Abstract

This article examines the relationship between students and their attitudes towards drugs and the people that use them. The review of literature discusses student's accessibility to drugs, academic performance in relation to drugs, nonacademic factors that contribute to drug use, the prevalence of dropout among drug users and interventions for students using drugs. The authors test their own hypotheses using a data sample collected from a previous survey. The authors expect to find that when questioned about drug attitudes, females will be more likely to have negative attitudes than males. Results varied in regard to assorted variables tested regarding attitudes towards drugs. Additionally, the authors expect that having access to Adderall will increase the likelihood of students thinking that the drug is harmless. Results of this analysis suggest that students are aware of the risks of Adderall and are not influenced in that regard when compared to accessibility to the drug. Limitations regarding the generalizability to the sample are discussed. Further information in relation to students' own experience with and usage of drugs, as well as those of their peers, would provide a more adequate depiction of the relationships of students and drugs. Therefore, making the collection of additional data more helpful in developing and implementing interventions, thus, reducing the occurrence of students using drugs.

Introduction

Drug use among teens and young adults can be simply harmless experimentation, however, it also has the potential to be life altering. In order to understand the occurrence of drug use among this particular population, the contributing factors must be analyzed. Factors, such as, their accessibility to drugs, drug use of family and friends, socioeconomic factors, emotional health, strength of support systems, academic performance and perception of connectedness to peers and community, can all be determinants in whether or not a young person uses drugs themselves. By determining which factors have the strongest relationships to drug use among these populations, solutions and interventions can be implemented to reduce further harm.

In the following review of literature, causational factors and impacts of drug use among teens are explored. The understanding of the factors that influence or contribute to teen drug use is especially important in creating strategies to prevent the occurence of teen drug use. The identification of potential drug use predictors can assist in addressing those factors before the occurrence of engaging in risky behavior, such as drug use.

Review of Literature

Drug Use Among Teens: Implications, Impacts and Interventions

Drug use among teens has steadily remained an issue for decades and continuingly so. Certain factors, such as, a teens accessibility to drugs, their relationships with their peers, the type of peers they associate with and the relationship they have with their guardians all show a significant impact on their propensity to use drugs. Academically, their commitment and attitudes towards school also show potential predictors of drug usage. Nonacademic factors of drug use can impact their academic performance and also their lives outside of school. The accumulation of negative factors both academic and nonacademic increase the risk of a student dropping out of high school. Addressing drug use among teens requires a broad lens and considerations across the inner workings of their social and personal lives.

Accessibility to Drugs

It is relatively easy to assume that individuals who lack the means to obtain drugs will have a rather difficult time using drugs. While this is essentially true, it appears to be slightly more complex when accounting for the ability of others to obtain drugs. Teens, especially at

school, have the ability to venture outside their social circles in order to associate themselves with other social groups that may have a more direct connection to drugs.

According to Hawkins et al. (2013), smoking cigarettes provided adolescents with opportunities to engage with older teens who were more likely to introduce them to further risk behaviors, serving as negative role models. The teens are able to "bum" cigarettes from their older peers and oftentimes have their older peers purchase the cigarettes for them. The initial relationship between the two groups of teens is established based on the exchange of cigarettes but can easily expand into exchanges of more serious substances. Data provided by Yusoff et al. (2014), shows that adolescents who are smokers are 7 times more likely to use illicit drugs in their lifetime. This shows how engaging in on risk behavior can easily encourage the engagement of additional risk behaviors. In having the opportunity to engage in risky behaviors, an individual is more likely to actually engage in the behavior as opposed to never having the opportunity presented to them. Finn (2012) found that when marijuana is easily accessible to students, there is an increased temptation to use the drug. If a student succumbs to the temptation, it is possible that they may use the drug only once, use it recreationally or begin using it habitually, depending on the availability of the drug and their external influences.

