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DEVELOPMENT AND IMPLEMENTATION OF A CURRICULUM INFUSION PLAN FOR ALCOHOL ABUSE EDUCATION

BY

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Career MPH

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DEVELOPMENT AND IMPLEMENTATION OF A CURRICULUM INFUSION PLAN FOR ALCOHOL ABUSE EDUCATION

BY

Sarah Kenney
M.P.H., Emory University, 2013
B.A., University of North Carolina at Chapel Hill, 2007

Thesis Committee Chair: Kimberly Hagen, Ed.D

An abstract of
A Thesis submitted to the Faculty of the
Rollins School of Public Health of Emory University
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2013

Abstract

DEVELOPMENT AND IMPLEMENTATION OF A CURRICULUM INFUSION PLAN FOR ALCOHOL ABUSE EDUCATION

BY
Sarah Kenney

College binge drinking continues to be a pervasive issue across campuses nationwide. While Curriculum Infusion (CI) has proved an effective strategy to reduce students' negative consequences related to alcohol, information about the process has been limited. CI is the process of purposively integrating topic content into existing classes, rather than teaching that content through a standalone course dedicated solely to that topic. Practically speaking, even if the outcomes of this intervention are strong, an instructor will not successfully employ the method if the process is not user-friendly and meets the needs of her/his course. This project aims to contribute practical information about the content and process of CI, particularly from an instructors' perspective. The ultimate goal of strengthening the CI content and process is to reduce students' negative consequences related to binge drinking, with the intent of reducing incidence or morbidity and mortality amongst our youth.

The specific aims of this study are to examine the content and process of CI for alcohol abuse education and to identify the elements necessary for successful design and implementation of CI. The research questions were examined using the following methodologies: literature review, formative evaluations to inform curriculum design, expert panel review, observation of implemented curriculum, and interviews with participating instructors. A thematic qualitative data analysis revealed themes regarding the use of the curriculum, student response to CI, courses suitable for using CI to address alcohol abuse, people involved in CI initiative, social norms, pre- and post-test and instructor training. Results also revealed that adequate CI training for instructors should be mandatory and include information about social norms, how to defend data, consistent messaging and how to lead class discussion on sensitive topics without reinforcing myths.

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Part One: Introduction

Problem Statement

Impact of Alcohol Abuse on Health

Substance abuse among college students is a national concern documented by the organizations such as the U.S. Surgeon General, National Institute on Alcohol Abuse and Alcoholism (NIAAA), National Institute of Health (NIH), U.S. Department of Health and Human Services (DHHS), U.S. Department of Education (ED), and Substance Abuse and Mental Health Services Administration (SAMHSA) (U.S. Department of Health and Human Services, 2007) (National Institute on Alcohol Abuse and Alcoholism, 2007) (U.S. Department of Health and Human Services, 2012) (Substance Abuse and Mental Health Services Administration, 2006). Substance abuse has taken a spotlight in both Healthy People 2020 and the companion document Healthy Campus due to its major impact on individuals, families, and communities. Healthy People 2020 prioritizes substance abuse in topic of Adolescent Health with the goal to "improve the healthy development, health, safety, and well-being of adolescents and young adults" and under the topic of Substance Abuse with the goal to "reduce substance abuse to protect the health, safety, and quality of life for all, especially children" (U.S. Department of Health and Human Services Office of Disease Prevention and Health Promotion, 2012, para. 3). As noted in Healthy People 2020, "the effects of substance abuse are cumulative, significantly contributing to costly social, physical, mental, and public health problems" (U.S. Department of Health and Human Services Office of Disease Prevention and Health Promotion, 2012, para. 3). Heavy drinking in particular is associated with many adverse health behaviors, such as smoking,

decreased physical activity, and increased physical health problems including hepatitis, hypertension, gastrointestinal problems, as well as mental health difficulties (Paul, Grubaugh, Frueh, Ellis, & Egede, 2011). In 2005 alone there were over 1.6 million hospitalizations and 4 million emergency department visits for alcohol-related issues (Center for Disease Control and Prevention, 2010).

Excessive alcohol use is the third leading lifestyle-related cause of death in the United States, and alcohol-related factors are the leading influence in the top three causes of death (automobile crashes, suicide and homicide) among youth 15-24 years old (U.S. Department of Health and Human Services, 2007). The Center for Disease Control and Prevention (CDC) estimated that there are approximately 79,000 deaths attributable to excessive alcohol use each year in the United States (Center for Disease Control and Prevention, 2010). This translates to 2.3 million years of potential life lost or 30 years of potential life lost for each death.

Excessive drinking also has severe economic consequences. The cost of excessive drinking in the U.S. in 2006 was approximately $223.5 billion (72.2% from lost productivity, 11.0% from healthcare costs, 9.4% from criminal justice costs, and 7.5% from other effects), or $746 per person (Bouchery, Harwood, Sacks, Simon, & Brewer, 2011). Binge drinking represented 76.4% of this total cost, or $170.7 billion.

Alcohol Abuse among College Students

Alcohol abuse among college students is on the rise. According the SAMHSA national surveys, from 1999 to 2005 the proportion of college students aged 18–24 who drank five or more drinks on a single occasion in the past month increased from 41.7% to 44.7%, a significant 7% proportional increase (Hingson, 2010). Consuming five or more drinks is considered *binge drinking* for males, and four or more drinks is considered *binge drinking* for females. NIAAA

(2007) defines a binge as a "pattern of drinking alcohol that brings blood alcohol concentration to 0.08 gram-percent or above," where 0.08 is the legal limit (p. 2).

Furthermore, college students appear to be at higher risk than their non-college peers, probably as a result of the college environment (Dawson, Grant, Stinson, & Chou, 2004). A greater percentage of college students compared with non-college respondents drank five or more drinks on occasion (Hingson, 2010). Certain college-student populations are more likely to drink heavily; men are more likely than women, and fraternity members and athletes more likely than other groups on campus to drink heavily and suffer negative consequences (Huchting, Lac, Hummer, & LaBrie, 2011; Johnston, O'Malley, Bachman, & Schulenberg, 2007).

Not only is alcohol abuse itself of concern, so are the serious consequences that result from binge drinking. The consequences of this type of drinking, also referred to as drinking to excess, high-risk drinking, heavy episodic drinking, has been well documented. Notable consequences include memory loss, alcohol-related driving injuries and fatalities, sexual and physical assaults, risky sexual behavior, poor academic performance, acute illnesses, alcohol-poisoning and death (Hingson, Zha, & Weitzman, 2009; National Institute on Alcohol Abuse and Alcoholism, 2007; Weitzman, Nelson, & Wechsler, 2003). Individuals who binge-drink are also at higher risk of using cigarettes, marijuana, cocaine, and other illegal drugs (Jones, Oeltmann, Wilson, Brener, & Hill, 2001).

Community Impact

Students who binge-drink also have adverse impacts on their community, ranging from incivilities to unintentional and intentional injury (Wechsler, Moeykens, Davenport, & Castillo, 1995). These students also jeopardize the well-being of others, namely in terms of drunk driving and physical and sexual assault. From a NIAAA survey in 2005, at least 46% of the 4,553

people killed that year in alcohol-related crashes with college age drinking drivers were people other than the drinking driver (Hingson & Weitzman, 2009). It is estimated that each year more than 690,000 students are assaulted or hit by another student who had been drinking and more than 97,000 students experienced a sexual assault or date rape perpetrated by a drinking college student.

Strategies to reduce binge drinking among college students

Binge drinking among college students is harmful both to the individual and society, yet is a preventable cause of morbidity and mortality. Evidence-based strategies must be widely implemented in all socioecological levels, namely the individual, interpersonal, community, organizational, and environmental, in order to address this serious public health issue. Interventions must be implemented to enhance the protective factors that reduce initiation of binge drinking as well as decrease risk factors that encourage one to drink to excess. Typical prevention efforts tend to be uni-variate, often conducted by the student affairs or counseling personnel, leaving faculty uninvolved and underutilized (Swaner, 2007; White, Park, & Cordero, 2010).

Curriculum Infusion is an example of a system-wide strategy that involves faculty, whom have a unique advantage of being in non-punitive roles on campus, in alcohol abuse reduction efforts (Cordero, Israel, White, & Park, 2010). Curriculum Infusion is the process of purposively integrating topic content into existing classes, rather than content through a standalone course dedicated solely to that topic. This strategy has been employed by colleges and universities in the United States to impact the knowledge, attitudes, and behaviors of college students in relation to binge drinking. The Fund for Improvement of Post-Secondary Education (FIPSE) sponsored drug-prevention programs found that decreases in binge drinking rates were greatest on

campuses where Curriculum Infusion on alcohol abuse was emphasized as part of the university's model for binge drinking prevention (Ziemelis, Bucknam, & Elfessi, 2002).

