

# Designing an Instrument to Assess School-Based Peer-to-Peer Heroin and Opioid Prevention Program Outcomes

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## Abstract

This study examines the issue of adolescent heroin and opioid use in New Hampshire and reviews interventions that positively change adolescent knowledge and perception of use. Prior studies indicate that peer-to-peer storytelling formats have a positive impact on adolescent knowledge and perception of substance use. We identified the Communities for Alcohol and Drug-free Youth’s (CADY) Alex’s Story, a school-based peer-to-peer storytelling prevention program addressing adolescent heroin and opioid use. To assist CADY in analyzing the programmatic impact of “Alex’s Story” on students, we designed a survey instrument to assess students’ understanding about substance use and addiction, and perception of harm associated with heroin and opioid use. We propose CADY use the designed instrument as a pre- and post-survey to measure students’ beliefs and perception of harm. It is hypothesized that by doing so, students who view Alex’s Story will have 1) an increased understanding about substance use and addiction, and 2) an increase in perception of harm related to heroin and opioid use when compared to students who do not view Alex’s Story. The implementation process for the survey instrument will be discussed.

## Introduction

The National Survey of Drug Use and Health (2011) found that between 2009 and 2013, about 12.7% of all adolescents in New Hampshire reported illicit drug use within the previous month. According to the National Center on Substance Abuse and Addiction (2011), nine out of 10 individuals struggling with addiction began drinking, smoking, and using other drugs before they turned 18. Research conducted by the New Hampshire Center for Excellence (2017) revealed that people had a greater likelihood of experiencing alcohol dependence, drug addiction, injuries, and fatality if they began using drugs during their adolescence, thus substantiating the need for effective prevention strategies focusing on changing adolescent perceptions and increasing knowledge.

## Literature Review

Studies regarding changing youth perceptions around drugs and alcohol have focused primarily on school-administered curriculum and its impacts on alcohol, tobacco, and marijuana use and attitudes. Clark, Ringwalt, Shamblen, and Hanley (2010), studied a schoolwide substance use prevention program (Project SUCCESS) for at-risk students at an alternative high school to build rapport, discuss myths, identify norms, provide support, and address coping. The study positive impacts on students’ perceptions of harm from alcohol and marijuana use and perceptions and acceptability of marijuana use, although heroin and opioid use were not addressed. Take-Charge-of-Your-Life (TCYL) program, a middle and high school substance use prevention program administered by police focused on student perceptions of instructors impacted overall effectiveness of the program (Stephan et al., 2009). Results show student with a positive perceptions of instructors showed smaller increases in substance use over time.

MacArthur, Harrison, Caldwell, Hickman, & Campbell (2016) meta-analysis 17 peer-led substance abuse intervention studies support a) young people can and do learn from each other, b) peers have more credibility when engaging in prevention with young people compared to adult-led interventions, c) peers have a shared cultural background, and d) they may have greater understanding and empathy regarding the wellness and behavior of their peers. Furthermore, peers may act as positive role models who reinforce behavioral messages, and peer interventions influence behavior and improve knowledge. Peer-led interventions and curricula that appear to be most effective in decreasing alcohol, cigarette, and drug use and stress included: Peer norm correction, role-playing using assertiveness skills, personal accounts from peers regarding the consequences and physiological effects of use, and informal conversations.

Stephens-Hernandez et al. (2007) researched a program that integrated life stories of individuals who used alcohol and other drugs in a series of dramatic vignettes. Pre- and post-test results show individuals who viewed the play had increased knowledge regarding substance abuse as a disease and its associated risks, and were more likely to participate in substance abuse prevention activities at home and in their community. At three-month follow-up, participants indicated discussing information and content from the play with family and friends.

An Australian study was conducted to evaluate the effectiveness of a theatre program in reducing risky drinking, illicit drug use, and problem behavior during high school students’ end of secondary school celebration. Schoolies (Quek et al., 2012). Performed by peer-aged students, the skits used popular culture (e.g. music, celebrities) in an effort to engage and raise awareness of drug issues, increase knowledge, and change attitudes and behaviors “by eliciting emotional responses” to engage in post-performance conversations (p. 898). Results showed a decrease in high-risk behavior among students, specifically a reduced risk of illicit drug use and engagement in problem behaviors.