Järvinen & Østergaard (2011) established that teens who engage in drug use associate with like-minded peers, thus, increasing opportunity and frequency of drug use. Additionally, the use of alcohol among the teens increased the likelihood of the teens using other drugs as well. The authors surveyed and conducted focus group interviews of teens aged 17-19 about their perception of drugs, their own experiences with drugs and their understanding of their friends' usage of drugs such as cannabis, amphetamines, cocaine and ecstasy. The teens were classified

into groups of attitudes: anti-drug, ambivalent, transitional or pro-drug. Previous data found that

a young person's perception of drugs was strongly correlated to their experience with drugs, and

furthermore, the less dangerous and the more pleasurable the drugs were viewed, the more likely

the teens were to use them. Additionally, males are found to be more pro-drug and use drugs

more frequently than their female counterparts, supported by both Järvinen & Østergaard (2011)

and Yusoff et al. (2014). Both the qualitative and quantitative data analyses showed that peer

influence did not significantly extend across the attitudinal groupings. To be more precise, the

teens who had an anti-drug attitude were less likely to have drugs readily accessible to them as

they were not associating with individuals who shared drastically different views on drugs and

were frequently using drugs. Therefore, making them significantly less likely to be influenced or

encouraged by their peers to change viewpoints on drugs and or participate in drug usage. This

is supported by the findings of Yusoff et al. (2014), in which all drug addict cases were heavily

influenced by their like-minded peers who were also addicted to drugs.

Academic Performance

Many researchers in the past have looked at the relationship between drug use among

teens and the quality of their academic performance. The findings tend to be generally similar in

that there is at the very least, a slight relationship between drug use and those who have lower

levels of academic performance, specifically among adolescents. However, it has yet to be

determined whether drug use is an effect of poor academic performance or a cause of poor

academic performance.

Finn's (2012) research focuses on the relationship between the accessibility of marijuana to high school students and the effect it has on the students' participation in school. Similarly, along with previous research, Finn (2012) found that students who engage in drug use show less participation in school, both socially and academically. Students who are drug users exhibit less motivation to succeed, have lower academic performance, and a lower priority for social acceptance. They also showed decreased levels of attendance compared to their non-using peers, higher levels of academic dishonesty and a higher frequency of receiving discipline. When students attend classes less frequently, they are more likely to fall behind and become disinterested. Thus, raising the question of whether or not the decreased attendance is in direct relation with use of drugs or in relation to other external or internal factors. With that, it is possible that the higher level of academic dishonesty is related to their lack of attendance. Rather, they have a lesser understanding of the topics being covered as a result of them not being present, making cheating a more attractive solution to receiving adequate grades.

The relationship between marijuana usage and achievement/academic performance was consistent throughout gender and racial groups (Finn, 2012). However, William et al. (2007) focused primarily on African American students and their academic performance in relation to drug use. The researchers found that students' marijuana use, the use of substances by their parents and family financial concerns all had impacts on the academic intentions of the students. Students who face troubled lives at home are more likely to have difficulty focusing during school. The study highlighted the relationship between the GPA of the focus group and the connection of either personal marijuana usage or family history of marijuana use.   Since parents typically act as a primary role model, their drug use will likely influence and impact their

children's attitudes and views towards drugs. The data collected by Järvinen & Østergaard (2011), could also be relevant when considering the parent and child relationship. If a teen views their parent, who is a drug user, positively, they may be more likely to have a more positive view on drug use that a teen is a witness to negative consequences to drugs as a result of their parent. Regardless, when academic performance is low among African American students, it is especially important to consider nonacademic factors and family-related correlates in addition to substance abuse as potential contributors.

Nonacademic Factors

Nonacademic factors of drug use cover a wide array of aspects that are either a cause or effect of drug use. Physical effects of drug use can range from minor to deadly. Psychological effects of drug use are vast in both type and severity, depending on the variant of drug used. Nevertheless, drugs seem to have an undeniable effect on the physical and mental health of those who use them. These effects can be strictly personal or extend into their interpersonal relationships. It is, however, apparent that drug use will have at least some impact on the individuals personal and or social lives.