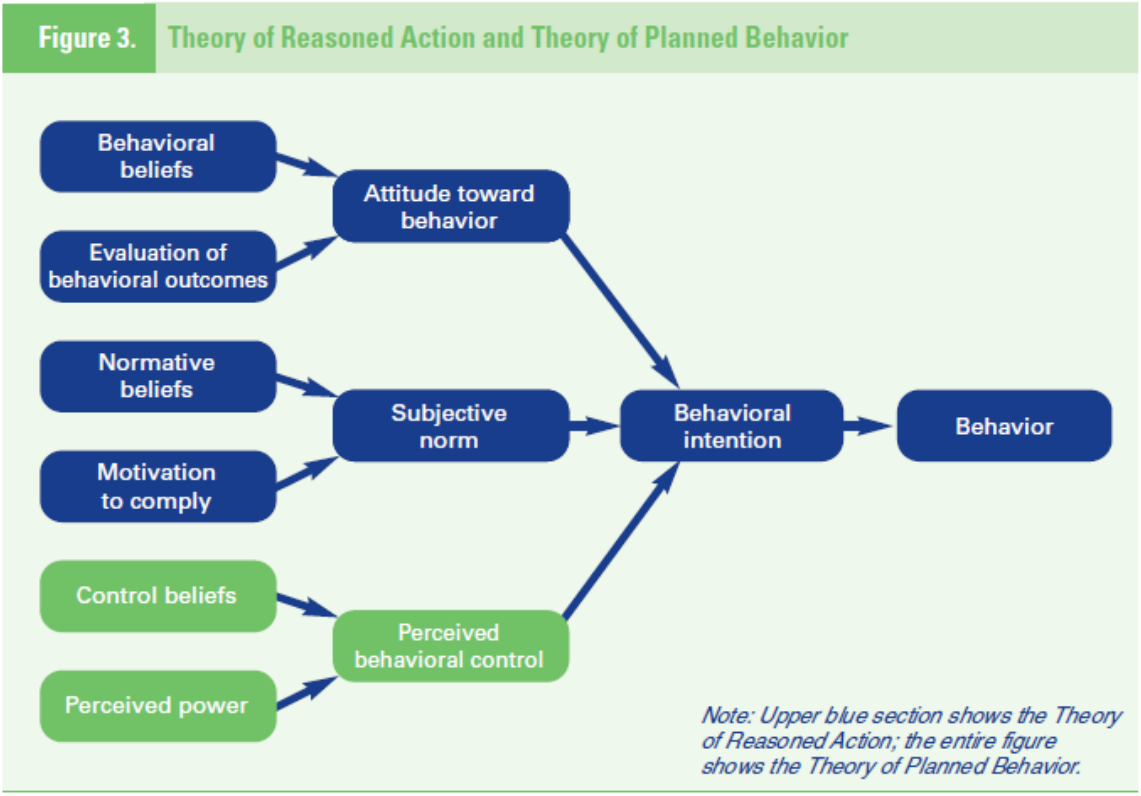
Theoretical Foundation

A total of four learning objectives were used for all four curricula. The first objective is that at the end of class students will be able to identify negative personal consequences related to alcohol abuse. The second is that students will be able to define the following five terms: alcohol, alcoholism, alcohol abuse, standard drink and binge drinking. The last learning objective is that students will be able to explain the difference between a *misperceived social norm* and an *accurate norm*, and how it alters people's behavior specific to drinking.

The project and curriculum are guided by the following theories as outlined below, the Theory of Planned Behavior and the Social Norms Theory.

Theory of Planned Behavior

Effective interventions are designed with a theoretical base and use a social ecological approach to identify intervention points (Glanz & Bishop, 2010). The Theory of Planned Behavior is an individual-level theory that guides this CI project and curriculum design. The Theory of Planned Behavior examines the relationships between an individual's beliefs, attitudes, intentions, behavior, and perceived control over that behavior. As shown in the figure below, "*behavioral intention* determines *behavior*, and how *attitude toward behavior*, *subjective norm*, and *perceived behavioral control* influence *behavioral intention"* (Glanz & Rimer, 2005, p. 18).



(Glanz & Rimer, 2005)

The CI curriculum at hand focuses primarily on the attitudes toward behavior and subjective norms portions of the Theory of Planned behavior.

- **Attitude towards behavior** stems from one's beliefs and evaluation of what is entailed and what outcomes may result from performing that behavior.
- **Subjective norms** include one's perception of the social pressure from valued others influencing oneself to engage (or not engage) in a behavior, which is influenced by normative beliefs about social standards and one's personal motivation to comply with those norms (Ajzen, 2011). A **norm** is an understanding of specific cultural expectation regarding behavior in a given context or situation (Bicherri and Muldoon, 2011). In the context of alcohol use, a norm in the U.S. is that college students drink alcohol. **Social** norms are seen as "central to the production of social order" and "ought to be understood

> as a kind of grammar of social interactions...a system of norms specifies what is acceptable and what is not in a society or group (Bicherri and Muldoon, 2011). In the case of binge drinking, a social norm is that it is acceptable for college students to drink. A **misperceived social norm** is an inaccurate view of the social norm, which in this case would be the misperception that most college students regularly get drunk when they drink alcohol. Misperceived social norms are formed when people see a minority of individuals engage in highly visible problem behavior, such as public drunkenness; those misperceived social norms are then spread in public conversation between members of that group or community, such as a university (Berkowitz, 2004). An **accurate norm** is a truthful reflection of reality, such as that while some students do choose drink, most do so in moderation both in frequency and quantity.

Two of the CI curriculum learning objectives are relevant to the Theory of Reasoned Action.

The first objective is that at the end of class students will be able to identify negative personal consequences related to alcohol abuse, will be accomplished by targeting the student's behavioral beliefs and their evaluations of behavioral outcomes. The other learning objective relevant to Theory of Reasoned Action is that students will be able to explain the difference between a *misperceived social norm* and an *accurate norm*, and how it alters people's behavior specific to drinking, and will be achieved by targeting the students' normative beliefs and their motivation to comply. The achievement of latter objective, which is focused on social norms, will be further strengthened by the Social Norms Theory as described in the paragraph below.

Social Norms Theory

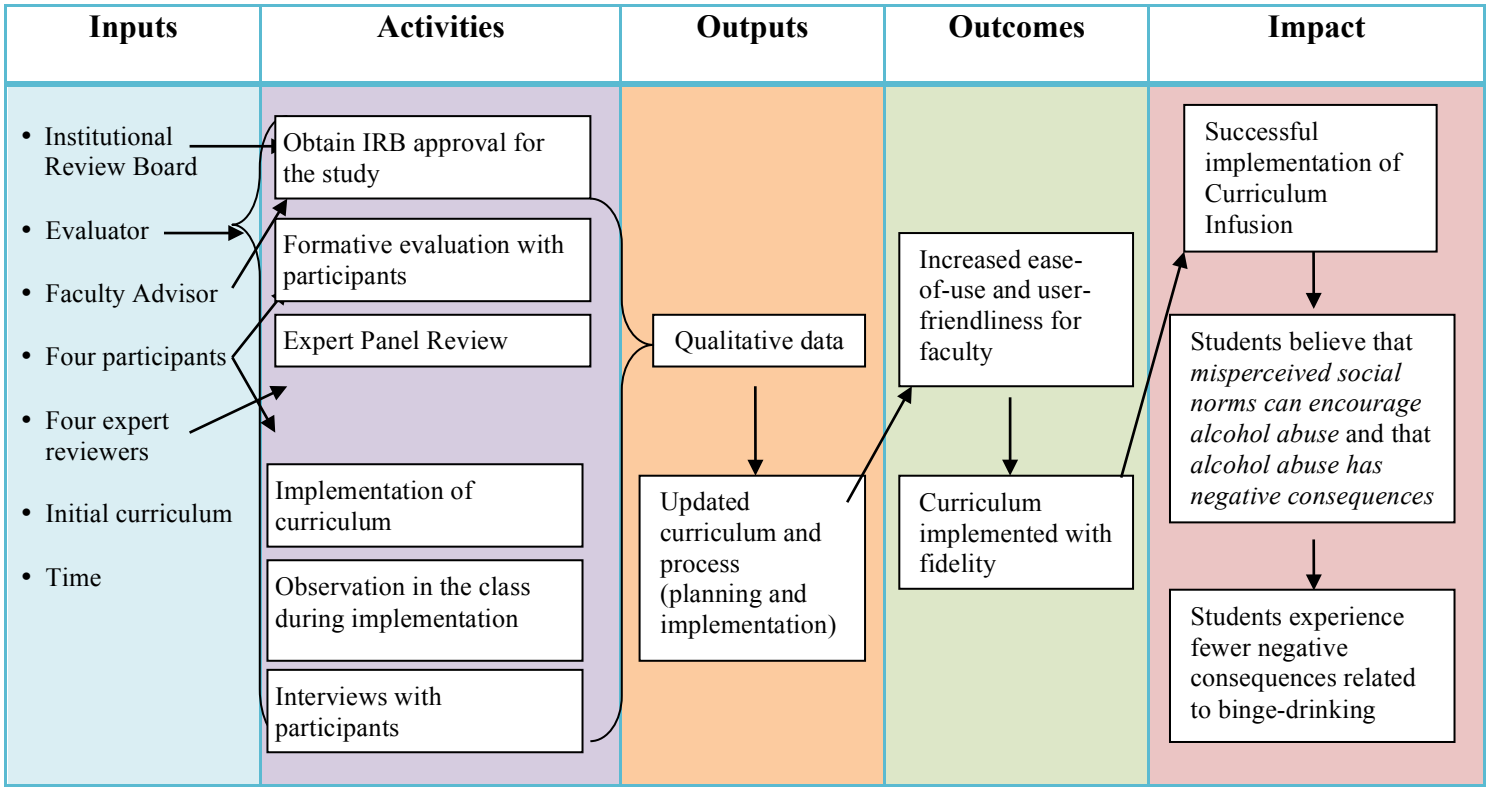
Social norms theory also provides a theoretical foundation for this CI project and curriculum. This theory is similar to the Theory of Planned Behavior and Reasoned Action described as it expands upon the idea of normative behavior by identifying how perceived descriptive and injunctive norms about peer behaviors affect an individual's behaviors. According to Collins and Carey (2007) the two types of norms in this context are *descriptive norms*, perceptions of how others drink, and *injunctive norms*, perceived peer approval of drinking (p. 499). Social Norms Theory posits that one can use normative statements in order to correct misperceptions of both descriptive and injunctive norms.

Perkins (2002) argued that "one can think of a group norm in this sense as the cause of much belief and action in addition to a descriptive characterization of the status quo, as a powerful independent variable accounting for or determining individual behavior" (p. 164). He also pointed out that students tend to think that their peers are more permissive in drinking attitudes and have more problem behaviors (consuming more frequently and more heavily) than is really the norm, which has been shown to promote and exacerbate problem drinking. Taking this argument into consideration, the current CI curriculum aims to address misperceived norms with students, allowing them to critically examine their perceptions of how others drink and their perceived peer approval of drinking, in addition to the perception of the social pressure influencing one to engage in the behavior.

Goals & Objectives

Curriculum Infusion (CI) is the process of purposively integrating topic content into existing classes, rather than teaching that content through a standalone course dedicated solely to that topic. The specific aims of this study are to examine the content and process of Curriculum

Infusion (CI) for alcohol abuse education and to identify the elements necessary for successful design and implementation of CI. A Logic Model of the process evaluation conducted during this project is below.



Current research indicates that using CI in college classes as a means of disseminating and reinforcing the messages that *misperceived social norms can encourage alcohol abuse* and that *alcohol abuse has negative consequences* is an effective process for reducing students' negative consequences related to binge-drinking (Perkins, 2002; Riley, Durbin, & D'Ariano, 2005; White et al., 2010; Ziemelis et al., 2002).

The goal of this project is to add to knowledge about the process of Curriculum Infusion, specifically infusion of alcohol-related content in the college classroom. There has been little

research done on the ease to teachers of implementing CI around alcohol abuse education in a college classroom.