## CADY’s Alex’s Story Program

While previous studies have focused on instructor perception, peer led interventions, and substance use, there remains a lack of research focusing on peer led interventions and their impact on youth perceptions of heroin and opioid use. “Alex’s Story,” is currently serving as a primary substance use prevention agent in school communities around New Hampshire and is a collaborative project of CADY (Communities for Alcohol and Drug Free Youth) and TIGER (Theatre Integrating Guidance Education & Responsibility).

“Alex’s Story” begins with a dramatic re-telling of Alex’s experience--what led to his addiction, his influences, and his difficult journey toward recovery, which began with admittance into a residential treatment facility on his 18<sup>th</sup> birthday. “Alex’s Story” is in Alex’s own dialogue, but is retold by a professional actress, in hopes that both men and women could relate. Alex then leads a powerfully candid question and answer session about his path toward addiction and recovery. “Alex’s Story” aims to emphasize the reality that any youth could find him/herself on the path toward heroin addiction. Furthermore, they are more likely to become addicted through the use of other drugs, such as: Cigarettes, alcohol, marijuana, cocaine, and prescription opioids. Through the telling of “Alex’s Story,” CADY endeavors to prevent students from ever misusing opiates in the first place by increasing knowledge and changing perceptions.

## Methodology

### Sample

This research design aims to evaluate the impact of peer-to-peer storytelling on adolescent perceptions of risk associated with heroin and opioid use. The targeted population includes adolescent students in grades nine through 12. The treatment group consists of students at the school who will view “Alex’s Story.”

As a convenience /opportunity sampling, treatment schools will be limited to schools scheduled to view “Alex’s Story” with parental permission for students to take the surveys. The control school will be identified after the treatment school, due to the need to control for demographic consistency between groups.

### Youth Substance Use Perception Survey

The questionnaire designed was based off a previous study’s survey (Stephens-Hernandez et al., 2007), as well as a survey from the Iowa Consortium for Substance Abuse Research and Evaluation (White, Guard, & Arndt, 2011). Both authors gave permission to have their surveys used and edited for the purposes of our project. The Iowa Consortium for Substance Abuse Research and Evaluation took most of its survey items from Monitoring The Future’s national questionnaire, which acknowledges that “there currently exists little empirical evidence of their [the survey questions’] validity and reliability” (Bachman, Johnston, & O’Malley, 2014, p. 11). This survey related to “Alex’s Story” has not been normed and thus the researchers were unable to verify its validity and reliability. As such, the researchers recommend that it be normed and evaluated to ensure both validity and reliability for future use.

## Discussion

The independent variable of this study is CADY’s “Alex’s Story” prevention program. The research question is whether exposure to “Alex’s Story” impacts student perceptions and knowledge regarding the risk of heroin and opioid use.

The dependent variable of the study is student perception regarding risk of harm from heroin and opioid use. Manipulating the independent variable – providing the intervention of viewing “Alex’s Story”– will directly affect student perceptions and knowledge regarding heroin and opioid use compared to the control group. Using surveys (see Youth Substance Use Perception Survey), changes in attitudes related to heroin and opioid use will be assessed. More specifically, the instrument will assess perceived risk of harm for others, harm for self, benefits of use, and addiction as a disease. It is hypothesized that viewing “Alex’s Story” will increase knowledge and positive perceptions (increased perceptions of risk for self and others related to heroin and opioid use) compared to those who do not view “Alex’s Story”.

In order to evaluate whether “Alex’s Story” has a true impact on student perceptions, this study will utilize a second school, with parent and school administrative approval, that is not receiving “Alex’s Story,” as a control group. The control school will need to be similar to the treatment school in demographics, including: Student enrollment, socioeconomic status, race, ethnicity, gender, and substance use data. The control school will be given the opportunity to view “Alex’s Story” upon completion of the study. This will ensure that CADY is serving both populations ethically by providing the treatment to both groups.