Beamer et al. (1991) and Yusoff et al. (2014) had similar findings that connected drug use to aggressive and violent behaviors. These negative behaviors can quickly result in criminal offenses. It is important to distinguish that this particular effect of drug use can create serious implications for others, not just the drug user themselves. Beamer et al. (1991) also found that drug use can lead to engagement in criminal and or gang activity, and overall disregard of social norms. Gang culture has values and priorities that lie outside the realm of typical societal norms,

especially in regard to using, producing and distributing drugs, all of which are generally criminal. Disregard of societal norms is often associated with a lack of connectedness to the society in which they belong. Young adults and especially college aged individuals, see drug use as an expression of freedom and a sign of maturity. As young adults age, they may feel like they are free to make their own decisions about issues such as drugs. This could also relate to a sense of rebellion against rules and norms they have been subjected to in the past. With that, Finn (2012) observed that there seemed to be a sense of carelessness associated with the teens who were using marijuana. Students were seemingly unconcerned with the likelihood that they will get caught using the drug, since they were not overly cautious about when and where they used it. The students even reported using it in school during the school day, in school bathrooms, hallways or relatively unused spaces within the campus. This exemplifies a defiance to both school rules and authority which may reflect a lack of attachment or identification with the school environment.

Individuals who use drugs such as amphetamines, cocaine, and heroin are shown to have an increased risk of premature death, morbidity and disability (Yusoff et al., 2014). Beamer et al. (1991) and Yusoff et al. (2014) both discussed additional physical impacts of drug use that include, but are not limited to: cardiovascular effects, such as, heart attacks, neurological, gastrointestinal, respiratory effects, HIV/AIDS, and immune deficiency. Yusoff et al. (2014) identified increased engagement in risky sexual behaviors which could explain the findings of Beamer et al. (1991) that there was a higher prevalence of HIV/AIDS among drug users. Yusoff et al. (2014) also found that adolescents who used drugs were more heavily associated with drownings and suicidal behavior. As suicidal behavior is typically related to feelings of

depression, there seems to be a cycle between drug use, depression and suicidal behaviors or ideologies. Individuals who suffer from depression are seen to have a high prevalence of drug use, likely used a method of coping. An increase in teens diagnosed with depression subsequently relates to the increase of the number of teens who use drugs.

Dropout

Mensch & Kandel (1988) found that students who use drugs in high school have a higher tendency to drop out. Furthermore, the variables of drug use and dropout share common antecedents such as lower self-esteem and psychological well-being, a lack of commitment or attachment to traditional societal norms and values, poorer relationships with family members, propensity to engage in risk behaviors and poor academic performance and attendance. The study conducted by Mensch & Kandel (1988) found that drug use was an adequate predictor of dropout, whereas the later study conducted by Hawkins et al. (2013) found that it was not. However, the implication that engaging in risk behaviors during high school has a significant impact on overall performance in school and increases the likelihood of dropout, remains evident. Rather, drug use cannot be viewed as a sole predictor but as a contributing factor combined with other deviant behaviors that result in high school dropout.

Hawkins et al. (2013) predicted a correlation between adolescents who engage in delinquent behaviors, such as, cigarette smoking and the use of marijuana and alcohol, and the probability that they will not complete high school. Previous research already links these delinquent behaviors to poor academic performance in adolescents, thus increasing the likelihood of dropping out of high school. The researchers note that engagement in risk behaviors can

begin as early as middle school when children are transitioning into adolescence. For this

reason, the longitudinal study attempted to identify predictors of students failing to complete

high school by examining the risk behaviors they engaged in starting during their middle school

years. The study was unique compared to previous studies in that it considered multivariate

factors, such as risk behaviors and social class/status, as opposed to singular or isolated factors,

such as, poor academic performance.   Hawkins et al. (2013) found that substance abuse alone

did not significantly predict a failure to complete high school. Rather, poor academic

performance alone was the strongest predictor of dropout. If a student is performing poorly in

school, they are less inclined to continue participating in an activity that they are not excelling in

and are not being rewarded for. Poor academic performance is also extremely likely to be overly

discouraging to students, leaving them with a sense of hopelessness and leading them to dropout.

The stress of underperforming at school could also contribute to a student's decision to drop out.

They may find it more beneficial to themselves at the time to completely remove that stressor

from their life, especially if they have multiple significant stressors outside of school. Overall,

Hawkins et al. (2013) found that nonacademic problem behaviors in middle school, as well as

the effects of poverty, were significant predictors to the likelihood of dropout in high school.

Hawkins et al. (2013) stress the importance of examining nonacademic factors and applying

interventions to both academic and nonacademic problems in order to reduce the risk of drop out

during high school.