Research Questions

This project explores the following research questions:

1. What are the key elements, regarding both the content and process, necessary for successful implementation of Curriculm Infusion of alcohol-related content in the college classroom?
2. Do faculty with various teaching styles and methods find the curriculum and process to be user-friendly?
3. Is the curriculum sufficiently generic and exportable?

Procedures

These questions are examined using the following methodologies:

1. The evaluator conducted a literature review that will address the following questions:
    a. What are key components to a successful Curriculum Infusion process that should be included in this projects' curriculum?
    b. What elements could increase the effectiveness and user-friendliness of the curriculum?

2. The evaluator conducted a formative evaluation process with the instructors of the courses participating in the project at University A (English, Management, Communications, and Theater). University A is a public institution of approximately 9,500 students nestled in the Blue Ridge Mountains of Virginia, focused on teaching.

The single overriding communication objective that this curriculum is designed to reinforce through infusion is *misperceived social norms can encourage alcohol abuse* and *alcohol abuse has negative consequences.*

a. The evaluator incorporated changes to the curriculum as needed; after receiving final approval from University A participants the curriculum was then subject to the expert panel review.

3. An expert panel review provided feedback to the evaluator on the curriculum specifically designed for four courses (English, Management, Communications, and Theater). This set of panelists was comprised of four faculty members from University B, a larger research-focused public university of over 30,000 students located in the same region of Virginia as University A. The faculty members from this research-focused University B are in the respective departments in which the curriculum is implemented at University A. Reviewers provided oral feedback during an in-person interview based on the following questions, which are also located in Appendix C: Expert Reviewer Interview Guide:

    a. How would you describe your teaching style?
        i. How do you typically conduct a class?
        ii. Please tell me about how you think that CI would work with your teaching style.
    b. How useful is the curriculum?
    c. How user-friendly is the curriculum?
    d. What could be changed to increase the user-friendliness of the curriculum?

e. Do you feel that you have received enough information about the topic and strategy to successfully implement the curriculum in a (English, Management, Communications, Theater) class?
    i. What additional information would be useful to include?
f. Is the curriculum sufficiently generic for you to use it in your classes?
    i. How much would you have to change your course to integrate the curriculum infusion information?
    ii. Would you consider infusing this curriculum into your (English, Management, Communications, Theater) courses?
    iii. If not, what would need to change in order for you to consider using the curriculum?
g. How effective do you think the piece on social norms will be at reducing misperceptions?
h. How seriously do you think your students would take this curriculum, in comparison to your normal lessons?
i. What are other public health topics that you would consider infusing into your course?

4. The evaluator re-formed the curriculum based on feedback. The evaluator sent the curriculum to University A participants for review and approval of final changes. The participants then infused the curriculum in their spring 2013 classes. Learning objectives for all lessons included the following: At the end of class students will be able to:

- Identify negative personal consequences related to alcohol abuse.
- Define the following five terms: alcohol, alcoholism, alcohol abuse, standard drink and binge drinking.
- Explain the difference between a *misperceived social norm* and an *accurate norm*, and how it alters people's behavior specific to drinking.

The table below provides examples of the methods used to deliver the CI objectives in each course.

Course Title	CI Method	Details
Communications: Public Relations	Lecture	Instructor delivers 90-minute lecture using PowerPoint presentation to introduce students to Theory of Reasoned Action and the persuasive nature of norms and normative messages, using alcohol prevention as an example of how a university deals with the issue internally. Lecture includes discussion questions about negative personal consequences and the five alcohol terms.
English	Paper	Students review literature and critically analyze how alcohol abuse affects college campuses and/or healthcare. In paper students must use the five alcohol terms correctly.
	Presentation	Students deliver five-minute multimedia presentation of their paper topic, covering both sides of the argument and citing literature. Follow-up discussion will explore negative personal consequences related to alcohol abuse.
	Activity and discussion	Instructor leads hands-on demonstration (snowball fight activity) about misperceived norms, and follow-up discussion about norms.
Management: Organizational Behavior	Research project (paper and presentation)	Groups write research paper about how alcohol affects the workplace and/or a college campus and what type of management strategies could be used to prevent/address this issue. Groups then deliver 8-minute multimedia presentation about their paper in which they will also demonstrate understanding of alcohol terms as well as social norms that influence a workplace and/or college campus.
Theater	Lecture and discussion	Prior to the lecture the instructor asks the students to read about the five alcohol terms. In class the instructor leads 60-minute lecture and discussion about how alcohol affects the voice, body and collaboration, as well as social norms that influence behavior.

	Reflection paper	Students write a reflection paper about the lecture on alcohol abuse.

5. The evaluator observed the four classes during the intervention of curriculum implementation at the University A. The evaluator sat in on all class meetings in which study participants implemented the CI curriculum in order to observe the degree to which study participants adhered to the CI lesson plan. This only applies to University A participants. The evaluator took notes guided by the following questions:
    a. Did the intervention appear natural to the instructor?
    b. Did the intervention appear natural to the students?
    c. How did the students react?
    d. What behaviors did they exhibit?
    e. To what extent were the learning objectives met? (note to self- examine what is acceptable, what is not acceptable)
    f. To what extent did the instructor diverge from the exact curriculum?

6. The four University A participants provided feedback to the evaluator on the curriculum design and implementation process, as a summative evaluation through in-person interviews. The interview guide contained the following questions, which are also located in Appendix D: Participant Interview Guide:
    a. How would you describe your teaching style?
        i. How do you typically conduct a class?
        ii. Please tell me about how you think that CI worked with your teaching style.
    b. On a scale of 1 to 5, with 1 being not at all difficult and 5 being impossibly difficult, how difficult has it been to implement CI in your class?
        i. [If '1' is given, ask this follow-up question] Why do you think that it wasn't at all difficult to implement CI in your class?

ii. [If any number other than '1' is given, ask this follow-up question] What could we have done differently to make implementing Curriculum Infusion in your class less difficult?

c. How much did you have to change your course to integrate the CI information?

d. On a scale of 1 to 5, with 1 being "I didn't follow it at all," and 5 being "I followed it to the letter, how closely did you end up following the provided curriculum while implementing CI in your class?

i. [If '1' is given, ask this follow-up question] In retrospect, what could we have done differently to make it easier for you to follow the provided curriculum?

ii. [If any number other than '1' is given, ask this follow-up question] What parts of the curriculum were easy to follow?

iii. [If any number other than "5" is given, ask this follow-up question] What changes in the curriculum would have made it **easier** to follow?

e. How did your instruction diverge from the written curriculum?

Say this: "There is a difference between "useful" and "user-friendly." The next question is about how "useful" the curriculum was."

f. On a scale of 1 to 5, with 1 being not at all useful and 5 being exceptionally useful, how useful was the CI curriculum you used?

i. [If '1' is given, ask this follow-up question] In retrospect, what could we have done differently to make the curriculum useful to you?

ii. [If any number other than '1' is given, ask this follow-up question] What parts of the curriculum were useful to you?

iii. [If any number other than "5" is given, ask this follow-up question] What changes in the curriculum would have made it **more** useful to you?

Say this: "The next question is about how "user-friendly" the curriculum was."

g. On a scale of 1 to 5, with 1 being not at all user-friendly and 5 being exceptionally user-friendly, how user-friendly was the CI curriculum you used?
    i. [If '1' is given, ask this follow-up question] In retrospect, what could we have done differently to make the curriculum user-friendly?
    ii. [If any number other than '1' is given, ask this follow-up question] What parts of the curriculum were the most user-friendly?
    iii. [If any number other than "5" is given, ask this follow-up question] What changes in the curriculum would have made it **more** user-friendly?

h. In retrospect, were you appropriately involved in the design of the curriculum?
    i. If we were to do it again, how should we do it differently?

i. How effective do you think the piece on social norms was at reducing misperceptions?
    i. How did the social norms piece flow with your course material?
    ii. What were the kinds of misperceived norms that students named?

j. How did the piece on negative consequences flow with your course material?
    i. What were some of the negative consequences that were identified by students?

k. Do you think that the students noticed that material on alcohol was being infused into your curriculum?
    i. What are your thoughts about that and what it means for the process and utility of using Curriculum Infusion as a means of addressing sensitive topics?

l. How seriously did the students take this curriculum?
    i. How does this response compare to your normal lessons?

m. What else can you tell me that will help to improve the process?

n. What are other public health topics that you would consider infusing into your course?
o. How could you infuse alcohol information into future courses? Would you consider doing so?

The evaluator then re-formed the curriculum based on participants' feedback.

Target Journal

The selected target journal for this manuscript is the American Journal of Health Education (AJHE). Through discussions with the Thesis Advisor and Field Advisor, it was determined that the AJHE was most appropriate for a journal article focused on small-scale process evaluation and pedagogy. All submission and review processes for AJHE are conducted through journalsubmit.com, and must follow the criteria below, taken directly from the AJHE website (American Journal of Health Education, 2009). Manuscripts must:

- Be typed in Microsoft Word, double-spaced, 12-point font
- Use the divisions Title Page; Abstract; Text; Tables; and Figures, Illustrations, Drawings and Photos.
    - Title Page: Provide manuscript title only with no author information or institutional affiliation
    - Abstract: Research Articles require structured abstracts up to 200 words in length using italicized headings identical to the ones listed above.
    - Text: Research Articles can be up to 25 double-spaced pages (~ 6250 words), not including abstract, tables, figures, illustrations, and references.

  - Tables: Use Arabic numbers in sequence throughout the article. Each table should be on its own page at the end of the manuscript. Reference tables in the text to indicate placement. Include descriptive titles and headings for columns or rows. General footnotes to tables should be collected as "Note:" or "Notes:" Sequenced letters—a, b, c, etc—should be used in footnotes. Use asterisks (* and/or **) to indicate .05 and .01 levels of significance, respectively.
  - Figures, Illustrations, Drawings and Photos: These images should be numbered sequentially, captioned, and referenced in the text. They should be appended to the end of the manuscript and not submitted as separate or supporting documents. Photos need to be 300 dpi at the size they will be used.
- Include the following headings: Background, Purpose, Methods, Results, Discussion, and Translation to Health Education Practice.
- Follow the American Medical Association (AMA) 9th edition Manual of Style for preparing narrative, graphics, and reference portions of manuscripts.

Definition of Terms

The following are several terms defined in the context of this project. The definitions are adapted from CDC's webpage on Alcohol and Public Health (Center for Disease Control, 2012).

Alcohol - Ethyl alcohol, or ethanol, is an intoxicating ingredient found in beer, wine, and liquor. Alcohol is produced by the fermentation of yeast, sugars, and starches.

