

An Analysis of Violence Victimization, Substance Use, and Gender as Predictors of Violence
Perpetration among Adolescents

by

Enzo Codella

Honors Thesis

Appalachian State University

Submitted to the Department of Psychology

in partial fulfillment of the requirements for the degree of

Bachelor of Arts

May, 2018

Approved by:

John Paul Jameson, Ph.D., Thesis Director

Twila A. Wingrove, J.D., Ph.D., Second Reader

Andrew Smith, Ph.D., Departmental Honors Director

Abstract

Purpose: The present study examined potential predictors for interpersonal violence perpetration among adolescents, focusing primarily on reported violence victimization but also analyzing reported substance use and gender. **Method:** I made correlational assessments using data from the Youth Risk Behavior Surveillance System (YRBS). I used 11,306 responses to this survey in the present study (mean age, 16.1, SD = 1.2). I focused on questions related to violence perpetration (physical or sexual), to violence victimization (physical or sexual), and to substance use (alcohol bingeing or marijuana use). I ran a simultaneous binomial logistic regression as well as separate chi-square tests to test the strength of the correlations between each categorical predictor and violence perpetration. **Results:** Participants who reported violence victimization were at three times higher risk of perpetrating violence than those who reported no victimization. Moreover, adolescents who reported substance use were at twice the risk of perpetrating violence than nonusers; this was the case both for alcohol users and for marijuana users. Finally, the risk of violence perpetration among males was almost three times that of females. **Conclusions:** Given the correlations observed in the current study, preventative efforts may focus on adolescent victimization, substance use habits, and gendered socialization as a means to reduce the prevalence of violence perpetration among adolescents.

Permission is granted to Appalachian State University and the Department of Psychology to display and provide access to this thesis for appropriate academic and research purposes.

An Analysis of Violence Victimization, Substance Use, and Gender as Predictors of Violence Perpetration among Adolescents

Violence among adolescents is a serious and widespread problem throughout the United States. Haynie et al. (2013) studied a nationally representative sample of 10th graders and found that 35% reported victimization and 31% reported perpetration of interpersonal violence. Youth violence is the third most prevalent cause of death for youth aged 15 to 24 in the country (Centers for Disease Control and Prevention [CDC], 2015a). Juveniles make up 10.2% of violent crime arrests, including murder, forcible rape, and aggravated assault, and 14.3% of property crime arrests (CDC, 2016). Roughly one in four adolescents between 9th and 12th grade reported participating in physical fights and about one in six reported carrying lethal and non-lethal weapons (CDC, 2016). Along with their significant rates of violence perpetration, adolescents experience alarming rates of violence victimization. Approximately two-thirds of adolescents aged 12 to 18 and in romantic relationships report that they have either been victimized by or that they perpetrated violence against their partner (National Institute of Justice [NIJ], 2017). These behaviors seem to escalate with time, as about 7% of females and 4% of males report being a victim of rape, physical violence, or stalking by partners who had previously inflicted physical violence on them (CDC, 2017).

Previous studies have found strong correlations between violence victimization and violence perpetration among adolescents. Novak and Furman (2016) surveyed a nationally representative sample of adolescents aged 14 to 16 to determine what models best predicted their perpetration of violence. They found significant overlaps between the models for violence victimization and violence perpetration, suggesting that these two experiences tend to co-occur frequently and perhaps share common risk factors. This finding is supported by Bell and Naugle's (2008) contextual framework for interpersonal violence, in which they point out the

many factors that facilitate the development of intimate partner violence. According to this framework, the most direct predictors of interpersonal violence are what Bell and Naugle (2008) call *proximal antecedents*, which include violence victimization among other distressful interactions with one's partner. The importance of this framework is in its implication for directionality, so that experienced victimization by a dating partner directly increases the overall risk of perpetration of violence, offering a theoretical explanation for Novak and Furman's (2016) observations.