Interventions

Historical drug prevention programs focused on drug education, life skills training and peer resistance. As discussed by Beamer et al. (1991) the Community Intervention approach engages the collective community rather than the individual alone or in conjunction with the family and school systems. This approach not only addresses the impacts and risks involved with drug use, but also identifies resources and assistance available, encourages community involvement and self-awareness and offers a plan of action for immediate change. Among the types of interventions tested, the Community Involvement model saw the greatest decrease in drug use among participants making it the most effective approach. This approach can help establish a greater bond between individual and society. As previously discussed, the lack of such a bond is seen as a potential inhibitor to engaging in behaviors that defy social norms, such as drug use. Additionally, similar findings suggest that teens need strong support systems in order to remain connected within their community/society. According to Finn (2012), schools with less supervision and engagement with students have a higher probability of increased number of students who are using the drug. Similarly, a lack of peer support and parental or guardian connectedness and supervision were strongly correlated with drug use among adolescents (Yusoff et al., 2014). These findings highlight the importance of teens feeling a sense of support and belonging in order for them to succeed. Without those support systems and a sense of belonging, they are more likely to engage in risk behaviors and become deviant in order to fit into other social groups.

As found by Järvinen & Østergaard (2011), there is a notable difference seen in the lives of the pro-drug group and the anti-drug group and the two groups do not typically intermingle, which suggests a need for different strategies for preventing and reducing drug use among teens

of different attitudinal groups. Rather, the same approach used for abstainers will not be effective in targeting active drug users. Strategies targeting active drug users should focus on changing their perception of drugs and convincing them that the dangers outweigh the pleasures of the drug. Moreover, pro-drug groups may be difficult to convince as they are known to heavily influence each one another. Therefore, a strategic approach to pro-drug groups might require unconventional or even shockingly direct messages to penetrate the layers of influence and attitudes they have associated with drugs.

Lastly, each study that used self-reporting as their means of data collection acknowledged this as a limitation to their research. The assumption is generally that adolescents are more likely to under report their drug use for fear of punishment rather than over reporting as this would serve them no benefit. As a result, the possibility should be considered that drug use among adolescents is slightly higher than the reported data illustrates. For this reason, interventions should consider including de-stigmatization criteria that does not place shame or blame on the individuals who are using drugs. Doing so could potentially have a more positive impact on preventing and reducing drug use among teens and even into adulthood.

Methods

A secondary quantitative analysis of data was performed using data extracted from a 2018 survey of southwest Virginia college students. The survey was conducted by student researchers in the department of Sociology for the purposes of statistical analysis. The survey explored students' attitudes towards drug use and their perceived accessibility to drugs. Specifically, the survey asked students if they knew other students whom they could obtain

"smart pills" or adderall from and whether or not they believed they should be allowed to use the drug. Survey questions aimed to assess the students' tolerance and opinions of others who use drugs and how they should be punished if caught. It also attempted to assess which drugs the students' viewed as the most harmful. The survey also asked which drugs (including: cannabis, ecstasy, cocaine, heroin, LSD, ritalin, and amphetamines) the students had heard of previously. The survey also asked the respondents about their opinion on the strictness of drug rules at their school and if they believed them to be strict enough. It also asked if the school provides drug and alcohol education and if they believed that program to be adequate.

A 5-point Likert scale was used to determine the level of risk the students' believed that drug users subject themselves to physically, mentally or otherwise. The categories of the scale included no risk, little risk, some risk, great risk and "can't say". For this scale, the respondents answered questions in regard to drugs ranging from cigarettes to amphetamines, each one distinguishing between those who have only tried the drug and those who use the drug regularly. An additional 5-point Likert scale assessed the level of approval the students felt towards other individuals who were over the age of 18 in regard to various drugs. The scale categories included strongly disapprove, disapprove, no opinion, approve and strongly approve. For each category of drug, ranging from cigarettes to amphetamines, the respondents were asked their level of approval for both trying it once and using the drug regularly.