Alcoholism - A chronic disease, also known as dependency on alcohol or alcohol addiction. The signs and symptoms of alcohol dependence include:

- strong craving for alcohol
- continued use despite repeated physical, psychological, or interpersonal problems
- the inability to limit drinking

Alcohol Abuse - A pattern of drinking resulting in harm to one's health, interpersonal relationships, or ability to work.

Binge Drinking - Consuming 5 or more alcoholic drinks for men, and 4 or more drinks for women, on a single occasion.

College Students – Individuals aged 18 -24 years old currently enrolled in college or university classes.

Curriculum Infusion - The process of integrating alcohol abuse prevention content into courses regularly offered across disciplines.

Standard drink**:** A standard drink is equal to 14.0 grams (0.6 ounces) of pure alcohol. This amount of pure alcohol is found in:

- 12-ounces of beer.
- 8-ounces of malt liquor.
- 5-ounces of wine.
- 1.5-ounces or a "shot" of 80-proof distilled spirits or liquor (e.g., gin, rum, vodka, or whiskey).

Part Two: Literature Review

Introduction

This chapter reviews the literature on Curriculum Infusion specific to the key components of a successful and effective intervention, specifically: a) What are key components to a successful CI process that should be included in this project's curriculum? b) What elements could increase the effectiveness and user-friendliness of the curriculum? The project's curriculum and process is designed based on best-practices found in the literature. This review concludes with a summary of the project's public health implications.

Curriculum Infusion

Curriculum Infusion (CI) is the process of purposively integrating topic content into existing classes, rather than content through a standalone course dedicated solely to that topic. In a large scale study conducted by the Fund for Improvement of Post-Secondary Education, it was found that decreases in binge drinking rates were greatest on campuses where Curriculum Infusion on alcohol abuse was emphasized as part of the university's model for binge drinking prevention (Ziemelis, Bucknam, & Elfessi, 2002). CI has been used successfully to integrate alcohol abuse prevention content into courses regularly offered across disciplines, allowing the message to extend to traditionally hard-to-reach student populations. Research shows that CI effectively reduces negative drinking consequences, increases knowledge about the dangers of alcohol abuse and

social norms, and in many instances also decreases alcohol consumption rates (Perkins, 2002; Riley, Durbin, & D'Ariano, 2005; White et al., 2010; Ziemelis et al., 2002).

Curriculum Infusion: Effectiveness

Cordero et al. (2010) conducted an posttest-only experimental design to examine the effectiveness of CI with faculty teaching two identical courses during the same quarter (n=343) and found that effectiveness does not vary across course subject or student demographics, and provided prevention messaging to students who may not seek out this information on their own (Cordero et al., 2010). The effectiveness of CI lies in the indirect nature of the message, and allows students to critically engage with the information in a safe environment free from social stigma (Riley et al., 2005; Tulin, 1997; Ziemelis et al., 2002). This strategy of CI allows faculty to design prevention content that target beliefs, attitudes, and behavior related to binge drinking; a strength of this approach is that faculty have the flexibility to design content that is specific to their courses and teaching style. College-aged students are at a critical development stage when their health habits are still being formed, and are in setting that has "great potential for disseminating health messages and information and shaping behavior" (Ottenritter, 2004, pg. 189). The Network for the Dissemination of Curriculum notes that by involving faculty, alcohol prevention programming can reach students through academic interests, which can change social norms of the school (Network for the Dissemination of Curriculum Infusion, 2012).

One limitation of many previous CI efforts is that the teaching method employed was not clearly defined or illustrated by examples, nor was the process clearly outlined,

thus it has been difficult to evaluate the process of CI implementation (White et al., 2010). Three main gaps were found in the current research on CI, the first being that in the research there is little information about the appropriate level of information for faculty to convey when implementing CI in their course (White et al., 2010). Second, little research has been done on the ease of teachers of implementing CI. Lastly, there are few studies that address the process of CI. Practically speaking, even if the outcomes of this intervention are strong, an instructor will not successfully employ the method if the process is not user-friendly and meets the needs of the instructor's course, which is a strong reason for assessing the process of Curriculum Infusion. This project explores such questions, and attempts to identify the elements necessary for successful design and implementation of CI.

Social Norms

According to the Theory of Planned Behavior, a given behavior can be predicted by behavioral intention, which is influenced by attitudes toward behavior (including behavioral beliefs and evaluation of behavioral outcomes), in addition to social norms and perceived behavioral control (Azjen, 2001). Using binge-drinking as the given behavior, a college student's decision to binge-drink can be predicted by their attitude and misperceived norms towards such high-risk drinking (Collins & Carey, 2007). Stronger intentions to engage in binge-drinking can be predicted by more positive attitudes, which can be fueled by misperceived norms regarding peer behavior (Collins & Carey, 2007).

Social Norms Theory expands upon the idea of social norms and normative behavior by identifying how perceived descriptive and injunctive norms about peer behaviors affect an individual's behaviors. According to Collins and Carey (2007) the two types of norms in this context are *descriptive norms*, perceptions of how others drink, and *injunctive norms*, perceived peer approval of drinking (p. 499). Social Norms Theory posits that one can use normative statements in order to correct misperceptions of both descriptive and injunctive norms. Perkins (2002) explains that "one can think of a group norm in this sense as the cause of much belief and action in addition to a descriptive characterization of the status quo, as a powerful independent variable accounting for or determining individual behavior" (p. 164). Students tend to think that their peers are more permissive in drinking attitudes and have more problem behaviors (consuming more frequently and more heavily) than is really the norm, which has been shown to promote and exacerbate problem drinking.

The most common misperception occurs when students falsely assume that most of their peers behave or think differently that them, assuming that they are in the minority when they are actually in the majority (Berkowitz, 2004). For example, students who do not drink or who drink moderately incorrectly assume that the majority of their peers are drinking in greater quantity and more often. This phenomenon is called pluralistic ignorance, and is dangerous because this misperception encourages students to drink in larger quantity and more often in order to match what they perceive as the behavior of their peers (Berkowitz, 2004). Correcting pluralistic ignorance empowers students who choose not to drink or who drink responsibly. Another misperception, called false consensus, occurs when heavy drinkers may think that the majority of other students are

heavy drinkers, when this is in fact untrue. Correcting the misperception of false consensus has been found to reduce drinking of heavy drinkers.

College students' misperception of drinking norms has been documented in more than 25 studies on different campuses using various measures (Perkins, Haines, & Rice, 2005). Perkins, Haines, & Rice (2005) found in a multivariate analysis of the National College Health Assessment survey (n=76,145) that three quarters of college students nationwide overestimate the amount of alcohol consumed by their peers. This complements Perkins previous work that revealed widespread misperception of norms about the frequency of alcohol consumption. Perkins, Haines, Rice (2005) also found that students' perception of drinking norms is the "strongest predictor of the amount of alcohol personally consumed in comparison with the influence of all demographic variables" (p. 470).

Strategies such as social norms marketing can be used to combat these misperceiving norms on college campuses. For example, a six-year research study at the University of Virginia (n = 2,500) found declining negative consequences related to alcohol misuse among students exposed to a social norms marketing intervention (Turner, Perkins & Bauerle, 2008). The campaign focused on correcting misperceptions about quantity and frequency of alcohol consumption of first-year students, and the study found that over the six study years, not only did the first-year students who initially experienced multiple consequences decreased by more than half, but the number of students who reported experiencing none of the ten named alcohol consequences nearly doubled. Research has also shown similar affects of correcting misperceived norms around the issue of smoking (Berkowitz, 2004). The normative influences at play with alcohol and

smoking are also applicable to a wide range of issues, such as sexual assault and violence, disordered eating and body image disturbance, academic climate and prejudicial behaviors.

Inclusion of social norms information in the CI curriculum is one way to ensure that students would apply this alcohol information to their personal lives and that of their peers, and would be an initial step to correct misperceived norms. As noted by Lederman et al. (2007), drinking is a topic that college students know a lot about (including misinformation), but "may not have developed the intellectual tools to examine the accuracy of what they think they know" (p. 478). CI of alcohol-related topics allows students to develop these tools, analyze their knowledge and assumptions about alcohol, and apply this to knowledge to their own behavior.

Misperceived norms exist across all subpopulations, including faculty and staff who are often carriers of the misperception and thereby inadvertently may add to the problem by reinforcing inaccurate beliefs regarding alcohol use (Perkins, 2002). Correcting students' misperceived social norms can both constrain problem drinkers and empower responsible students. CI of norms may also increase students' awareness of faculty norms regarding alcohol use, which would add as an additional normative influence on students (White et al., 2010).

Given that misperceived drinking norms is such a pervasive problem, inclusion of social norms material in CI was deemed necessary to create an effective curriculum. One gap in the current research is that little information exists about what type of information is most effective in reducing misperceptions (Perkins et al., 2005). While this project is not designed to study this issue on a large scale, it explores these issues through

observation and participant interviews, to gain information about what type of social norms information is appropriate and effective for use in CI. The developed CI curriculum aims to address misperceived norms with students, allowing them to critically examine their perceptions of how others drink and their perceived peer approval of drinking, in addition to the perception of the social pressure influencing one to engage in the behavior.

Curriculum Infusion: Development

Cordero et al. (2010) also found that the courses with strong outcomes used assignments, interactive activities, audio/visual materials, materials about campus resources, and statistics about alcohol and other drugs more than the courses with weaker outcomes (Cordero et al., 2010). The authors of the study concluded that perhaps the strength of these methods is that they have an element of reflection, which allowed students to engage with the material by considering how they may apply such information in their personal lives. Engaged and reflective learning have been documented as essential to the process of learning (Swaner, 2007; Yearwood & Riley, 2010). The curriculum in this project was designed to incorporate methods that allow students to reflect and/or critically engage with the material; this element was evaluated through class observation and participant interviews.

Curriculum Infusion: Faculty

Credibility

Multiple studies have found that faculty are the most believable source of health information, and the instructors seen as more credible and immediate were more knowledgeable about alcohol and had healthier attitudes about substance abuse. Kwan et al. (2010) conducted a study through use of the National College Health Assessment survey to understand the connection between student reception, sources, and believability of health-related information, and found that faculty were the most believable source of health information behind campus health staff (Kwan, Arbour-Nicitopoulos, Lowe, Taman, & Faulkner, 2010). More specifically, Cordero et al. (2010) found that "students who found their CI instructors as more credible and more immediate were more knowledgeable about alcohol and had healthier attitudes about substance abuse" (Cordero et al., 2010, p. 75). The researchers conducted a study of 309 students in 14 CI classes over the course of two semesters, using pre/post test with students and questionnaires with faculty, to assess the impact that CI has on students' knowledge, attitudes, and behaviors regarding alcohol and other drug use, and students' perception of instructors' credibility and immediacy. This project at University A recruited faculty who were known in their departments for being well-respected, as the students were more likely to internalize messages that come from instructors who are experts and trustworthy (Cordero et al., 2010). While being an expert in alcohol is not a requirement for participation in this project, CI allows faculty to integrate alcohol information into course topics about which they are experts.