Substance use is another frequently cited risk factor, though its relationship with violence perpetration may be nuanced. Rothman, Reyes, Johnson, and LaValley (2012) point out that acute alcohol intoxication increases the risk for violence perpetration, as posited by the proximal effects model. The reason behind this phenomenon, they explain, is that alcohol intoxication hinders cognitive capacities, resulting in exaggerated responses to perceived provocations and reduced behavioral inhibition. Moreover, Rothman et al. (2012) explain that adolescents are particularly vulnerable to alcohol intoxication given their reduced capacity for cognitive inhibition as compared to adults. White, Fite, Pardini, Mun, and Loeber (2012) observed this pattern when researching the effects of substance use in delinquent behaviors. White et al. (2012) used the Pittsburgh Youth Study, a longitudinal study that followed male students from first through seventh grade in the City of Pittsburgh public school system. White et al. (2012) also used the Youth Self-Report aggression subscale, which consisted of items for interpersonal violence perpetration such as "getting into fights" and "disobeying parents," to measure aggressive behaviors. The researchers found that increased alcohol use predicted increased aggression among students continuously exposed to violence (e.g. from high-crime neighborhoods).

Conversely, White et al. (2012) observed that increased marijuana use predicted

decreased overall aggressive behavior. These observations suggest that different substances have different—even opposite—effects on interpersonal violence perpetration, a phenomenon that merits further examination. Interestingly, other studies have found a different impact of marijuana use on violence perpetration. Reingle, Staras, Jennings, Branchini, and Maldonado-Molina (2012) used Add Health data to conduct bivariate analyses on a nationally representative sample of middle- and high-school students and found that adolescents who reported marijuana use were also more likely to report violence perpetration than those who reported no use. The risk of violence perpetration among those who reported marijuana use ranged from 1.2 to 2.4 times higher than that for non-users, and students who reported more consistent use were more likely than not to have a higher risk for violence perpetration. Reingle and colleagues' (2012) findings stand in stark contrast to the findings of White et al. (2012), as the former establish a positive association between marijuana use and violence perpetration, but the latter observed that such relationship had a negative directionality. A noteworthy addition to this controversy is that marijuana intoxication is often associated with relaxation and calmness among adolescents (Barthelemy, Richardson, Cabral, & Frank, 2016). These seemingly contradictory conclusions highlight the need for further research that may consistently clarify the effects of marijuana use on violence perpetration.

In addition to these factors, past research suggests that patterns of violence perpetration differ between genders, although the degree of differentiation varies for distinct forms of violence. Bonomi, Anderson, Nemeth, Rivara, and Buettner (2013) found remarkable disparities in the prevalence of violence depending on the gender of the victim, noting that 67.4% of females aged 13 to 19 experience dating violence victimization versus 57.1% of males in the same age group, and that females are four times more likely than males to experience sexual violence victimization. These victimization rates seem to correspond with the prevalence of

violence perpetration among adolescents according to their gender. Rothman et al. (2011) recruited adolescent patients at the Boston University Medical Center and observed similar relationships between victimization and violence perpetration and between substance use and violence perpetration among males as among females. Still, the researchers indicated that the magnitude of these relationships and the concrete pathways toward violence perpetration differed depending on the perpetrators' genders. These findings are critical in understanding the gendered aspect of violence perpetration as a function of previous victimization.

There is, however, some controversy surrounding violence rates according to gender. Novak and Furman (2016) observed that the males in their sample were twice as likely as the females to be victims of violence. While the reason for such rates is unclear, the researchers suggest that females' responses to these types of surveys are limited to severe cases of victimization. Novak and Furman (2016) also found no significant gender differences for violence perpetration in their sample. Likewise, Reingle et al. (2012) observed that males in their sample were more likely to be victimized by their intimate partners than females. Interestingly, Reingle et al. (2012) also determined that females were more likely than males to perpetrate violence against their intimate partners. Reingle et al. (2012) suggested that these numbers may have resulted from underreporting of victimization by females or that they may reflect the victim-offender overlap in intimate partner violence. In any case, the fact that such a discrepancy exists in the literature merits further research exploring the relationship between gender and violence perpetration.

