neutral attitudes of high school students, as contrasted to the positive or negative views of employees and college students, may be related to the recent emergence of drug testing programs conducted in high schools. It is possible that high school students are unsure how they feel about drug testing because it has just recently impacted their rights in schools. Drug testing in the military has existed for the past thirty years, and workplace drug testing has in place since the 1980's (Lawler, 2000; Newton, 1999). However, drug testing in schools has been an accepted drug prevention alternative for the only past eight years. As recent as June 2002, drug testing in schools has been challenged (Te Board of Education of School District No. 92 v. Earls, 2002).

Although majority of the items ATSDT fell in the “neutral” categories, the items that deviated from neutrality are worth noting. High school students somewhat agreed with two of the sixteen statements. This finding suggests they have a somewhat positive attitude towards drug testing because they believe drug use is a significant problem among students; hence, drug testing is needed in order to help reduce drug use among students. This outcome supports studies conducted by Franz (1999c), Coombs and Ryan (1990), and Peterson (2000). They found the biggest benefit of student drug testing programs reported from various schools was the fact that students were given a reason to say “no” when offered illicit or banned substances, and it provided athletes a socially acceptable excuse for refusing drugs offered in friendship. Lastly, this finding offers support as to why school administrators implement drug testing prevention programs in schools (Borack; 1989; Crow & Hartman, 1992; Franz, 1999b; Griffin, et al., 2001; Hawkins, 1999; Lawler, 2000; Murray & Storm, 1995; Newton, 1999; Office of National Drug Control Policy, 2002; West & Ackerman, 1993).

Furthermore, as expected, students somewhat agree that the results of their drug test should be kept confidential. That is, student feel positive that the results of their drug test should not be disclosed to non-essential people or people not directly involved in the drug testing prevention program such as teachers, non-teaching staff, and other students. It seems that students are concerned about the results of their drug test affecting their academic and social life, reputation, and future. This finding corresponds with the current literature that found students are concerned with the lack of confidentiality of drug testing results (ACLU, 2000; Comer; Crow & Hartman; Griffin; Hawkins; Lawler; McCarthy, 2001; West & Ackerman).

Students disagreed with only one of the sixteen statements. As expected, this finding suggests they had a somewhat negative attitude towards drug testing because, although they believed drug testing is necessary, it is not necessary to test for alcohol. It is possible that high school students' believe alcohol use should not be tested because about half of the participants in this study was found using alcohol within the past month (see Table 16). This finding coincides with previous studies that indicated about 51% of high school students consume alcohol each year (Gleaton, 2001; Johnston et al., 2002a). Lastly, many students use alcohol as a substitute for using illegal drugs because it is not tested; thus, they could get drunk on the weekend, return to school on Monday and get drug tested, and have a negative result (Hawkins, 1999; Lawler, 2000).

Attitudes Toward High School Drug Testing and Variables of Interest

The specific hypotheses investigating whether high school students' attitudes toward drug testing prevention programs were related according to gender, grade, ethnicity, exposure to experiences related to a drug testing program, illegal drug use, alcohol use, and involvement in extracurricular activities at school were investigated.

Gender

In this study, it was hypothesized that males and females would differ in their attitudes toward drug testing prevention programs, because research has shown that males have a higher rate of drug use. A significance difference was found. It appears males' attitudes differ from female attitudes regarding drug testing prevention programs. By examining the mean scores, it appears that females have higher ATSDT scores

($M = 3.31$) than males ATSDT scores ($M = 3.19$), although the two groups are equivalent with respect to the level of neutrality. This finding suggests that students do not respond with equal degrees of neutrality to drug testing prevention programs.

The slight difference between males and females attitudes coincides with the current literature. Males were more likely than females to report binge drinking in 2001 (SAMHSA, 2001), and women on the average were more than likely to be intolerant of substance abuse, find experimental use too risky, and disprove of the daily use of alcohol; therefore, they are less likely to be ambivalent toward drug testing prevention programs (Spigner, Hawkins, & Lowen, 1993).

Grade Level

In this study, it was found that the students' grade level was related to their attitudes toward drug testing prevention programs. This finding revealed that high school students have neither positive or negative attitudes toward drug testing prevention programs; however, differences were found in the agreement level between students in the eighth and twelfth grades, and between students in the ninth and twelfth grades.