The sample population of 216 respondents consisted of 18-48 year olds with the average age being 20. Of those 216 respondents, 126 identified as female, 84 as male and 6 declined to identify their gender. The variable of race was not considered in the survey but future research may find that this variable is worth examining in regard to this particular area of research. Of the respondents, the most frequently occurring majors were criminal justice, business, science, and

liberal studies. The respondents ranged in class status from freshman to graduate students, more specifically, 20 freshmen, 29 sophomores, 84 juniors, 74 seniors, 4 graduate students and 5 who chose no to disclose their status.

The authors acknowledge the issues regarding generalizability associated with the nonprobability sample being used. The sample population is only representative of a small region within the United States. Additionally, the sample population only reflects the opinions of college students and not the general population.

After reviewing the existing research, as well as the survey, the authors were able to determine two hypotheses to test for the purposes of this research. First, if students are questioned about their attitudes towards drugs, females are more likely to have a negative attitude towards drugs than men. Second, if a student knows someone who uses adderall, they are more likely to think they are harmless.

Findings

The authors created the variable *drug attitudes* by combining the variables of *cannabis law, tougher sentences* and *criminal or victim*. The new variable was used to compare viewpoints based on the survey questions of "the use of cannabis should not be against the law", "tougher sentences for drug misusers is the answer to drug problems", and " I would see drug addicts more as criminals than victims". Each question utilized a Likert scale for responses. The authors felt that these questions in combination should provide adequate insight into the respondents overall opinion on drugs and those who use them. In order to determine if there was a significant difference between the attitudes expressed in those responses and the male and female respondents, an F-test was conducted. This particular test allows the authors to examine

both the female and male groups at the same time in respect to the variables within the *drug attitude* variable.

The test results showed a significance level of .004 which urges the acceptance of the research hypothesis, at a confidence interval of 95%. The research if students are questioned about their attitudes towards drugs, females are more likely to have a negative attitude towards drugs than men. The mean for the male cohort is 9.2024 and the female cohort mean is 9.9524, which suggests that the female cohort is likely to have more negative attitudes towards drugs than the male cohort.

Next, the authors tested 5 variables independently against male and female cohorts in order to test the first hypothesis. In table 1.2, the results of the independent t-test show that when comparing male and female responses of the potential of drugs being a pleasant activity, a significance level of .073 is calculated. Using a 95% confidence interval, the authors then accept the null hypothesis which is that there is no relationship, and there is no significant difference between the responses of males and females.

Table 1.3 shows the results of the independent t-test which compares male and female opinion of all drugs being harmful. Again, using a confidence level of 95%, the authors accept the null hypothesis with a significance level of .566. There is not a significant difference in the responses of male and female attitudes of drugs being perceived as harmful. Table 1.4 shows the results of the independent t-test comparing male and female responses to the survey question of, "Our society is too tolerant towards drug users". The significance level of .339 would cause the researchers to again accept the null hypothesis, at a 95% confidence interval, suggesting no significant difference between the attitudes in the two groups. In table 1.5, the results of the independent t-test comparing male and female responses to the survey question asking if they thought cannabis should be legal show a significance level of .005. Using a 95% confidence interval the authors accept the null hypothesis of no relationship. However, the mean for females is slightly higher than the mean for males suggesting that females may have a slightly harsher opinion regarding cannabis legality than males.In table 1.6, the results of the independent t-test comparing male and female responses to the survey question asking if they

believed that using prescription drugs were "not as bad" as using other drugs show a significance level of .858. Using a 95% confidence interval, the research hypothesis is rejected, and the null hypothesis is accepted. Rather, there is no significant difference in attitudes regarding the use of prescription drugs between males and females.

Table 1.7 shows the results of comparing the attitudes of males and females of whether they believe that their school has strict enough rules regarding drugs and alcohol. Using a 95% confidence interval, the significance level calculated in the t-test performed was .346. As a result, the authors accepted the null hypothesis that there was no significant difference in attitudes between males and females regarding their opinion if the school has strict enough rules on drugs and alcohol.

Lastly, the authors tested their second hypothesis using a chi-square analysis. This test allows the authors to determine a relationship between two variables. The two variables being compared are *know smart pill* and *smart pill harmless*. *Know smart pill* was created based on respondents' answers to the survey question of "I know students that I can get "smart pills"/Adderall from". The variable *smart pill harmless* was created from the survey question "I think "smart pills"/Adderall is harmless". The significance level of .139 causes the authors to accept the null hypothesis of no relationship. Moreover, knowing where to get Adderall does not show to be a significant predictor in a student believing that they are harmless.