Despite the existing research, some aspects of the factors driving violence perpetration among adolescents remain unclear. One such aspect is the direct relationship between violence victimization and violence perpetration, independently of other variables; the current study will seek to determine the extent to which violence victimization may uniquely predict perpetration

of violence. Further, even though there seems to be a positive relationship between substance use and violence, the available literature does not deeply address the nuanced impacts of different substances, namely alcohol and marijuana, on violence perpetration. Hence, the current study will compare whether alcohol and marijuana have different effects on violence perpetration and, if so, analyze the degree of difference. Lastly, much of the research on gender differences for violence perpetration seems highly inconclusive, with some studies suggesting no gender effects whatsoever on violence perpetration. The current study will add to the existing literature on this matter by evaluating gender difference in cases of reported violence and seeking to establish the degree to which gender may predict violence perpetration.

I hypothesize that reported previous violence victimization predicts reports for future violence perpetration among adolescents. Further, I want to investigate whether substance use independently and differentially predicts violence perpetration; I predict that alcohol use, given its disinhibitory effects, promotes perpetration of violence and that marijuana use, given its alleged relaxing properties, predicts a lower frequency of violence perpetration. Lastly, I predict that males will be more likely to engage in violence perpetration than their female counterparts.

Method

Participants and Procedure

The Youth Risk Behaviors Survey (YRBS) yields a nationally representative sample of high school students (9th through 12th grade) using a three-stage cluster sampling frame (CDC, 2015b). The 2015 national YRBS sampled students from all regular public, Catholic, and other private schools across all 50 states and Washington D. C. Of the 180 schools systematically sampled, 125 participated in the survey, and the student response rate in these schools was 86% (15,713 total responses). Cases missing data for the variables of interest were excluded, leaving 11,306 respondents in the current study. The demographic characteristics of

my sample are noted in Table 1. It is notable that participants reported their sex as either male or female; no other options were presented.

YRBS Items

Violence perpetration questions. The YRBS presents 6 questions regarding violence perpetration. The criterion variables for violence perpetration—items involving fighting and weapon carrying—were collapsed into an aggregate for any type of perpetration. Participants indicated the frequency within the last 12 months of their engaging in physical fights, of their being injured and later treated by a doctor or nurse, and of these fights occurring on school property. Another set of questions prompted participants to indicate the frequency within the last 30 days of their carrying any kind of weapon, of their carrying a gun specifically, and of their carrying any of these weapons on school property. Participants reported that they engaged in these behaviors zero, one, or multiple times. To create a binary variable, participants who responded affirmatively to one or more of these questions were classified as perpetrators and respondents who responded negatively to all these questions were classified as non-perpetrators.

Violence victimization items. The predictor variables for violence victimization—items involving physical and sexual victimization—were collapsed into an aggregate for any type of victimization. Participants were classified as violence victims if they responded affirmatively to one or more of the following items: having been threatened or injured with a weapon on school property within the last 12 months, having ever been physically forced to have sexual intercourse, having been forced to do sexual things (e.g., kissing, touching, and sexual intercourse) by their dating partner within the last 12 months, and having been physically hurt on purpose by their dating partner (including being hit, slammed, or injured) within the last 12 months.

Substance use items. To understand the impact of substance use in the relationship

between violence perpetration and previous violence victimization, I analyzed alcohol and marijuana use as predictor variables. I defined alcohol use as binge drinking (five or more drinks within two hours) of alcohol once or more in the 30 days prior to completing the survey. I defined marijuana use as having used marijuana for one or more times within 30 days prior to completing the survey.

Analytic Plan

Separate chi-square tests were used to test whether each of the categorical predictors (sex, violence victimization, marijuana use and alcohol use) was independently related to violence perpetration. Variables that were significantly related to violence perpetration were entered as categorical predictors into a simultaneous binomial logistic regression model to determine whether each made a unique contribution to predicting likelihood of violence perpetration. I interpreted the regression model's beta weights and odds ratios to denote the strength of these relationships.

Results

Among respondents, 29.3% reported any type of violence perpetration, 17% reported any type of violence victimization, 17.5% reported binge-drinking alcohol, and 21.1% reported using marijuana. Results of chi-square tests can be found in Table 2. Approximately half of participants who reported having experienced violence victimization in the past reported perpetrating violence (48.6%), compared to only 25.3% of participants who reported no history of violence victimization. Slightly over half of participants who reported alcohol bingeing also reported violence perpetration (50.5%), compared to only 24.8% of participants who reported no alcohol bingeing. Slightly less than half of marijuana users reported violence perpetration (48.8%), compared to 24% of nonusers. Almost two-fifths of male respondents reported violence perpetration (38.3%), compared to only 20.5% of female respondents.