Eighth grade students showed the greatest support for drug testing ($M = 3.45$), followed by ninth grade students ($M = 3.32$) while twelfth grade students showed a slight apprehension for implementing drug testing in schools ($M = 3.04$), although all fell in the "neutral" category. That is, eighth and ninth grade students have higher ATSDT scores than twelfth grade students. It appears as though over time high school students' attitudes gradually become less positive as they move through grades.

On the other hand, twelfth grade students feel not as positive than eighth and ninth grade students. It seems they feel more apprehensive about drug testing prevention

programs because it may not act as a deterrent to student drug use, or reduce students' use of illicit drugs. This result is contrary to research conducted by Johnston, O'Malley, and Bachman (2002) which found attitudes towards drug use change with age. They suggested the higher the grade level, the lower the rate of disapproval of drug use. For example, in 1995, 57% of seniors disapproved of trying marijuana compared to almost three-fourths of eighth graders.

Ethnic Background

In this study, the ethnic background of the sample appeared to be related to their attitudes toward drug testing prevention programs. By examining the mean scores by ethnicity, it appears that across Black students' attitudes are somewhat more positive than the other ethnic groups, although all means are in the "neutral" category. Statistically significant differences were found in the agreement level between White and Black students. Black students showed the highest support for drug testing ($M = 3.40$), while White students showed a concern for implementing drug testing in schools ($M = 3.20$). Specifically, Black students feel positive that drug testing will help deter students from using illegal drugs, and consequently, prevent them from engaging in drug abusing behaviors. One explanation for this finding is White students are significantly more likely than Black students to have ever used illegal drugs (National Drug Control Strategy, 2000), and Blacks students are more likely than White students to associate marijuana use as risky, and more likely to report being scared of taking drugs (Johnston, O'Malley, & Bachman, 2001). Past research suggests that unfavorable attitudes about substance use are linked with lower rates of use among youths (Hawkins, Catalano, & Miller, 1992).

Experience Being Drug Tested

In this study, high school students' exposure to experiences related to drug testing prevention programs appeared to be related to their attitudes toward drug testing prevention programs. That is, students who have experienced being drug tested had neither positive nor negative attitudes toward drug testing prevention programs ($M = 3.22$); however, students who have not been drug tested had somewhat positive attitudes towards drug testing prevention programs ($M = 3.51$), compared to the neutral attitudes of students who had experienced being drug tested ($M = 3.21$). A possible explanation for this finding is students who have not experienced the process of being drug tested do not know how it really feels to give a drug sample. Conversely, students who have experienced being drug tested understand and are familiar with the feelings associated with handing over a drug sample. As expected, students' attitudes were affected by being exposed to being drug tested.

Illegal Drug Use

In this study, high school students' use of illegal drugs appeared to influence their attitudes toward drug testing prevention programs. That is, those students who have used illegal drugs within the past month had a slightly negative attitude towards drug testing prevention programs, compared to those students, who refrained from using illegal drugs within the past month, having a positive attitude. As expected, self-reported drug use is negatively related to the acceptance of drug testing programs (Murphy, Thornton & Reynolds, 1990; Sujak & Villanova, 1995). This finding is consistent with the current literature. Those students who feel drug use is an especially negative act in and of itself will be more willing to accept certain drug testing policies (Sujak & Villanova).

Students who are more accepting of drug use are less likely to somewhat agree with the implementation of drug testing in their school.

Alcohol Use

In this study, high school students' use of alcohol appeared to influence their attitudes toward drug testing prevention programs. That is, those students who have used alcohol within the past month (almost 50%) had a somewhat negative attitude towards drug testing prevention programs ($M = 2.95$), compared to those students who refrained from using alcohol within the past month (about 50%), who had a somewhat positive attitude ($M = 3.50$). As expected, this finding relates to previous research on high school students alcohol use. Hawkins, Catalano, and Miller (1992) found unfavorable attitudes about substance use were linked with lower rates of use among youths. Furthermore, since four out of every five high school students are consuming alcohol by the end of high school, they are less likely to accept a drug testing program, and accept drug testing programs that also tests for alcohol (Gleaton, 2001; Johnston et al., 2002a).