Faculty Involvement

Cordero et al. found in their study that there was no difference in outcomes between the faculty who attended training about CI, campus statistics regarding alcohol and other drug use, and relevant resources, and the faculty who did not attend training (Cordero et al., 2010). However, the faculty did express that it would be helpful to receive information about campus drinking norms and health resources prior to implementing CI. The researchers also noted that it would be useful for future studies to provide this information to faculty so that they have greater confidence in their implementation of CI. In this project we provided faculty participants with information about the problem (binge-drinking among college students), the strategy of Curriculum Infusion, and the theoretical framework of Planned Behavior and Social Norms in initial group meetings and then in written form in the curriculum's introduction. This project inquires whether participants felt that they received enough information from the evaluator about the topic and strategy to successfully implement CI.

Noted by the Network for Dissemination of Curriculum Infusion (2012), "significant involvement of faculty in each program" was one the factors for a successful CI (Glick, 2005, p. 5). Faculty involved also offers stability to prevention efforts (White et al., 2010). Thus in the project at hand the recruited faculty were involved in designing prevention content for their courses. In some instances the evaluator was responsible for researching ideas for the CI but the participants were involved in approving the methods, in hopes to create a user-friendly curriculum that could be seamlessly integrated into the existing course. During the in-person interviews participants were asked if they felt appropriately involved in the design of the curriculum for their course.

As noted by the Network for Dissemination of Curriculum Infusion, it is important for the project coordinator to have a plan for follow up and support to maximize the likelihood that faculty will continue to use CI (Glick, 2005). Therefore, the evaluator will interview the participants after the interview to ask them about the process, what they would change, and how it could be improved for the future. It is hoped that the participants will continue to use this CI strategy in future classes, and will serve as an example to other faculty who may be interested in joining the project. Participants were asked in the interviews whether they would consider infusing alcohol information into future courses and if they would consider using CI for any other public health topics.

Public Health Implications

College binge drinking continues to be a pervasive issue across campuses nationwide. While CI has proved an effective strategy to reduce students' negative consequences related to alcohol, information about the process has been limited. Practically speaking, even if the outcomes of this intervention are strong, an instructor will not employ (or successfully employ) the method if the process is not user-friendly and meets the needs of her/his course. This project aims to contribute practical information about the content and process of CI, particularly from an instructors' perspective. The ultimate goal of strengthening the CI content and process is to reduce students' negative consequences related to binge drinking, with the intent of reducing incidence or morbidity and mortality amongst our youth.

Part Three: Data Collection, Analysis, and Results

Introduction

The purpose of this study is to contribute practical information about the content and process of Curriculum Infusion (CI) to strengthen the intervention. The two aims of the study are to examine the content and process of CI for alcohol abuse education, and to identify the elements necessary for successful design and implementation of CI.

In addition to the literature review, this study is comprised of formative evaluations to gather information that may strengthen the CI intervention. Evaluations included the creation of the curriculum based on faculty input, interviews with expert reviewers from University B to gather feedback on the written curriculum, observation in the classrooms in which the curriculum is implemented, and interviews with University A participants. The curriculum was revised at two separate points, initially after the expert reviewer interviews and then again after the interviews with the participating faculty. This chapter contains sections on Data Collection, Analysis, and Results from this study.

Data Collection

The evaluation methods were approved by the Emory University and University A Institutional Review Board prior to implementation. The IRB consent form, signed by all study participants, is located in Appendix A. Results from the following evaluation components are located in the Analysis section of this chapter.

Target Population

The target population for this project is faculty. The project employed several different evaluation components, each with its own participants and sample, as noted below. The sample sizes, while small, were carefully selected to represent a variety of discipline types within University A.

Literature Review

The first step of the evaluation was a literature review (n=1), described in Chapter Two.

Participant Recruitment

The sample for this study was comprised of a convenience sample drawn from the faculty of two Universities (University A and University B) in Virginia. The inclusion criteria for University A were: 1) Being on the faculty of University A, 2) having an interest in the use of CI in a classroom setting, and 3) intending to teach a course in spring 2013 that was judged by the evaluator and potential participant to be a good fit for implementation of an infused alcohol-related curriculum. One faculty member each from four University A departments were eventually recruited: English, Communication, Management, and Theatre. Inclusion criteria for University B were: 1) Being on the faculty of University B, 2) having an interest in the use of CI in a classroom setting, and 3) belonging to an academic department that corresponded to the department of a University A study participant. Potential participants were approached by telephone and email to assess their appropriateness for and interest in participating in the study. During the conversations it was made clear that participation in the study was voluntary.

Potential participants from University A convened as a group with the evaluator, the evaluator's Field Advisor, and a member of the evaluator's thesis committee to discuss the project. At this meeting the evaluator briefed the group on the project and the milestones to be completed. As a follow-up to this meeting faculty members who consented to be study participants received written summaries of the Theory of Planned Behavior, Social Norms Theory and Curriculum Infusion, as well as facts about alcohol abuse and health.

Formative Evaluations to Inform Curriculum Design

Three formative evaluations were held during the curriculum design stage. First, as noted in Chapter 2, the evaluator worked with University A participants (n=4) to create a curriculum focused on alcohol abuse-prevention content for use in their classes in spring 2013. During this process the evaluator met individually with each instructor to brainstorm ideas and review her/his syllabus. The evaluator then reviewed the literature for ideas to use in the four classes, and began working on forming the curriculum. The evaluator then met individually with the participants, through phone conversation and/or in-person, to engage in a second formative evaluation, this time of curriculum drafts, until she was able to finalize a curriculum that University A participants felt could be infused into their spring 2013 courses.

After receiving final approval from University A participants, the curriculum was then subject to a third formative evaluation, this time via an expert panel review in fall 2012 by participants from University B. Procedurally, University B participants were sent the curriculum for review; including additional information about CI and the guiding

theories was considered to be unnecessary as they are included in the curriculum's introduction section. University B participants were given at least three weeks to do a formative review of the curriculum, after which they provided feedback to the evaluator through in-person and phone interviews. All feedback was initially scheduled to be provided in-person, but weather restrictions led to two interviews taking place via phone.

Interviews were guided by questions in the "Expert Reviewer Interview Guide" located in Appendix C. The evaluator took notes during each interview and later edited the curriculum based on the expert panel feedback provided by University B participants. She then sent the revised curriculum to University A participants for implementation.

Observation

The evaluator observed implementation of the curriculum by University A participants during four classes in spring 2013 (one class per participant). She did not speak or play an active role in the class during which the curriculum was implemented. During observation she paid particular attention to the aspects of the infused curriculum that were relevant to the project's study and the questions outlined in Chapter One. All data arising from observations was qualitative in nature and coded for themes during analysis.

Interview with University A Participants

The evaluator conducted one-on-one interviews with each of the four University A participants after curriculum implementation with the hope to gain information about the faculty perspective on the CI process and the curriculum they implemented. The "Participant Interview Guide," found in Appendix D, focused on the faculty perspective of the CI process and curriculum in order to answer the research questions outlined in

Chapter One. The guide contained questions about the instructors' teaching style, difficulty implementing CI, degree to which course was changed to integrate the CI information, how instruction diverged from written curriculum, curriculum usefulness, user-friendly aspects of the curriculum, instructor participation in CI development, social norms, negative consequences of binge drinking, student reactions to curriculum, CI process, and CI in future courses. All data arising from interviews was qualitative in nature and coded for themes during analysis.

Curriculum Revision

The curriculum was further revised and re-formed based on oral feedback received from University A participants, as well as from data obtained through the class observations. The revised curriculum for each of the four classes is located in Appendices E (English), F (Communications), G (Management), and H (Theater).

Analysis

Almost all of the data collected during this study is qualitative in nature, the sole exceptions being a few quantitative questions in the University A interview guide that asked participants to numerically score various aspects of the curriculum prior to providing qualitative answers to the corresponding open-ended questions. The data was coded for patterns and themes during analysis.

Results

Findings

Ease of implementation:

- None of the instructors said that they had to change their courses to integrate the CI information. The only way in which two instructors said they changed their class was to substitute a typical lesson plan for this CI plan.
- Some participants found the CI curriculum to be easier to implement than others. One participant rated the difficulty level of implementation as a "1," being not at all difficult, because the evaluator "did all the work…the outline was there and I just added my background to feed discussion and make sure students were comfortable giving their perspective." Another instructor rated the difficulty level a "3," moderately difficult to implement, citing a preference for indexing the lesson plans with tabs, though noting "the rest was excellently done; it really was a good topic."

User-friendliness:

- Participants found the CI curriculum to be user friendly. In response to "On a scale of 1 to 5, with 1 being not at all user-friendly and 5 being exceptionally user-friendly, how user-friendly was the CI curriculum you used?" the average score was 4.375 (5, 5, 4, 3.5).
- Instructors said that all parts of the of the curriculum were easy to follow because of the organization and "a very clear outline."

- The symbols and layout were reported as the user-friendliest aspects in the curriculum.

- To increase the user-friendliness one instructor suggested creating a "separate page of steps – like a checklist with clear steps without the full content."

Subject matter utility:

- An instructor who rated the curriculum "extremely useful" said that "It is a current topic and it's what they are living. They talked, shared, and were engaged. They could relate to this a lot more easily than they could to the other topics we usually focus on."
- An instructor who said it was moderately useful (a 3 out of 5) said "It depends what you mean by useful. I don't think that it will change their drinking behaviors but it does spark discussion. They recall the information, especially [the slogan] '4 or fewer' [drinks per sitting]. Students have told me they remember this when they are out at parties and it works. Also, I would … include more questions about intentions since this is the change you can measure in one class. You can't measure change in behavior but you can change their view of norms."