Surveys will be provided to participants before and after the “Alex’s Story” performance. The survey will be in paper form, group administered, and consist of one doubled-sided page. There will be five demographic questions, and 13 perception-based questions. The advantage of this design is that it does not require technology or internet and does not take an excessive amount of time to complete. Limitations include: necessary time to review and input data for program analysis; proximity of participants to one another when completing the survey; and self-report (Young, 2010). Survey administrators will emphasize to students there are no wrong answers as this is an opportunity to gather group information regarding the program.

## Conclusion

The purpose of this research project is to understand the impact of prior programs similar to CADY’s “Alex’s Story”, and design an instrument to collect data used to inform decision-making and accountability for the CADY program. Specifically, if CADY is able to administer a survey to students who view “Alex’s Story”, and provide data analysis, this organization will be better positioned to discern the program’s impact on student perceptions and knowledge. In February 2016, Senate Bill 353 FN-A (2016) was proposed which would establish a grant program for high schools for heroin and opiate prevention education (HOPE). The legislature was projected to be jointly administered by the TIGER program at Plymouth State University and Communities for Alcohol and Drug-free Youth (CADY). However, in April 2016 the bill was deemed, “Inexpedient to Legislate” and was killed in the New Hampshire House before being able to establish a one-year grant program providing 84 HOPE presentations to schools in New Hampshire. Providing perception and knowledge data could bolster the efforts of those advocating for program/intervention funding on a community and state-level.

## Youth Substance Use Perception Survey

| Personal Demographics  |  |  |
|--|--|--|
| What is your current age?                                      | _____ Years old  |  |
| What grade are you in?   | _____ Grade  |  |
| Indicate your gender   | _____ Male _____ Female  | _____ Transgender _____ Other  |
| Are you Hispanic or Latino?                                    | _____ Yes  | _____ No   |
| Which of the following best describes you? (please choose one) | _____ White _____ Hispanic/Latino _____ Black/African American _____ American Indian/ Native Alaskan | _____ Native Hawaiian/ Pacific Islander _____ Asian _____ Some other race _____ More than one race |

| How much do you agree or disagree with the following statements? (check one response per question)   |                   |          |       |                |
|--|-------------------|----------|-------|----------------|
|  | Strongly Disagree | Disagree | Agree | Strongly Agree |
| Drug addiction is a disease.   |                   |          |       |                |
| A person addicted to drugs can quit anytime.   |                   |          |       |                |
| I believe that the positives for using heroin or opioids outweigh the negatives.   |                   |          |       |                |
| People who are addicted to drugs must go through treatment (detox, rehab, counseling, support groups, residential programs, etc.) to stop using. |                   |          |       |                |
| People who are addicted to drugs will continue to use even though there are negative consequences.   |                   |          |       |                |

| How much do you think you risk harming yourself (physically or otherwise) if you: (check one response per question) |         |             |               |            |
|---|---------|-------------|---------------|------------|
|   | No Risk | Slight Risk | Moderate Risk | Great Risk |
| Use medication (such as Vicodin, Percocet, OxyContin, Codeine, etc.) prescribed to someone else?                    |         |             |               |            |
| Try heroin once or twice without using a needle (smoking, snorting, etc.)?  |         |             |               |            |
| Try heroin once or twice <u>with</u> using a needle?  |         |             |               |            |
| Use over the counter medications different from the directions?   |         |             |               |            |

| How much do you think people risk harming themselves (physically or otherwise) if they: (check one response per question) |         |             |               |            |
|---|---------|-------------|---------------|------------|
|   | No Risk | Slight Risk | Moderate Risk | Great Risk |
| Use medication (such as Vicodin, Percocet, OxyContin, Codeine, etc.) prescribed to someone else?                          |         |             |               |            |
| Try heroin once or twice <u>without</u> using a needle (smoking, snorting, etc.)?   |         |             |               |            |
| Try heroin once or twice <u>with</u> using a needle?  |         |             |               |            |
| Use over the counter medications different from the directions?   |         |             |               |            |



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