Involvement in Extracurricular Activities

No significant difference was found between high school students' attitudes toward drug testing prevention programs and their involvement in extracurricular activities. This suggests students' involvement in extracurricular activities does not appear to be related to their attitudes toward drug testing prevention programs. However, mean scores for both groups fell in the "neutral" category. By examining the ADSDT mean scores, students who responded to "yes" being involved in extracurricular activities at school had higher scores ($M = 3.30$) than those who responded to "no" ($M = 3.20$). One explanation for this finding is that students who participate in extracurricular

activities at school have the lowest rates of illegal drug use and disapprove of peer substance use (SAMHSA, 2002a); therefore, they are less likely to disagree with drug testing prevention programs. This finding challenges the assumption held by critics of drug testing that it will affect students' participation in extracurricular activities at school (CNN.com/HEALTH, 2002). The results of this study indicate that students were not deterred from participating in extracurricular activities because a drug testing prevention program was in place, rather slightly more than 65% of the students reported being involved in extracurricular programs at school.

Limitations of the Study

A limitation of this study was the paucity of information about high school drug testing. All prior research exploring attitudes toward drug testing programs has focused on employees in the workplace and on college athletes. The survey instrument used to collect data in this study may have posed a threat to internal validity because it was researcher-constructed and designed with the purpose of fulfilling the specific needs of this study. To address this limitation, the Attitudes Toward High School Drug Testing (ATSDT) survey has been tested for both validity and reliability so that accurate conclusions may be drawn regarding the study's hypotheses.

Furthermore, because the questionnaire was a self-reported instrument, a respondent can respond to a statement in ways that they believe to be socially acceptable or agree with a statement when they are unsure or ambivalent (Andersen, 1981). The quality of responses ascertained from the survey was limited by how knowledgeable the respondent was about drug testing programs.

Lastly, threats to external validity are associated with the sample used in this study. Because the participants were high school students who attend a co-educational, parochial high school located in New Orleans, Louisiana, the sample may not be representative of high school students in general. Therefore, caution should be exercised when generalizing the results from this study to other states, parochial, private, and public schools.

Implications

Drug Testing Policy and Procedures

Presently, many schools and communities are grappling with issues surrounding drug testing high school students. In June 2002, the United States Supreme Court broadened the ability of public schools to test students for illegal drugs. This ruling allows random drug test for students in middle and high school students who participate in competitive extracurricular or co-curricular activities at school. This ruling expanded the scope of school drug testing, which began in June 1995 testing only student athletes.

In August 2002, the White House Office of National Drug Control Policy issued a drug testing policy guide that provides school districts, school administrators, and school counselors with information to help them when considering to drug test students (CNN.com/HEALTH, 2002; Office of National Drug Control Policy, 2002). It is imperative that school administrators and counselors have an understanding of the issues related to drug testing, and have solid, updated information on which to base their decision whether or not to implement drug testing in the school. Furthermore, it is important that they are prepared to answer questions that students, parents, school officials, and individuals in the community will have regarding drug testing students.

The results of this study indicated high school students' attitudes toward drug testing prevention programs are neither positive nor negative, although statistical significance were found among six of the seven variables of interest. This finding suggests high school students are generally in somewhat in agreement that drug testing prevention programs are necessary in schools for various reasons. However, there appears to be a disagreement as to why students should be drug tested. Therefore, it is imperative that school administrators include students in the decision making process and provide them with information regarding the use of drugs among students, and educational strategies to resist using illegal drugs or alcohol. In addition, they should give students a rationale for implementing a drug testing prevention program in the school. The decision whether to implement a drug testing prevention program should not be left to one individual, or even the school board. By making the effort to include all parties involved in drug testing, a school can greatly increase its chances of achieving and adopting a successful testing program (Office of National Drug Control Policy, 2002).

Implementing A Drug Testing Policy

Good planning will get the drug testing prevention program off to a good start. When implementing and/or maintaining a drug-testing prevention program, there are several key elements to ensure its success (Franz, 1999; Kerns, 2000; Elkin, 1999; Murray & Storm, 1995; Office of National Drug Control Policy, 2002). Schools considering drug testing should get public input. Listening to supporters and opponents, and including their views, can strengthen the testing program and increase its chance of being successful (Office of National Drug Control Policy, 2002).