Because statistically significant relationships were found between each of the predictors and violence perpetration, all predictors were retained in the simultaneous binomial logistic regression models. An omnibus test of model coefficients revealed that the overall model partially predicts violence perpetration, $\chi^2(4; n = 11,306) = 1505.29, p < .001$, Nagelkerke's $R^2 = .18$. Beta weights were examined to determine whether the predictor variables analyzed uniquely predicted violence perpetration. Results supported the hypothesis that previous victimization predicts future violence perpetration, $B = 1.10, p < .001, OR = 2.99$. Additionally, results supported the hypothesis that alcohol use predicts perpetration of violence, $B = .72, p < .001, OR = 2.04$. Contrary to my expectations, results did not support the hypothesis that marijuana use is inversely associated to violence perpetration, $B = .70, p < .001, OR = 2.00$. Lastly, results supported the hypothesis that males would be more likely than females to perpetrate violence, $B = 1.09, p < .001, OR = 2.98$.

Discussion

The present study investigated associations between violence victimization, substance use, and gender with violence perpetration among adolescents. My findings support the primary hypothesis that previous violence victimization predicts violence perpetration. I noticed that, among the respondents who reported violence perpetration, those who had been victimized had three times higher odds of perpetrating violence than those who had experienced no victimization. These rates suggest that violence victimization had, among my predictors, the strongest correlation with violence perpetration. These findings are consistent with Novak and Furman's (2016) and seem to confirm the model by Bell and Naugle (2008) positing that proximal antecedents such as violence victimization increase the likelihood that adolescents will perpetuate violence. Social learning theory may explain this relationship between violence victimization and perpetration, as the theory posits that deviant activities are endorsed by the

perpetrator following his or her exposure to others when they engage in such behaviors (Akers, 2009; Bandura, 1977). Cochran, Maskaly, Jones, and Sellers (2017) tested this model by surveying young adults in Florida colleges and found that differential associations, the process exposing a person to certain deviant behaviors—in the case of this study, interpersonal violence against a partner by the participant’s best friend—was directly associated to the participants’ engagement in the same behaviors—namely perpetration of violence against their own partners. In this regard, the most critical element in the self-perpetuating nature of adolescent violence would be the exposition of perpetrators to acts of violence by others, especially when the perpetrators themselves have been victims of violence.

The findings also support the secondary hypothesis that alcohol use predicts perpetration of violence. When comparing the groups who had perpetrated violence, the odds of violence perpetration among respondents reporting alcohol binges were twice as high as those who reported no alcohol bingeing, a finding that is consistent with other studies in the literature. Lipperman-Kreda, Gruenewald, Grube, and Bersamin (2017) found associations between adolescent alcohol and marijuana use and consequent violent, delinquent, and reckless behaviors. Unlike my study, which only considered alcohol use when the participants binge-drank the substance, Lipperman-Kreda and colleagues considered any recent instance of alcohol use, marijuana use, or use of both. The researchers do highlight, however, that the effect of alcohol use on violence is three times greater than the effect of marijuana use or of using both substances concurrently. Hence, Lipperman-Kreda et al. (2017) argue, alcohol use, regardless of marijuana use, ought to be understood as the main cause for these problem behaviors among adolescents.