Courses suitable for using CI to address alcohol use:

- When asked "How could you infuse alcohol information into future courses," instructors said:
    - "You could use the same materials in other business courses, marketing, and consumer behavior. It has a number of applications."
    - "It would be easy because I have so much latitude. It could also be used in nursing (OB, neonatal), geriatrics, and medicine. It would be easy to do in psychology, or really any class with an assignment where the CI lesson could be tossed in and substituted for something else. Then it's not intimidating for the instructor."
    - "I could infuse it in PR case studies, strategic management for communications campaign, interpersonal communication, small group communication, digital communication – you could really use it for any course."
    - "We could use it when studying a play like Cat on a Tin Roof. I would be worried though that this may be sneaky because in that class I don't know the students as well so there is not as much trust. The class expectations aren't as clear since they are not majoring in theater."
- When asked if they would consider infusing alcohol information into future courses, three instructors said, "Yes."
    - One instruction said, "At this time I wouldn't because of time constraints and the process."

- Other public health topics that instructors would consider infusing into the course include: smoking (mentioned by three people), texting, washing hands, tanning, depression, social anxiety, date rape, harassment, stress, nutrition and obesity.

Student engagement with CI:

- "The students were very accepting. I think you need to make sure you emphasize that it is not punitive and stays in the classroom. It's a learning experience where they can learn from each other."
- "CI as you prepared it and we did it infused quite well. It didn't have any negative connotation, it was very positive for them. Judging from students' feedback it was a valuable piece."
- During the evaluator's observation the students appeared very engaged and comfortable talking about the material amongst themselves and with the instructor. They admitted to binge drinking and spoke about their perceptions of their friends' drinking habits. One class asked to use the social norms snowball game to gather information about their classmates drinking habits, to compare to their perceptions. When this data was compared it was found that the perceptions were inaccurate, which reinforced the lesson on social norms.

Level of seriousness with which the students responded to CI:

- "They took it very seriously. CI may have been taken more seriously than the regular assignments. CI held together well from the beginning to the end of

the semester and the topic was of interest. It was a relevant theme for students."

- "They took it seriously – they left the room still chatting about it. They all turned their assignments in on time. Whether they know it or not, I think at the next keg party it will come flowing back to them."
- "I think they took it seriously. Once they know it's on the exam they pay attention. They took it as seriously as normal lessons. But again, it depends on how seriously the faculty take it. They knew I wasn't joking because I said 'this will be on the exam' and 'write this down'."
- "Somewhat seriously, but a little less than normal discussions since we were discussing social issues and not typical class content."
- Through observation the evaluator noticed that the students were engaged, took notes, and appeared to take the material seriously.

Persons involved in CI initiative:

- "I think the most important part was working with the faculty member to personalize it."
- All faculty said they felt adequately involved in the design of the curriculum: "Oh yeah, it is the most important part of what you're doing. I am the professor and am still in control and have academic freedom. You have to let the professor know it's his stuff, and that you are just there to help. Your role and title as Health Educator is important and the nature of what you do fits well with this.

You are here to help me, not to control what I teach. It's good that you are not part of the administration and that it's not coming from the administration."

- "I don't think you should be sneaky [in reference to how CI is implemented] because students will figure it out. The administration is sneaky, which is more of a reason why the CI can't come from the administration."

Unanticipated findings

Social norms:

- One instructor said that he diverged from the curriculum during the piece on social norms: "I added examples that weren't in the PowerPoint. Once you bring up social norms, you can't predict how many examples a student will need to believe the information."
- When asked what changes in the curriculum would have made it easier to follow, one instructor suggested including more examples for students about social norms.
- When asked about the success of integrating the piece on social norms to reduce misperceptions, instructors noted:
    - "It was valuable at reducing misperceptions; not sure it was highly effective, but effective."
    - "It flowed ok – if I was to do it again, I would make a better connection with social norms."

  - "I touched on social norms, but I'm not sure how much it stuck with them. Maybe it would have been better if we did this part up front."
  - "I don't think I covered the social norms activity very well. I think it was partly due to time and partly because I felt that we had already covered the material through discussion."

Students' awareness of CI:

- Students did notice alcohol information was being infused based on the pre- and post- test but that it "wasn't a big deal."
- Students didn't notice the CI because "it fit in seamlessly" to the class content.
- One instructor noted that the pre- and post-test seemed confusing for the students because a couple days prior they took the National College Health Assessment in class, but that they were still engaged with the material.

Pre- and post-test:

- When asked what changes in the curriculum would have made it easier to follow, one instructor suggested emphasizing the instructions for pre- and post- test.
- To improve the ease of implementation, "emphasize the instructions on the pre- and post- test."
- It was observed by the evaluator that the instructors didn't read the pre-test instructions or state the debriefing on the post-test.
- "I would make the pre- and post-test as short as possible."

Training for instructors:

- "I think it [CI of alcohol information] demonstrated that faculty care enough by the fact that they infuse it. Even if they [students] notice, it makes it seem important because faculty spend time on it, which is why you need to make sure the faculty are committed to it or else it will backfire."
- "Once you bring up social norms, you can't predict how many examples a student will need to believe the information. You can train faculty on how to discuss this, though. As an instructor you have to stand behind the data or they won't believe you."
- "There should be consistency in how the steps are followed – make this easy. If CI is used across campus there should be a mandatory training with the steps you need to cover. You need to get them comfortable that they create a culture of learning where students lead class and discussion. For me, it was actually fun."
- In response to how to make the curriculum user-friendlier: "Include more information about where the statistics came from. The students had questions about this. It might have been difficult if you didn't have the background or the rapport with students to back your data."
- An expert reviewer said: "Give examples of norms, and then draw students to come up with more…don't leave it to chance for individual faculty to explain it, so add examples with descriptions." The evaluator did include examples,

but based on study-site participant interview, more examples with discussion points are necessary.

- The evaluator observed in a couple classes that the instructor didn't know how to manage students when they made comments that could fuel misperceptions. The instructors eventually redirected the conversation, but did not debunk the myth. The instructors' body language made it appear to the evaluator that they were uncomfortable but did not know how to handle the situation.
- The evaluator observed one instructor say, "When you choose to drink," insinuating that all the students drink, rather than saying, "If you choose to drink."

Revisions to Curriculum

The data revealed that less edits were required for the content of the curriculum than for the process of CI. Suggested changes for the CI process are discussed in *Part Four: Discussion*. The following were edits made to the curriculum content based on the results from University A participant interview and class observations:

- Addition of social norms examples and talking points.
- The step "Ask students to carefully review the instructions at the top of the page before beginning" was added as a step to the pre- and post-survey steps for instructors.

Part Four: Discussion

Introduction

The purpose of this study was to contribute practical information about the content and process of Curriculum Infusion (CI) to strengthen the intervention. The study sought to identify the elements necessary for successful design and implementation of CI, and was designed to address gaps in previous research. One of these gap areas was to explore the appropriate level of information for faculty to convey when implementing CI in their course (White et al., 2010). Secondly, little research has been done on the ease to teachers of implementing CI. Lastly, there is little information how the teaching method process and teaching method employed in order to better evaluate the process of CI. Practically speaking, the process must be also user-friendly and meet the needs of the instructors' course if the intervention is to be employed widely. It is hoped that other higher education and public health professionals will find the following results useful for the creation and implementation of their own CI projects, as a strategy to decrease students' negative consequences related to drinking.

Discussion

The specific findings of the study are discussed in length in Part Three, and this section will aim to summarize the results. The study sought to identify the elements necessary for successful design and implementation of CI, and was designed to address gaps in previous research.

The level of information and teaching style varied between the instructors in this study, but in the curriculum implementation they all applied the standard learning outcomes for students outlined in the curricula. It may be that the level of information and style are not as important as consistent messaging across the courses and clear, achievable outcomes.

Recruitment and selection of appropriate faculty is important, because as learned in the results, the infused curriculum will only be taken seriously by students if faculty present it in a way that shows they take it seriously. Previous research has recommended the use of incentives such as grants or gift cards to incentivize faculty, but has not recommended how to recruit and select instructors to implement CI. Faculty must be willing to reflect on their behavior in the classroom, specifically behavior that reinforces misperceptions. Due to the sensitive nature of the content and ease with which instructors can unintentionally reinforce misperceptions, it is important that instructors participating in a CI project are self-reflective and are willing to attend professional development about the CI process prior to implementation.

Adequate training for faculty who wish to implement CI may be one of the most significant findings of this research. Data from this study shows that recruitment of appropriate and committed faculty is an important element to the success of CI, but should not include participation from the administration as this group was seen as "sneaky" and controlling of academic freedoms. Training for instructors who wish to implement CI should be mandatory and include information about social norms, how to

defend the data, consistent messaging, and how to lead class discussion on sensitive topics without reinforcing myths.

Interpreted Findings:

- Implementation of CI did not require significantly changing the normal course plans. On the surface this may appear contradictory to the two of the instructors' follow-up response in which they stated that the only way they changed their class was to substitute a typical lesson plan for the CI plan. This is important data, as it reveals that the instructors did not think of this substitution as requiring significant change to their course.
- A clear outline and organization are essential to the ease of use and user-friendliness of the curriculum.
- Instructors found the curriculum to be moderately to exceptionally useful and the topic to be relevant and interesting to students.
- Students critically analyzed the information, but were open to discussing the information even with an instructor present in the room.
- Instructors found CI of alcohol information beneficial and would implement CI in future classes.
- The students took the curriculum seriously.
- It is important that the curriculum be developed in partnership between the Health Educator (Evaluator) and Instructor, without influence from the Administration.

Interpreted Unanticipated Findings:

- The social norms content was an area of weakness. Thorough training for instructors about social norms, and various examples of norms for students in the curriculum are necessary for successful implementation.
- It did not seem to matter whether the students noticed that alcohol information was being infused.
- Instructors did not follow pre-and post-test directions that instructed students to use a code-name, and did not read the debriefing on the post-test.
- Training for instructors implementing CI should be mandatory and include information about social norms, how to defend the data, and how to lead class discussion on sensitive topic without reinforcing myths. Furthermore, recruitment of faculty is an important element to the success of CI; faculty must be committed and willing to reflect on their behavior in the classroom, specifically behavior that reinforces misperceptions.

Limitations and Delimitations

One of the primary delimitations is that the study sample was a convenience sample of participants and thus may not be representative of the entire University A or B faculty. Participants expressed that their interest in alcohol abuse prevention motivated them to volunteer as subjects in this study, which is likely not the case for all faculty. The particular culture of University A or B is not representative of all universities, and neither are the participants' teaching styles representative of all faculty. This limits the results' generalizability for other universities or faculty, as the data is mediated by the

particular context of this study. While the generalizability of the data is limited, the data does still add useful general knowledge about the process of CI.