The following aspects of the drug testing policy should be followed when a decision is made to implement drug testing in schools:

- (1) A statement of need and purpose must be articulated; clearly defined goals must be stated, which includes where the school stands on drug testing and what will happen if the policy is violated. A concise policy lets all students, parents, faculty, and staff know there is a commitment to a drug-free school.
- (2) Supporting data for implementing the drug test should be articulated to students, parents, faculty, staff, and community. Education and information are crucial
- (3) The subsequent procedures for collecting the drug sample should be disseminated to students, parents, faculty, and staff at least six months prior to implementing the program. This should include when the test will be conducted and the frequency of testing; the techniques that will be used to collect the drug sample should be stated (i.e. urine, hair, saliva or blood); and the testing laboratory that will be utilized should be properly certified to collect and analyze the samples. Furthermore, the person performing the test should be properly trained. He or she should not be a faculty or staff school employee. The specific drugs that will be tested and the level of confidentiality of the results should be clearly stated, and the action that will be taken for a student's refusal to take the test. Finally the process a student endures for a positive test, and the process of appealing the results or decisions made by the administration should be articulated.

- (4) It is important that all parties involved understand that the goal of school-based drug testing is not to penalize students who use drugs, but to deter and guide those who test positive into counseling and treatment.
- (5) The results of the drug test pursuant to the policy stated above should not be documented in the students' academic record.

School Counselors

The counseling department in most schools is a place where students can go to disclose issues or problems of concern to them. As a result, the following information with help guide school counselors in providing drug related prevention services, interventions, and after-care for students.

School counselors must be aware that implementing mandatory drug testing policies in schools could cause students to become reluctant to talk to them about their drug use. They must be aware that taking away students' right to choose to participate in drug testing may create an atmosphere of rigidity and hostility. Students have a right to be treated with respect and dignity as human beings and a right to counseling services without prejudice. Drug testing may cause students to believe that they will not be treated fairly, as persons who have made a mistake, but rather labeled as a substance user. It is school counselors' ethical duty to ensure that the rights of students are adequately provided for and protected (ASCA, 1992). Drug testing in schools could potentially compromise that principle.

School counselors should not be involved in the process of obtaining the drug sample because this would place them in a dual role and a dual relationship. It is possible that students will no longer view the school counselor as a person with an understanding,

empathetic ear, but rather as the person who will take their drug sample and potentially harm them. As a result, the trusting relationship between the counselor and student could be compromised. However, it is important that school counselors have knowledge of those students who test positive in order to offer support, coordinate intervention and after-care services, and offer supplemental counseling.

Lastly, it is unwise to rely on drug testing as a solution to students' drug usage because it is a singular approach to combating drugs in schools. Therefore, the following strategies are offered to help school counselors develop a more comprehensive substance abuse program: (1) hold school assemblies and have guest speakers to educate students about drug use, and ways to resist using drugs, (2) implement peer facilitator groups for students to share their thoughts, reactions, or drug use, and any other information deemed necessary, (3) implement parent educational seminars about drug use and prevention, (4) implement classroom guidance discussions that focuses on drug prevention topics and prevention strategies, and (5) implement teacher training workshops to help teachers identify student drug use and issues surrounding it.

Recommendations for Further Research

Because drug testing in high schools is a relatively new phenomenon, no research has been conducted to date on high school students' attitudes toward drug testing prevention programs. Since drug testing is becoming more prevalent and remains controversial, high school students are likely to develop their own attitudes regarding the procedures. These attitudes, positive or negative, can affect students' behaviors

(Mastrangelo, 1993). Therefore, more research is needed in this area. Based on the results of this study, the following recommendations for further research are offered:

(1) further research exploring the attitudes of high school students toward drug testing prevention programs should be conducted in other states that have drug testing prevention programs, (2) further research is needed comparing the attitudes of high school students toward drug testing prevention programs in Louisiana with those students from other states. (3) since there was some variability in attitudes toward several characteristics of drug testing programs, further research is needed exploring attitudes of high school students in other parochial schools in other states, (4) further research is needed examining public school students attitudes toward drug testing prevention programs. (5) further research is needed examining private school students' attitudes toward drug testing prevention programs, (6) further research is needed comparing the attitudes and opinions of parochial, private, and public school students' attitudes toward drug testing prevention programs, (7) further research is needed examining the attitudes of parents, teachers, administrators, and the community towards drug testing prevention programs, (8) further research is needed comparing drug testing prevention programs to other prevention programs such as Project STAR, Life Skills Training, and Project ALERT, (9) further research is needed comparing mandatory drug testing prevention programs to voluntary drug testing prevention programs, (10) further research is needed exploring the effectiveness of drug testing prevention programs, and (11) a qualitative approach to high school students' attitudes toward drug testing prevention programs could enhance researchers' knowledge of the issues surrounding drug testing.

Conclusion

This study was a descriptive, exploratory study of high school students' attitudes toward drug testing prevention programs. The findings of this study suggested that high school students tend to have neutral attitudes toward drug testing prevention programs, and that the gender, grade, ethnic background, exposure to experiences related to a drug testing program, illegal drug use, and alcohol use of high school students are related to those attitudes. No relationship was found between students' attitudes toward drug testing prevention programs and involvement in extracurricular activities at school.

These findings suggest high school students are generally somewhat in agreement that drug testing prevention programs are necessary in schools for various reasons. However, there appears to be disagreement as to why students should be drug tested. The knowledge gained from this study can help school administrators and counselors make informed decisions concerning the implementation of drug testing in high schools. Finally, these results provide needed information for school counselors in providing drug related prevention services, interventions, and after-care for students.

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APPENDIX A

Letter to Human Subjects Committee

Dr. Matthew Stanford, Chair
Human Subjects Committee
Department of Psychology
University of New Orleans
New Orleans, LA 70148

Dear Dr. Stanford:

I am a doctoral student in Counselor Education at the University of New Orleans. I am writing this letter to request a formal review by the Human Subjects Review Committee for my dissertation project. The chairperson of my dissertation committee is Dr. Vivian McCollum, Associate professor of Counselor Education in the Department of Educational Leadership, Counseling, and Foundations.

My dissertation instrument is a survey designed to assess the attitudes of high school students towards drug testing prevention programs. I plan to survey high school students in grades 8, 9, 10, 11, and 12 that attend De La Salle High School. I have contacted the principal to obtain school-level cooperation for the study. Approval has been granted. The permission letter is enclosed. Participants will be asked to complete both sections of the survey. They will be asked not to write their names on any survey. Students will place the completed survey in the envelope, seal it, and give it to the teacher. Having the students seal the envelope will protect their anonymity and assure complete confidentiality in their responses. No data will be collected that could be used to identify any of the potential participants.

Please contact me by phone (280-6451) or e-mail (kim9299@bellsouth.net) if you have any questions. If you would prefer to speak with Dr. McCollum, her office phone number is 280-6451 and her e-mail address is vmccollu@uno.edu.

Thank you for your consideration in this matter.

Sincerely,

Kimberly L. Mason, M.Ed.
Doctoral Candidate

APPENDIX B

Letter to the Principal

Project Director – Kimberly L. Mason, Ph.D. Candidate in Counselor Education at the University of New Orleans. New Orleans, LA 70148. 504-280-6454

Thank you for allowing me to use your school to collect data for my research entitled, Drug Testing in High Schools: Attitudes of High School Students. This study will help me explore the attitudes of high school students toward drug testing prevention programs. This research is being done as part of my program as a doctoral student at the University of New Orleans and partial fulfillment of my dissertation under the supervision of Dr. Vivian McCollum, Associate Professor at the University of New Orleans.

The purpose of this study is to gain insight into students' perceptions of mandatory drug test taken in high school and to explore the positive and negative attitudes of drug testing in high schools from the student's perspective. The information students will provide will help me and others gain a better understanding how drug testing affects their attitudes toward this type of drug prevention program, and assist us in formulating better models to deter students from using drugs. In addition, this research project will also provide needed information for school counselors in providing drug related prevention services, interventions, and after-care to adolescents.