Interestingly, my findings do not support the secondary hypothesis that marijuana use and violence perpetration are inversely associated. Although my alcohol measure explicitly focused on binge drinking within the past month as a measure of intoxication, the marijuana measure

included any reported use of the drug within the same timeframe. This was done due to the different cultural connotations between the two substances, namely the widespread acceptance of the former's use in social bonding activities and the pervasive illegality of using the latter regardless of context. I assumed that violence perpetration would require a greater level of exposure to alcohol, a drug of encouraged use, than to marijuana, a drug of discouraged use. With that in consideration, my findings for marijuana use mirrored my findings for alcohol binging, so that the odds of perpetrating violence among marijuana users turned out to be twice as high as those for nonusers. Rather than assuming a causal relation, however, these findings may suggest an alternative explanation for this effect. One such explanation might be that both marijuana use and violence perpetration stem from experienced distress and poor coping mechanisms. The existing literature seems to back this interpretation of the results, as Parker, Debnam, Pas, and Bradshaw (2016) found that students who had recently used alcohol and marijuana were at an increased risk of experiencing violence victimization compared to nonusers. Hence, my results might reflect upon a more complex process with marijuana use and violence perpetration ensuing from victimization. Further research should address this possibility to clarify the role of marijuana in perpetration of violence.

Finally, I found that males perpetrated violence at higher rates than females. Similar to violence victimization, I found that the odds of violence perpetration among male respondents were roughly three times higher than those for female respondents. These findings suggest that gender is, among my predictors, the second most strongly associated with perpetration of violence among adolescents. Similar patterns have been observed in previous research. Swahn, Simon, Arias, and Bossarte (2008) observed that males are more likely than females to perpetrate injury-inducing violence on their partners, even within same-sex peer relationships. This observation suggests that males' proneness toward interpersonal violence is inherent in their

gender and not necessarily in their interaction with victimizable females, although whether this proneness is based on biological or psychosocial factors remains unclear. To this respect, Simon, Miller, Gorman-Smith, Orpinas, and Sullivan (2010) noted that acceptance of dating violence, a significant motivator for actual dating violence perpetration, is particularly high among males. Although the reasons why this is true for males but not for females seem unclear, this phenomenon suggests that societal norms allowing and even encouraging partner violence are a critical factor driving violence perpetration by males.

Furthermore, the literature suggests that gender and substance use interact to increase the risk of violence perpetration among adolescents. Duke, Smith, Oberleitner, Westphal, and McKee (2017) observed that the effects of alcohol abuse on violence perpetration impact males more than females. This is possibly due to cultural factors encouraging intoxication among males as well as the raw neurological impact of substance use on these males, such as lowered inhibition and increased aggression. Regarding females, the impact of substance use seems to increase their risk of violence victimization. Kobulsky (2017) noticed a connection between the severity of experienced physical abuse and early substance use, although only among females. Methodological constraints obscure the directionality of this relationship, though, and females may in fact recur to alcohol use as a result of their victimization rather than the other way around. Further research should examine this relationship longitudinally to establish a clearer interpretation.

The current study presents a few noteworthy limitations. Perhaps most notably, the study is a retrospective review of a self-report-based survey. As such, I cannot establish directionality across associated variables. Even though I was able to discern correlations, they do not necessarily suggest any causation, and alternative explanations may account for my findings, as demonstrated by my interpretation on the effects of substance use over violence perpetration.

Furthermore, given the nature of the data, I cannot not establish temporal relationships. Because of this, even though I have identified correlations between my predictor variables and violence perpetration, I do not know with certainty whether the predictors preceded violence perpetration or vice versa. Another limitation is in the very nature of self-report surveys, namely the potential for under or overreporting by respondents due to perceived desirability or disapproval of particular items. This limitation may explain some of the discrepancy in the literature regarding gender and violence perpetration, and my study may have been impacted by biases of the sort, although the degree to which this may have occurred cannot be easily determined. Further, the variable for violence victimization is limited in that it could represent different and unrelated experiences. This is due to the addition of an item indicating reported threats or injuries with a weapon at school into the victimization aggregate, an item that does not entail interpersonal violence victimization in and of itself. Lastly, given that my data derived from an already existing survey measuring miscellaneous risk behaviors, I was unable to ask specific questions or discern between different types of violence as thoroughly as I would have liked to. As for the generalizability of my findings, I feel confident that my sample represents adolescents who attend high school across the U.S. Further research should address the nuances revolving around different types of violence perpetration and victimization, and the extent to which that nuance impacts the adolescents' resulting behaviors. Moreover, future studies should consider observing the impact of different treatments on this population and their correspondence with individualized characteristics such as type of substance abused and type of victimization experienced.