Table 1.1 F-Test Comparing Drug Attitudes in Males and Females

The attitude towards drugs was compared between male and female respondents using an F-test. The resulting significance level of .004 suggests that there is a difference in relationships between male and female attitudes towards drugs.

Drug Attitudes in Males and Females

Descriptives

drugattitudes

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum
					Lower Bound	Upper Bound	
male	84	9.2024	1.91242	.20866	8.7874	9.6174	4.00
female	126	9.9524	1.74290	.15527	9.6451	10.2597	6.00
Total	210	9.6524	1.84524	.12733	9.4014	9.9034	4.00

Descriptives

drugattitudes

	Maximum
male	14.00
female	14.00
Total	14.00

ANOVA

drugattitudes

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	28.350	1	28.350	8.630	.004
Within Groups	683.274	208	3.285		
Total	711.624	209			

Table 1.2 Independent T-Test Comparing Male and Female Opinions If Drugs Can Be Pleasant.

Male and female opinions regarding the potential for drugs being a pleasant activity were compared. The significance level of .073 suggests that there is no relationship between male and female attitudes that drugs can be a pleasant experience.

Male and Female Opinions If Drugs Can Be Pleasurable

Group Statistics

	sex	N	Mean	Std. Deviation	Std. Error Mean
pleasant	male	81	4.17	10.731	1.192
	female	126	3.01	1.156	.103

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
pleasant	Equal variances assumed	3.246	.073	1.209	205
	Equal variances not assumed			.973	81.195

Independent Samples Test

		t-test for Equality of Means			95% Confidence Interval of the Difference
		Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower
pleasant	Equal variances assumed	.228	1.165	.963	-.734
	Equal variances not assumed	.333	1.165	1.197	-1.216

Independent Samples Test

		t-test for Equality of Means
		95% Confidence Interval of the Difference
		Upper
pleasant	Equal variances assumed	3.064
	Equal variances not assumed	3.546

Table 1.3 Independent T-Test Comparing Male and Female Opinions Of All Drugs Perceived As Harmful.

Male and Females were compared in their overall perception of drugs being harmful. The significance score of .566 suggests that there is no significant difference in perceptions.

Male and Female Opinions Of All Drugs Perceived As Harmful

Group Statistics

	sex	N	Mean	Std. Deviation	Std. Error Mean
all drugs	male	83	3.90	1.236	.136
	female	126	5.09	8.491	.756

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
all drugs	Equal variances assumed	.331	.566	-1.260	207
	Equal variances not assumed			-1.540	132.959

Independent Samples Test

		t-test for Equality of Means			95% Confidence Interval of the Difference
		Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower
all drugs	Equal variances assumed	.209	-1.184	.939	-3.035
	Equal variances not assumed	.126	-1.184	.769	-2.704

Independent Samples Test

		t-test for Equality of Means
		95% Confidence Interval of the Difference
		Upper
all drugs	Equal variances assumed	.668
	Equal variances not assumed	.336

Table 1.4 Independent T-Test Comparing Male and Females Opinions Of Societes Level Of Tolerance Towards Drugs.

Respondents were surveyed on their opinion on if society is too tolerant in regard to drugs. The significance level of .339 suggests that there is not a significant difference in opinions between males and females.

Male and Females Opinions Of Societes Level Of Tolerance Towards Drugs

Group Statistics

	sex	N	Mean	Std. Deviation	Std. Error Mean
soc tolerant	male	84	3.35	1.114	.122
	female	126	3.19	1.049	.093

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
soc tolerant	Equal variances assumed	.917	.339	1.022	208
	Equal variances not assumed			1.010	170.512

Independent Samples Test

		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
soc tolerant	Equal variances assumed	.308	.155	.151
	Equal variances not assumed	.314	.155	.153

Independent Samples Test

		t-test for Equality of Means	
		95% Confidence Interval of the Difference	
		Lower	Upper
soc tolerant	Equal variances assumed	-.144	.453
	Equal variances not assumed	-.148	.457

Table 1.5 Independent T-Test Comparing Male and Female Opinions Of Cannabis Legality.