Enclosed is a copy of the "Attitudes Toward High School Drug Testing Survey" along with a copy of the letters that will be given to the teachers and students. The survey should take no more than 15 minutes for students to complete. The process of administering and collecting the surveys is as follows.

I will deliver the students' packets to the school representative. The school representative will distribute the packets to the identified teachers. The teachers will administer the survey to all students at the beginning of their class period explaining that student participation is voluntary and would not affect their grade in the class. All students who are present at the time of the survey will be asked to participate. Students who are absent on the day of the survey will not be given an opportunity to participate. Students will be asked to complete both sections of the survey. They will be asked not to write their names on any survey. Students will place the completed survey in the envelope that will be provided, seal it, and give it to the teacher. Having the students seal the envelope will protect their anonymity and assure complete confidentiality in their responses. When the last student turns in his or her completed survey, the teacher will return them to the school's representative. I will collect all of the envelopes from the school's representative at the end of the day.

If you have any further questions, please do not hesitate to contact me at 280-6454. Once again, thank you for allowing me access to your students and your involvement in this important research.

APPENDIX C

Letter to Teachers

Drug Testing in High Schools: Attitudes of High School Students

Project Director – Kimberly L. Mason, Ph.D. Candidate in Counselor Education at the University of New Orleans. New Orleans, LA 70148. 504-280-6454

Thank you for assisting me in administering and collecting the survey entitled, Attitudes Toward High School Drug Testing Survey. This survey will help me explore the attitudes of high school students toward drug testing prevention programs. This research is being done as part of my program as a doctoral student at the University of New Orleans and partial fulfillment of my dissertation under the supervision of Dr. Vivian McCollum, Associate Professor at the University of New Orleans.

The purpose of this study is to gain insight into students' perceptions of mandatory drug test taken in high school and to explore the positive and negative attitudes of drug testing in high schools from the student's perspective. The information students will provide will help me and others gain a better understanding how drug testing affects their attitudes toward this type of drug prevention program, and assist us in formulating better models to deter students from using drugs. In addition, this research project will also provide needed information for school counselors in providing drug related prevention services, interventions, and after-care of adolescents.

Process of Distributing & Collecting the Surveys:

The school's representative will give you packets to distribute to students in your class. You will administer the survey to all students at the beginning of the class period explaining that student participation is voluntary and would not affect their grade in the class. The survey should take no more than 15 minutes for students to complete. Students who are absent on the day the survey will not be given an opportunity to participate. Students will be asked to complete both sections of the survey. They will be asked not to write their names on any survey. Please be sure too reiterate this point to students. Students will place their completed survey in the envelope, seal it, and give it to you. Having the students seal the envelope will protect their anonymity and assure complete confidentiality in their responses. When the last student turns in his or her completed survey, you will return them to the school's representative. I will collect all surveys from the school's representative at the end of the day.

If you have any further questions, please do not hesitate to contact me at 280-6454. Once again, thank you for your cooperation and assistance in this matter.

APPENDIX D
Letter to Students

Project Director – Kimberly L. Mason, Ph.D. Candidate in Counselor Education at the University of New Orleans. New Orleans, LA 70148. 504-280-6454

You are invited to participate in a research study entitled, Drug Testing in Schools: Attitudes of High Schools Students to explore the attitudes of high school students toward drug testing prevention programs. This research is being done as part of my program as a doctoral student at the University of New Orleans and partial fulfillment of my dissertation under the supervision of Dr. Vivian McCollum, Associate Professor at the University of New Orleans.

The purpose of this study is to gain insight into students' perceptions of mandatory drug test taken in high school and to explore the positive and negative attitudes of drug testing in high schools from your perspective. I am asking you to participate in this study because I believe the student's perspective has not been taken into account when administration decided to implement drug testing. The information you provide will help me and others gain a better understanding how drug testing affects students' attitudes toward this type of drug prevention program, and assist us in formulating better models to deter students from using drugs. In addition, this research project will also provide needed information for school counselors in providing drug related prevention services, interventions, and after-care of adolescents.