Conclusion

Adolescent violence is a recurrent problem throughout the U.S., with often criminal and even lethal consequences; hence the urgency to examine risk factors for violence perpetration

within this demographic. My findings shed some light in the correlations between violence perpetration by adolescents and their victimization, substance use, and gender; addressing these relationships may effectively lower the prevalence of adolescent violence nationwide. Given that the strongest relationship was between violence perpetration and victimization, prevention efforts may focus on providing resources to victimized youth to assist them in coping with the violence they have experienced and provide them with developmental pathways away from violence perpetration. Moreover, when considering the effect of gender on violence, and since educators, community figures, and other primary sources of socialization seem to have the greatest impact on the gender roles and expectations that adolescents learn, further preventative measures may include campaigns to highlight the violent nature of particular gendered behaviors and encourage non-violent alternatives. As for substance use, specialists should prioritize mental health care treatments for this vulnerable population. Such treatments should help affected adolescents in developing healthy coping mechanisms to replace substance use behaviors and prevent violence perpetration as a possible outcome.

References

- Akers, R. L. (2009). *Social learning and social structure: A general theory of crime and deviance*. New Brunswick, NJ: Transaction Publishers.
- Bandura, A. (1977). *Social Learning Theory*. Oxford, England: Prentice-Hall.
- Barthelemy, O. J., Richardson, M. A., Cabral, H. J., & Frank, D. A. (2016). Prenatal, perinatal, and adolescent exposure to marijuana: Relationships with aggressive behaviors. *Neurotoxicology and Teratology*, 58, 60-77. <http://dx.doi.org/10.1016/j.ntt.2016.06.009>
- Bell, K. M., & Naugle, A. E. (2008). Intimate partner violence theoretical considerations: Moving towards a contextual framework. *Clinical Psychology Review*, 28, 1096-1107. doi: 10.1016/j.cpr.2008.03.003
- Bonomi, A. E., Anderson, M. L., Nemeth, J., Rivara, F. P., & Buettner, C. (2013). History of dating violence and the association with late adolescent health. *BioMed Central Public Health*, 13, 1-12. doi: 10.1186/1471-2458-13-821
- Centers for Disease Control and Prevention. (2015a). *Understanding Youth Violence: Fact Sheet*.
- Centers for Disease Control and Prevention. (2015b). *Youth Risk Behavior Surveillance System (YRBS):2015 YRBS data user's guide*.
- Centers for Disease Control and Prevention. (2016). *Youth Violence: Facts at a Glance*.
- Centers for Disease Control and Prevention. (2017). *The national intimate partner and sexual violence survey*.
- Cochran, J. K., Maskaly, J., Jones, S., & Sellers, C. S. (2017). Using structural equations to model Akers' social learning theory with data on intimate partner violence. *Crime & Delinquency*, 63(1), 39-60. doi: 10.1177/0011128715597694
- Duke, A. A., Smith, K. M. Z., Oberleitner, L. M. S., Westphal, A., & McKee, S. A. (2017). Alcohol, drugs, and violence: A meta-meta-analysis. *Psychology of Violence*, 8(2), 238-

249. <http://dx.doi.org/10.1037/vio0000106>

Haynie, D. L., Farhat, T., Brooks-Russell, A., Wang, J., Barbieri, B., & Iannotti, R. J. (2013).

Dating violence perpetration and victimization among U.S. adolescents: Prevalence, patterns, and associations with health complaints and substance use. *Journal of Adolescent Health, 53*, 194-201. <http://dx.doi.org/10.1016/j.jadohealth.2013.02.008>

Kobulsky, J. M. (2017). Gender differences in pathways from physical and sexual abuse to early substance use. *Children and Youth Services Review, 83*, 25-32.

<http://dx.doi.org/10.1016/j.chilyouth.2017.10.027>

Lipperman-Kreda, S., Gruenewald, P. J., Grube, J. W., Bersamin, M. (2017). Adolescents, alcohol, and marijuana: Context characteristics and problems associated with simultaneous use. *Drug and Alcohol Dependence, 179*, 55-60.