A limitation of the study is that the evaluator was also a stakeholder in this study, a risk being that of unintentional bias. Additionally, while the participants' volunteered for the study without any expected discomforts or risks other than potential loss of confidentially concerning comments made about the curriculum, their behavior may have been altered due to their relationship to the evaluator. The evaluator does not have a personal relationship with the participants nor does she work with them directly, but she has collaborated with them in the past on campus wide initiatives. Thus, their performance in this study may have been altered due to this relationship.

A limitation of the observations is that the participants may have behaved in an atypical fashion since they knew they were being observed, which may also have impacted how closely they followed the curriculum. The observation data is also constrained by the limited sample size, and the interview data may have been subject to recall error. However, use of a combination of data types, observations and interviews, does increase the validity of the data as each method provides a check on what is reported in the other.

Public Health Implications

College binge drinking continues to be a pervasive issue across campuses nationwide that can have severe and costly impacts for the individual and her/his community, and is a preventable cause of morbidity and mortality. Strategies to reduce alcohol-related harm and increase knowledge alcohol abuse and social norms are worthy

of our attention, as they can help us to change not only individuals' behavior and knowledge but also campus culture and social impacts. Furthermore, it is important to ensure that such strategies are user-friendly and appropriately implemented in order to produce favorable results. In addition to ideas about successful content and curriculum design that ensured user-friendliness and usefulness of the curriculum, this study also adds to the body knowledge about the faculty training necessary for successful implementation.

For the campus Health Educator, or person interested in implementing a CI program, the following suggestions are offered as advice about what retrospectively turned out to be the most important components of the process:

- Do not include the administration in the recruitment or implementation of CI. A common theme from this study is that the administration is seen as sneaky and controlling of academic freedoms. Health Educators, or those in a less academic or managerial role, should be used to orchestrate the project throughout the process.
- Voluntary faculty buy-in is essential to this process, so participation should not be made mandatory. Faculty from University A and B suggested that a small monetary incentive, such as a Starbucks gift card, or an hour of release time from their course load, would be appreciated in exchange for their participation in a CI project. This echoes previous studies in which faculty recommended an incentive be offered in exchange for their participation, but did not want their participation to be required by the administration.

- Unless the instructor needs to collect data about the CI lessons, it would be best not to include a pre/post test because it can trigger students' awareness of the intervention and affect the fluidity of the CI process. If a pre/post test is necessary, it would be beneficial to include the evaluation questions as part of another class quiz or test, as opposed to administering a pre/post test that is limited to questions about alcohol abuse and social norms.
- For each of the four courses the Health Educator spent about seven hours creating the CI curriculum of lesson plans from start (initial group meeting to discuss learning objectives) to finish (after expert review, observation and interviews was completed, and curriculum revised). In this study the evaluator conducted separate literature reviews for each course to formulate discipline-specific ideas. However, if all of the courses had been from the same or similar disciple, this review would have taken a shorter amount of time. In the expert review panel with University B participants, the evaluator learned that the CI curriculum formulated for one class is likely to be very generalizable in terms of its applicability to another class in a similar discipline. For example, the English CI curriculum included a lesson plan that required students to write a paper that incorporated critical analysis about negative consequences of alcohol abuse related to college-aged students. After writing the paper the students delivered a presentation about their paper and were asked to present both sides of their argument. This same assignment could have been used in a class that

focused on creative writing, public speaking, grammar or even literary study.

- Do not assume that because an instructor is an expert in her/his field, or is interested in alcohol abuse prevention, that she/he has a thorough grasp on social norms. Include examples in the training from your own campus or from the instructors' fields if possible, in which social norms affect behavior. Provide specific examples in which an instructor may inadvertently reinforce misperceived norms (i.e. "when you drink" rather that "if you drink," and empower them with ways to address misperceived norms named by their students. Encourage instructors to use data whenever possible to reinforce the social norms message with students.

Areas for Future Research

Future research about CI could benefit from student input on the process, through student focus groups or interviews. While not appropriate for the purposes of this study since our target population was faculty, students' experience of the curriculum may be helpful to gain insight into the degree to which the curriculum flows with the other class content, as well as the believability of the information presented. Expanding this research with faculty from other disciplines at other universities may add knowledge about differences that exist between disciplines and could strengthen the generalizability of such information. It may also be useful to conduct further research with instructors about the best methods and incentives to engage them in CI initiatives. Additional fieldwork on this topic would serve to test the conclusions from this study as well as add additional information.

Part Five: Journal Article

TITLE PAGE

DEVELOPMENT AND IMPLEMENTATION OF A CURRICULUM INFUSION PLAN FOR ALCOHOL ABUSE EDUCATION

ABSTRACT

Background

College binge drinking continues to be a pervasive issue across campuses nationwide. While Curriculum Infusion (CI) has proved an effective strategy to reduce students' negative consequences related to alcohol, information about the process is limited.

Purpose

The purpose of this study is to contribute practical information about the content and process of CI to strengthen the intervention.

Methods

The research questions were examined using the following methodologies: literature review, development of materials, expert panel review, observation of implemented curriculum, and interviews with participating instructors.

Results

A thematic qualitative data analysis revealed themes regarding the use of the curriculum, student response to CI, courses suitable for using CI to address alcohol abuse, people involved in CI initiative, social norms, pre- and post-test and instructor training.

Discussion

Adequate CI training for instructors should be mandatory and include information about social norms, how to defend data, consistent messaging and how to lead class discussion on sensitive topics without reinforcing myths.

Translation to Health Education Practice

Findings suggest ways to strengthen the CI content and process with the ultimate goal of reducing college students' negative consequences related to binge drinking.

BACKGROUND

Excessive alcohol use is the third leading lifestyle-related cause of death in the United States, and alcohol-related factors are the leading influence in the top three causes of death (automobile crashes, suicide and homicide) among youth 15-24 years old.[1] The Center for Disease Control and Prevention (CDC)[2] estimated that there are approximately 79,000 deaths attributable to excessive alcohol use each year in the United States. This translates to 2.3 million years of potential life lost or 30 years of potential life lost for each death.

Typical alcohol abuse prevention efforts tend to be uni-variate, often conducted by the student affairs or counseling personnel, leaving faculty uninvolved and underutilized.[3,4] However, Curriculum Infusion (CI) is an example of a system-wide prevention strategy that involves faculty, whom have a unique advantage of being in non-punitive roles on campus, in alcohol abuse reduction efforts.[5] CI is the process of purposively integrating topic content into existing classes, rather than content through a standalone course dedicated solely to that topic. The Fund for Improvement of Post-Secondary Education sponsored drug-prevention programs found that decreases in binge

drinking rates were greatest on campuses where CI on alcohol abuse was emphasized as part of the university's model for binge drinking prevention.[6] Current research indicates that using CI in college classes as a means of disseminating and reinforcing the messages that misperceived social norms can encourage alcohol abuse and that alcohol abuse has negative consequences is an effective process for reducing students' negative consequences related to binge-drinking.[4,6-8]

CI has been used successfully to integrate alcohol abuse prevention content into courses regularly offered across disciplines, allowing the message to extend to traditionally hard-to-reach student populations. Research shows that CI effectively reduces negative drinking consequences, increases knowledge about the dangers of alcohol abuse and social norms, and in many instances also decreases alcohol consumption rates.[4,6-8] Cordero et al[5] conducted an posttest-only experimental design to examine the effectiveness of CI with faculty teaching two identical courses during the same quarter (n=343) and found that effectiveness does not vary across course subject or student demographics, and provided prevention messaging to students who may not seek out this information on their own. The effectiveness of CI lies in the indirect nature of the message, and allows students to critically engage with the information in a safe environment free from social stigma.[6,8,9] The Network for the Dissemination of Curriculum[10] notes that by involving faculty, alcohol prevention programming can reach students through academic interests, which can change social norms of the school.

This strategy of CI allows faculty to develop prevention content that target beliefs, attitudes, and behavior related to binge drinking; a strength of this approach is that faculty have the flexibility to develop content that is specific to their courses and

teaching style. College-aged students are at a critical development stage when their health habits are still being formed, and are in setting that has "great potential for disseminating health messages and information and shaping behavior."[11] A limitation of many previous CI efforts is that the teaching method employed was not clearly defined or illustrated by examples, nor was the process clearly outlined, thus it has been difficult to evaluate the process of CI implementation.[4] Another gap in the research is the appropriate level of information for faculty to convey when implementing CI in their course.

Curriculum Infusion Development

Cordero et al[5] also found that the courses with strong outcomes used assignments, interactive activities, audio/visual materials, materials about campus resources, and statistics about alcohol and other drugs more than the courses with weaker outcomes. The authors of the study concluded that perhaps the strength of these methods is that they have an element of reflection, which allowed students to engage with the material by considering how they may apply such information in their personal lives. Engaged and reflective learning have been documented as essential to the process of learning.[3,14] Inclusion of social norms in the curriculum is one way to ensure that students would apply this alcohol information to their personal lives and that of their peers. As noted by Lederman et al.[15] drinking is a topic that college students know a lot about (including misinformation), but "may not have developed the intellectual tools to examine the accuracy of what they think they know." CI of alcohol-related topics allows students to develop these tools, analyze their knowledge and assumptions about alcohol, and apply this to knowledge to their own behavior.

Faculty Involvement

Kwan et al[12] conducted a study through use of the National College Health Assessment survey to understand the connection between student reception, sources, and believability of health-related information, and found that faculty were the most believable source of health information behind campus health staff. More specifically, Cordero et al[5] found that "students who found their CI instructors as more credible and more immediate were more knowledgeable about alcohol and had healthier attitudes about substance abuse." The researchers conducted a study of 309 students in 14 CI classes over the course of two semesters, using pre/post test with students and questionnaires with faculty, to assess the impact that CI has on students' knowledge, attitudes, and behaviors regarding alcohol and other drug use, and students' perception of instructors' credibility and immediacy.