Respondents were surveyed on their opinions regarding if cannabis should be legal. The significance level of .05 suggests that there is not a significant enough difference between males and females to prove a relationship.

Male and Female Opinions Of Cannabis Legality

Group Statistics

	sex	N	Mean	Std. Deviation	Std. Error Mean
grass law	male	84	1.88	1.069	.117
	female	126	2.41	1.292	.115

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
grass law	Equal variances assumed	8.234	.005	-3.126	208
	Equal variances not assumed			-3.246	198.415

Independent Samples Test

		t-test for Equality of Means			95% Confidence Interval of the Difference
		Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower
grass law	Equal variances assumed	.002	-.532	.170	-.867
	Equal variances not assumed	.001	-.532	.164	-.855

Independent Samples Test

		t-test for Equality of Means
		95% Confidence Interval of the Difference
		Upper
grass law	Equal variances assumed	-.196
	Equal variances not assumed	-.209

Table 1.6 Independent T-test Comparing Male and Female Attitudes on Prescription Drugs

An independent t-test examines the responses to the question of if students think prescription drug use is not as bad as using other drugs. The significance level of .858 suggests that there is no significant difference in the opinions between male and females.

Male and Female Attitudes on Prescription Drug Use					
Group Statistics					
	sex	N	Mean	Std. Deviation	Std. Error Mean
not as bad	male	84	3.18	1.224	.134
	female	126	3.27	1.248	.111

Independent Samples Test					
		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
not as bad	Equal variances assumed	.032	.858	-.523	208
	Equal variances not assumed			-.525	180.440

Independent Samples Test				
		t-test for Equality of Means		
		Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference
					Lower
not as bad	Equal variances assumed	.601	-.091	.174	-.435
	Equal variances not assumed	.600	-.091	.174	-.434

Independent Samples Test	
	t-test for Equality of Means
	95% Confidence Interval of the Difference
	Upper
not as bad	Equal variances assumed	.253
	Equal variances not assumed	.252

Table 1.7 Independent T-test Comparing Male and Female Attitudes of Their School Having Strict Enough Rules Towards Drugs and Alcohol.

An independent t-test was performed to determine if there was a difference in male and female attitudes regarding their schools strictness of rules on drugs and alcohol. A significance level of .346 suggests that there is not a significant difference in the attitudes of males and females.

Group Statistics					
	sex	N	Mean	Std. Deviation	Std. Error Mean
strict rules	male	84	1.67	.883	.096
	female	126	1.84	.852	.076

Independent Samples Test					
		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
strict rules	Equal variances assumed	.894	.346	-1.434	208
	Equal variances not assumed			-1.424	173.706

Independent Samples Test				
		t-test for Equality of Means		
				95% Confidence Interval of the Difference
		Sig. (2-tailed)	Mean Difference	Std. Error Difference
				Lower
strict rules	Equal variances assumed	.153	-.175	.122	-.415
	Equal variances not assumed	.156	-.175	.123	-.417

Independent Samples Test	
	t-test for Equality of Means
	95% Confidence Interval of the Difference
	Upper

strict rules	Equal variances assumed	.065
	Equal variances not assumed	.067

Table 1.8 Chi-Square Comparing Knowing Where To Get Adderall and Thinking It Is Harmless

Respondents were asked if they knew how to get adderall and also if they perceived the drug as harmless. Participants knowing where to obtain adderall was compared to their opinion of its harmfulness using. The .139 level of significance suggests that there is no relationship between the attitude of harmlessness and availability.

Knowing Where To Get Adderall and Thinking It Is Harmless

know smart pill * smart pill harmless Crosstabulation

Count

		smart pill harmless			Total
		Yes	No	3	
know smart pill	Yes	43	99	0	142
	No	12	60	1	73
	3	0	1	0	1
Total		55	160	1	216

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.947[a]	4	.139
Likelihood Ratio	7.652	4	.105
Linear-by-Linear Association	5.963	1	.015
N of Valid Cases	216		