You teacher will be administering the survey to you at the beginning of the class period explaining that your participation is voluntary and will not affect your grade in the class. The survey should take no more than 15 minutes to complete. **DO NOT** write your name on the survey. Your responses are anonymous so please answer each and every item truthfully. I will be the only person reviewing the results of the surveys. Please complete both sections of the survey. When you are finished, please place the survey in the envelope provided, seal it, and give to the teacher. By sealing the envelope, it will protect your anonymity and assure complete confidentiality in your responses. When the last student turns in his or her completed survey, the teacher will return them to the school representative. I will collect all of the envelopes from the school's representative.

The project does not pose any risks to you. There are no right or wrong answers to the statements. Your participation is entirely voluntarily and you may withdraw from the study at any time with no consequence.

Thank you for taking the time to help me in this important research.

APPENDIX E

Attitudes Toward High School Drug Testing (ATSDT) Survey

Attitudes Toward High School Drug Testing Survey

This questionnaire consists of two sections. The first is a scale describing your attitudes toward drug testing programs. The second is a series of items focusing on general personal information. Please read each of the items in each section carefully and respond appropriately.

There are no identification marks on this survey. Your responses are anonymous so please answer each and every item truthfully. When you are finished, please place the survey in the envelope provided, seal it, and give to the teacher

Section I:

You are asked to respond to each of the following sixteen (16) statements by indicating the extent to which you agree or disagree with each item. To respond, circle the number to the right of each item. There are no right or wrong answers.

Use the following scale to indicate your response:

	1	2	3	4	5					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree					
	(SD)	(D)	(N)	(A)	(SA)					
						SD	D	N	A	SA
1. Drug use is a significant problem for high school students.						1	2	3	4	5
2. There is no real need for drug testing in high schools.						1	2	3	4	5
3. Drug tests accurately differentiate drug users from non-users.						1	2	3	4	5
4. Drug testing should test for all drugs, including alcohol.						1	2	3	4	5
5. Drug testing gives students a legitimate reason to resist using illegal drugs.						1	2	3	4	5
6. Drug testing decreases illegal drug use among high school students.						1	2	3	4	5
7. Drug testing is helpful.						1	2	3	4	5
8. High schools do <u>not</u> have the right to drug test students.						1	2	3	4	5
9. Drug tests are accurate.						1	2	3	4	5
10. Drug testing contributes to a safe school environment.						1	2	3	4	5
11. Drug testing is <u>not</u> fair.						1	2	3	4	5

	SD	D	N	A	SA
12. Drug testing creates mistrust among students.	1	2	3	4	5
13. Every high school student should be drug tested.	1	2	3	4	5
14. A drug testing program creates a favorable impression of the school.	1	2	3	4	5
15. Drug testing is humiliating.	1	2	3	4	5
16. The results of a drug test should be kept confidential.	1	2	3	4	5

Section II:

This section consists of seven (7) questions that focus on some personal information. Please respond to each question by checking the response that most closely reflects your background or most accurately reflects your characteristics.

1. What is your gender?
 - ☐ Male
 - ☐ Female
2. What is your current grade level?
 - ☐ 8th
 - ☐ 9th
 - ☐ 10th
 - ☐ 11th
 - ☐ 12th
3. What is your ethnic background?
 - ☐ American Indian/ Alaskan Native
 - ☐ Asian/ Pacific Islander
 - ☐ Black (not of Hispanic Origin)
 - ☐ Hispanic
 - ☐ White (not of Hispanic Origin)
 - ☐ Other
4. Have you ever been tested for drugs at school?
 - ☐ Yes
 - ☐ No

5. Have you used any illegal drugs in the past month?
- ☐ Yes
 - ☐ No
6. Have you used alcohol in the past month?
- ☐ Yes
 - ☐ No
7. Are you involved in any extracurricular activity at school?
- ☐ Yes
 - ☐ No

APPENDIX F

ATSDT Instrument: Validity and Reliability

Principal Component Factor Analysis with Varimax Rotation (N=620)