<http://dx.doi.org/10.1016/j.drugalcdep.2017.06.023>

National Institute of Justice. (2017). *A national survey shines a light on the nature and scope of teen dating violence.*

Novak, J., & Furman, W. (2016). Partner violence during adolescence and young adulthood: Individual and relationship level risk factors. *Journal of Youth and Adolescence, 45*, 1849-1861. doi: 10.1007/s10964-016-0484-4

Parker, E. M., Debnam, K., Pas, E. T., & Bradshaw, C. P. (2016). Exploring the link between alcohol and marijuana use and teen dating violence victimization among high school students: The influence of school context. *Health Education & Behavior, 43*(5), 528-536. doi: 10.1177/1090198115605308

Reingle, J. M., Staras, S. A. S., Jennings, W. G., Branchini, J., & Maldonado-Molina, M. M. (2012). The relationship between marijuana use and intimate partner violence in a nationally representative, longitudinal sample. *Journal of Interpersonal Violence, 27*(8),

1562-1578. doi: 10.1177/0886260511425787

Rothman, E. F., Reyes, L. M., Johnson, R. M., & LaValley, M. (2012). Does the alcohol make them do it? Dating violence perpetration and drinking among youth. *Epidemiologic Reviews, 34*, 103-119. doi: 10.1093/epirev/mxr027

Rothman, E. F., Stuart, G. L., Greenbaum, P. E., Heeren, T., Bowen, D. J., Vinci, R., & Bernstein, J. (2011). Drinking style and dating violence in a sample of urban, alcohol-using youth. *Journal of Studies on Alcohol and Drugs, 72*(4), 555-566.

<http://dx.doi.org/10.15288/jsad.2011.72.555>

Simon, T. R., Miller, S., Gorman-Smith, D., Orpinas, P., & Sullivan, T. (2010). Physical dating violence norms and behavior among sixth-grade students from four U.S. sites. *Journal of Early Adolescence, 30*(3), 395-409. doi: 10.1177/0272431609333301

Swahn, M. H., Simon, T. R., Arias, I., & Bossarte, R. M. (2008). Measuring sex differences in violence victimization and perpetration within date and same-sex peer relationships. *Journal of Interpersonal Violence, 23*(8), 1120-1138. doi: 10.1177/0886260508314086

White, H. R., Fite, P., Pardini, D., Mun, E.-Y., & Loeber, R. (2012). Moderators of the dynamic link between alcohol use and aggressive behavior among adolescent males. *Journal of Abnormal Child Psychology, 41*, 211-222. doi:10.1007/s10802-012-9673-0

Table 1: *Demographic Information*

Characteristic	Reported
Mean Age (SD)	16.12 (1.22)
Gender Female (%)	50.7
Grade (%)	
9th grade	24.8
10th grade	24.3
11th grade	25.8
12th grade	24.8
Ungraded or other grade	0.1
Missing	0.2
Hispanic or Latino (%)	36.5
Race (%)	
White	54.8
African American	10.7
Asian	5.1
American Indian or Alaska Native	3.2
Native Hawaiian or Other Pacific Islander	1.3
Two or more races	6.4
Missing	18.4

N = 11306

Table 2: χ^2 , Relative Risk Ratios (RR), and Confidence Intervals (CI) for Risk Variables

Variable	χ^2 [df (1)] ¹	RR	(95% CI)
Violence Victimization	417.61	1.92***	(1.8-2.0)
Alcohol Binging	520.48	2.04***	(1.9-2.2)
Marijuana Use	557.98	2.03***	(1.9-2.1)
Male Sex	433.85	1.87***	(1.8-2.0)

¹ $N = 11306$, * $p < .05$, ** $p < .01$, *** $p < .001$

Appendix A

2015 State and Local Youth Risk Behavior Survey

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

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

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

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

Make sure to read every question. Fill in the ovals completely. When you are finished, follow the instructions of the person giving you the survey.

Thank you very much for your help.

How old are you?

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

What is your sex?

- A. Female
- B. Male

In what grade are you?

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

Are you Hispanic or Latino?