Conclusion

Based on the review of the literature, the authors of this paper believed that they would find a significant difference in the attitudes towards drugs of male and female respondents. However, the results of the data analyzed by the authors suggest further research would need to be conducted in order to fully understand if females are actually more likely to have negative attitudes towards drugs than men. Of the five tests conducted to test the first hypothesis, the f-test was the only test that showed a significant difference in attitudes between males and females. The independent t-tests all showed no relationship. This disparity can likely be explained by the variables tested. In the future, the authors should test each variable concerning drug attitudes independently in order to determine in which specific areas the male and female opinions significantly differ from each other. Since the variable *cannabis law* was tested independently and the research hypothesis was rejected in that instance, the authors can assume that the disparity in opinions occurs in either the *tougher sentences* or the *criminal or victim* variable of the *drug attitude* variable. Testing these two variables independently would be particularly helpful in determining where the inconsistency takes place. Additionally, there are many other variables from the survey questions that could be tested in order to create a better understanding of overall attitudes towards drugs in both male and female cohorts. It is possible that male and female opinions simply don't differ in regard to the specific questions the authors tested and that testing other variables would show a more accurate depiction. Extensive further research would be necessary to determine the extent of females potentially having more negative

attitudes towards drugs than their male counterparts. Furthermore, it would be helpful if researchers were able to determine *why* females are more likely to have negative attitudes towards drugs than males. Factors such as aversion to risk, education, and personal experience with drugs could all contribute to a person's attitude towards drugs. In becoming aware of what factors contribute to negative attitudes towards drugs, researchers could potentially determine strategies to change the mindsets of individuals who struggle with drug use in order to reduce the occurrence of usage.

The authors also believed that students knowing where to get adderall would lead them to perceive the drug as harmless. The results of the chi-square analysis suggest otherwise. In fact, only 55 respondents admitted to thinking that adderall was harmless, regardless of if they knew how to get it or not. However, the majority of those who did respond as thinking that adderall was harmless did know where to get it, as well. Furthermore, 142 of the 216 respondents, or 65.74%, admitted that they knew where to obtain the drug. Also, 160 of 216, or 74.07% of respondents believed the drug to be harmless overall. This perhaps suggests that awareness in respect to this specific drug is reflected in the students opinions. Students may be sufficiently educated on the risks related to the drug adderall. This analysis does fail to determine whether or not the students are actually using the drug, regardless of their knowledge of its potential harm. Having this additional data would better allow the researchers to analyze the relationship between students and adderall. Comparing their attitudes to usage could provide useful information, especially if it is found that students are aware of the harm but are still using the drug. From there, researchers could go on to attempt to determine why students are misusing adderall. Having such information would allow researchers to identify solutions to the problem or interventions to reduce the occurrence of adderall misuse. Furthermore, it would be useful to

determine the results from similar testing on other variants of drugs as well. This would allow researchers to determine a more generalized assumption regarding the impact of accessibility to drugs and the likelihood of using drugs.

Generally, the authors believe that the respondents own experience with various drugs would be a beneficial addition to the data set. This data would provide a much better depiction of students' relationships to drugs and their mindsets. It would also be helpful to determine the students' peers experience and attitudes towards drugs. Having this additional data would allow researchers to examine the relationships between drugs and students in much greater detail. The current data set is limiting in it's potential findings to only opinions on drugs and specifically opinions regarding *others* using drugs, which completely neglects self-use as an important factor to the overall issue. Additional limitations include the generalizability of the sample. Since the sample population was composed of students from one university, where the majority of students are residents of the same state, it can be assumed that overall attitudes will be similar in respect to socialization in that area. Moreover, the sample represents a mostly rural population. Variation of respondents from both rural and urban areas over a nationwide area might provide a more generalizable sample. Conversely, it could also be useful to examine such a sample by comparing the attitudes in rural and urban areas overall and similarly comparing various regions throughout the United States.

Overall, these analyses account for an incredibly miniscule measure of the issue of drugs. Greater researcher has the potential to determine relationships between students and drugs, why they use them and what affects their opinions of them. In acquiring such knowledge, researchers and professionals across various fields of study, can design and implement programs to reduce the occurrence of drug use, such as, educational programs, resistance programs and effective

rehabilitation programs. Understanding the reasons why students turn to drugs can allow professionals to focus on addressing those concerns and thus reducing the desire to engage in risk behaviors, before students actually begin experimenting with drugs.

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