Items on the ATSDT	Factor		
	1	2	3
Drug testing gives students a legitimate reason to resist using illegal drugs.	.55		
Drug testing decreases illegal drug use among high school students.	.57		
Drug testing is helpful.	.67		
Drug testing contributes to a safe school environment.	.70		
A drug testing program creates a favorable impression of the school.	.40		
Drug tests accurately differentiate drug users from non-users.	.63		
Drug testing should test for all drugs, including alcohol.	.50		
Drug tests are accurate.	.70		
There is no real need for drug testing in high schools. (R)		.60	
High schools do not have the right to drug test students. (R)		.70	
Drug testing is not fair. (R)		.73	
Drug testing creates mistrust among students. (R)		.65	
Every high school student should be drug tested.		.60	
Drug testing is humiliating. (R)		.73	
Drug use is a significant problem among high school students.			.32
The results of a drug test are kept confidential.			.82

Note: (R) indicates reverse-scored items

Likert's Criterion of Internal Consistency

Item	Statement	Coefficients
1	Drug use is a significant problem among high school students.	.50
2	There is no real need for drug testing in high schools.	.74
3	Drug tests accurately differentiate drug users from non-users.	.50
4	Drug testing should test for all drugs, including alcohol.	.57
5	Drug testing gives students a legitimate reason to resist using illegal drugs.	.60
6	Drug testing decreases illegal drug use among high school students.	.52
7	Drug testing is helpful.	.72
8	High schools do <u>not</u> have the right to drug test students.	.73
9	Drug tests are accurate.	.51
10	Drug testing contributes to a safe school environment.	.70
11	Drug testing is <u>not</u> fair.	.73
12	Drug testing creates mistrust among high school students.	.41
13	Every high school student should be drug tested.	.74
14	A drug testing program creates a favorable impression of the school.	.54

Likert's Criterion of Internal Consistency

Item	Statement	Coefficients
15	Drug testing is humiliating.	.54
16	The results of a drug test should be kept confidential.	.07

VITA

Kimberly L. Mason was born in New Orleans, Louisiana. She earned a Bachelor of Arts degree in Psychology in 1995 and a Masters of Education degree in Counseling in 1997, both from the University of New Orleans. Kimberly was awarded the University of New Orleans Outstanding Masters' Student Award. She is a National Certified Counselor and is eligible for certification as a school counselor in Louisiana.

During the two and half years of her masters' program, Kimberly worked as the program coordinator for an Alzheimer's Unit and completed an internship at a community agency in New Orleans working with individuals, groups, couples, and families. After graduating in 1997, Kimberly worked as a substance abuse counselor, social services director, and a school counselor.

In 2001, Kimberly entered the counseling doctoral program at the University of New Orleans. During that time, she worked full-time as an elementary, middle, and secondary school counselor. While at the University of New Orleans, Kimberly had various opportunities to teach and present at conferences on topics related to school counseling, child and adolescent counseling, group work, and supervision. For two and half years, she provided individual and group supervision for masters' level counseling students, specializing in school counseling and community counseling. During the last year of her doctoral program, Kimberly has been assisting the faculty program coordinator for practicum and internship.

Kimberly has accepted a position for the Fall, 2003 as an assistant professor of counseling at Cleveland State University.

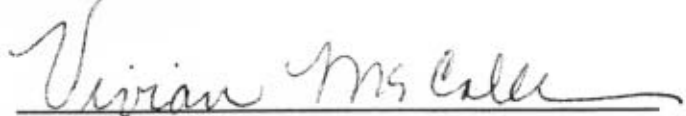
DOCTORAL DISSERTATION REPORT

CANDIDATE: Kimberly Mason

MAJOR FIELD: Counselor Education

TITLE OF DISSERTATION: "Drug Testing in Schools: Attitudes of High School Students"

APPROVED:



Major Professor & Chair
VIVIAN MCCOLLUM

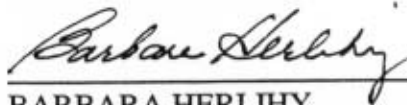


Dean of the Graduate School

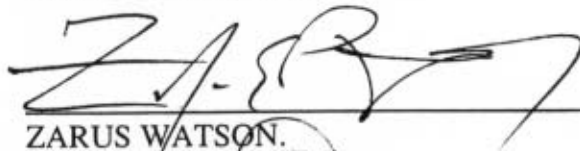
EXAMINING COMMITTEE:



TERESA CHRISTENSEN



BARBARA HERLIHY



ZARUS WATSON.



JEFFREY OESCHER

DATE OF EXAMINATION:

April 29, 2003