- A. Yes
- B. No

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

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

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

- A. 0 days
- B. 1 day
- C. 2 or 3 days
- D. 4 or 5 days

E. 6 or more days

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

A. 0 days

B. 1 day

C. 2 or 3 days

D. 4 or 5 days

E. 6 or more days

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

A. 0 days

B. 1 day

C. 2 or 3 days

D. 4 or 5 days

E. 6 or more days

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

A. 0 times

B. 1 time

C. 2 or 3 times

D. 4 or 5 times

E. 6 or 7 times

F. 8 or 9 times

G. 10 or 11 times

H. 12 or more times

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

- A. 0 times
- B. 1 time
- C. 2 or 3 times
- D. 4 or 5 times
- E. 6 or 7 times
- F. 8 or 9 times
- G. 10 or 11 times
- H. 12 or more times

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

- A. 0 times
- B. 1 time
- C. 2 or 3 times
- D. 4 or 5 times
- E. 6 or more times

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

- A. 0 times
- B. 1 time
- C. 2 or 3 times
- D. 4 or 5 times
- E. 6 or 7 times
- F. 8 or 9 times
- G. 10 or 11 times

H. 12 or more times

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

A. Yes

B. No

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

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

B. 0 times

C. 1 time

D. 2 or 3 times

E. 4 or 5 times

F. 6 or more times

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

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

B. 0 times

C. 1 time

D. 2 or 3 times

E. 4 or 5 times

F. 6 or more times

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

- A. 0 days
- B. 1 day
- C. 2 days
- D. 3 to 5 days
- E. 6 to 9 days
- F. 10 to 19 days
- G. 20 or more days

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

- A. 0 times
- B. 1 or 2 times
- C. 3 to 9 times
- D. 10 to 19 times
- E. 20 to 39 times
- F. 40 or more times

Appendix B

To: John Jameson
Psychology
CAMPUS MAIL

From: IRB Administration
Date: 3/18/2014
RE: Notice of IRB Exemption
Study #: 14-0224

Study Title: A Multicomponent Examination of Student Characteristics using the Youth Risk Behavior Survey

Exemption Category: (4) Collection or Study of Existing Data, If Public or Unable to Identify Subjects This study involves minimal risks and meets the exemption category cited above. In accordance with 45 CFR 46.101(b) and University policy and procedures, the research activities described in the study materials are exempt from further IRB review.

Study Change: Proposed changes to the study require further IRB review when the change involves:

- an external funding source,
- the potential for a conflict of interest,
- a change in location of the research (i.e., country, school system, off side location),
- the contact information for the Principal Investigator,
- the addition of non-Appalachian State University faculty, staff, or students to the research team, or
- the basis for the determination of exemption. Standard Operating Procedure #9 cites examples of changes which affect the basis of the determination of exemption on page 3.

Investigator Responsibilities: All individuals engaged in research with human participants are responsible for compliance with University policies and procedures, and IRB determinations. The Principal Investigator (PI), or Faculty Advisor if the PI is a student, is ultimately responsible for ensuring the protection of research participants; conducting sound ethical research that complies with federal regulations, University policy and procedures; and maintaining study records. The PI should review the IRB's list of PI responsibilities.

To Close the Study: When research procedures with human participants are completed, please send the Request for Closure of IRB Review form to irb@appstate.edu

If you have any questions, please contact the Research Protections Office at (828) 262-7981 (Julie) or (828) 262-2692 (Robin).

Best wishes with your research.

Websites for Information Cited Above

Note: If the link does not work, please copy and paste into your browser, or visit <https://researchprotections.appstate.edu/human-subjects>.

1. Standard Operating Procedure #9:

<https://researchprotections.appstate.edu/sites/researchprotections.appstate.edu/files/IRB20SOP920Exempt%20Review%20Determination.pdf>

2. PI responsibilities: <https://researchprotections.appstate.edu/sites/researchprotections.appstate.edu/files/PI20Responsibilities.pdf>

3. IRB forms: <https://researchprotections.appstate.edu/human-subjects/irb-forms>

Study Specific Details:

Appalachian's exemption does not cover non-Appalachian agents. Dr. Daly will need to have Drexel's IRB review his research activities or provide authorization for him to be included in our exemption.