Cordero et al[5] found in their study that there was no difference in outcomes between the faculty who attended training about CI, campus statistics regarding alcohol and other drug use, and relevant resources, and the faculty who did not attend training. However, the faculty did express that it would be helpful to receive information about campus drinking norms and health resources prior to implementing CI. Significant faculty involvement in the curriculum development is another factor for a successful CI program, which offers stability to prevention efforts.[13],[4] As noted by the Network for Dissemination of Curriculum Infusion, it is also important for the CI project coordinator to have a plan for follow up and support to maximize the likelihood that faculty will continue to use CI.[13]

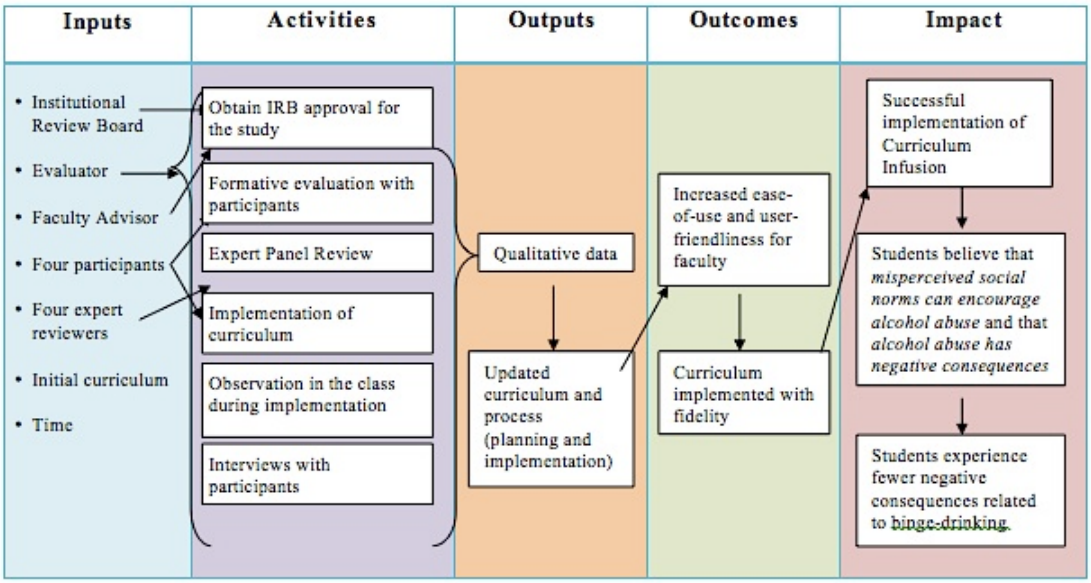
PURPOSE

The purpose of this study is to contribute practical information about the content and process of CI to strengthen the intervention. The goal of this project is to add to knowledge about the process of Curriculum Infusion, specifically infusion of alcohol-related content in the college classroom. There has been little research done on the ease to teachers of implementing CI on alcohol abuse education in a college classroom.

METHODS

Data Collection

The evaluation methods were approved by the Emory University and University A Institutional Review Board prior to implementation, and all study participants signed an IRB consent form.



Participant Recruitment

The sample for this study was comprised of a convenience sample drawn from the faculty of two Universities (University A and University B) in Virginia and were carefully selected to represent a variety of discipline types. The inclusion criteria for University A were: 1) Being on the faculty of University A, 2) having an interest in the use of CI in a classroom setting, and 3) intending to teach a course in spring 2013 that was judged by the evaluator and potential participant to be a good fit for implementation of an infused alcohol-related curriculum. One faculty member each from four University A departments were eventually recruited: English, Communication, Management, and Theatre. Inclusion criteria for University B were: 1) Being on the faculty of University B, 2) having an interest in the use of CI in a classroom setting, and 3) belonging to an academic department that corresponded to the department of a University A study participant. Potential participants were approached by telephone and email to assess their appropriateness for and interest in participating in the study.

Curriculum Development and Expert Panel Review

The evaluator worked with University A participants (n=4) to develop a curriculum focused on alcohol abuse-prevention content for use in their classes in spring 2013. During this process the evaluator met individually with each instructor to brainstorm ideas and review the class syllabus. The evaluator reviewed the literature for ideas to use in the four classes and began working on developing the curriculum, after which she met with the instructors to edit the curriculum drafts. Learning objectives for all lessons included the following:

At the end of class students will be able to:

- Identify negative personal consequences related to alcohol abuse.
- Define the following five terms: alcohol, alcoholism, alcohol abuse, standard drink and binge drinking.
- Explain the difference between a "misperceived social norm" and an "accurate norm," and how it alters people's behavior specific to drinking.

Course Title	**CI Method**	**Details**
Communications: Public Relations	Lecture	Instructor delivers 90-minute lecture using PowerPoint presentation to introduce students to Theory of Reasoned Action and the persuasive nature of norms and normative messages, using alcohol prevention as an example of how a university deals with the issue internally. Lecture includes discussion questions about negative personal consequences and the five alcohol terms.
English	Paper	Students review literature and critically analyze how alcohol abuse affects college campuses and/or healthcare. In paper students must use the five alcohol terms correctly.
	Presentation	Students deliver five-minute multimedia presentation of their paper topic, covering both sides of the argument and citing

		literature. Follow-up discussion will explore negative personal consequences related to alcohol abuse.
	Activity and discussion	Instructor leads hands-on demonstration (snowball fight activity) about misperceived norms, and follow-up discussion about norms.
Management: Organizational Behavior	Research project (paper and presentation)	Groups write research paper about how alcohol affects the workplace and/or a college campus and what type of management strategies could be used to prevent/address this issue. Groups then deliver 8-minute multimedia presentation about their paper in which they will also demonstrate understanding of alcohol terms as well as social norms that influence a workplace and/or college campus.
Theater	Lecture and discussion	Prior to the lecture the instructor asks the students to read about the five alcohol terms. In class the instructor leads 60-minute lecture and discussion about how alcohol

		affects the voice, body and collaboration, as well as social norms that influence behavior.
	Reflection paper	Students write a reflection paper about the lecture on alcohol abuse.

After receiving final approval from University A participants, the curriculum was then subject to an expert panel review in fall 2012 by participants from University B. Procedurally, University B participants were sent the curriculum for review and were given at least three weeks to review the curriculum, after which they provided feedback to the evaluator through in-person and phone interviews. Interviews were guided by questions in the Expert Reviewer Interview Guide. The evaluator took notes during each interview and later edited the curriculum based on the expert panel feedback provided by University B participants. She then sent the revised curriculum to University A participants for implementation.

Observation

The evaluator observed implementation of the curriculum by University A participants during four classes in spring 2013 (one class per participant). She did not speak or play an active role in the class during which the curriculum was implemented. During observation she paid particular attention to the aspects of the infused curriculum

that were relevant to the project's study and research questions. The evaluator took notes guided by the following questions:

- Did the intervention appear natural to the instructor?
- Did the intervention appear natural to the students?
- How did the students react?
- What behaviors did they exhibit?
- To what extent were the learning objectives met?
- To what extent did the instructor diverge from the exact curriculum?

All data arising from observations was qualitative in nature and coded for themes during analysis.

Interviews

The evaluator conducted one-on-one interviews with each of the four University A participants after curriculum implementation. The Participant Interview Guide focused on the faculty perspective of the CI process and curriculum in order to answer the research questions, and covered the following topics: teaching style, difficulty implementing CI, degree to which course was changed to integrate the CI information, how instruction diverged from written curriculum, curriculum usefulness, user-friendly aspects of the curriculum, instructor participation in CI development, social norms, negative consequences of binge drinking, student reactions to curriculum, CI process, and CI in future courses.

The curriculum was further revised and re-formed based on oral feedback received from University A participants during interviews, as well as from data obtained through the class observations. Copies of the curricula are available upon request.

Analysis

Almost all of the data collected during this study is qualitative in nature, the sole exceptions being a few quantitative questions in the University A interview guide that asked participants to numerically score various aspects of the curriculum prior to providing qualitative answers to the corresponding open-ended questions. The data was coded for patterns and themes during analysis.

RESULTS

Results below were gathered from the interviews and observations.

Findings

Ease of implementation:

- None of the instructors said that they had to change their courses to integrate the CI information. The only way in which two instructors said they changed their class was to substitute a typical lesson plan for the developed CI plan.
- Some participants found the CI curriculum to be easier to implement than others. One participant rated the difficulty level of implementation as a "1," being not at all difficult, because the evaluator "did all the work…the outline was there and I just added my background to feed discussion and make sure students were comfortable giving their perspective." Another instructor rated the difficulty level a "3," moderately difficult to implement, citing a preference for indexing the lesson plans with tabs, though noting "the rest was excellently done; it really was a good topic."

User-friendliness:

- Participants found the CI curriculum to be user-friendly. In response to "On a scale of 1 to 5, with 1 being not at all user-friendly and 5 being exceptionally user-friendly, how user-friendly was the CI curriculum you used?" the average score was 4.375 (5, 5, 4, 3.5).
- Instructors said that all parts of the of the curriculum were easy to follow because of the organization and "a very clear outline."
- The symbols and layout were reported as the user-friendliest aspects in the curriculum.
- To increase the user-friendliness one instructor suggested creating a "separate page of steps – like a checklist with clear steps without the full content."

Subject matter utility:

- An instructor who rated the curriculum "extremely useful" said that "It is a current topic and it's what they are living. They talked, shared, and were engaged. They could relate to this a lot more easily than they could to the other topics we usually focus on."
- An instructor who said it was moderately useful (a 3 out of 5) said "It depends what you mean by useful. I don't think that it will change their drinking behaviors but it does spark discussion. They recall the information, especially [the slogan] '4 or fewer' [drinks per sitting]. Students have told me they remember this when they are out at parties and it works. Also, I would … include more questions about intentions since this is the change you can

measure in one class. You can't measure change in behavior but you can change their view of norms."

Courses suitable for using CI to address alcohol use:

- When asked "How could you infuse alcohol information into future courses," instructors said:
    - "You could use the same materials in other business courses, marketing, and consumer behavior. It has a number of applications."
    - "It would be easy because I have so much latitude. It could also be used in nursing (OB, neonatal), geriatrics, and medicine. It would be easy to do in psychology, or really any class with an assignment where the CI lesson could be tossed in and substituted for something else. Then it's not intimidating for the instructor."
    - "I could infuse it in PR case studies, strategic management for communications campaign, interpersonal communication, small group communication, digital communication – you could really use it for any course."
    - "We could use it when studying a play like Cat on a Tin Roof. I would be worried though that this may be sneaky because in that class I don't know the students as well so there is not as much trust. The class expectations aren't as clear since they are not majoring in theater."

- When asked if they would consider infusing alcohol information into future courses, three instructors said, "Yes."
    - One instruction said, "At this time I wouldn't because of time constraints and the process."
- Other public health topics that instructors would consider infusing into the course include: smoking (mentioned by three people), texting, washing hands, tanning, depression, social anxiety, date rape, harassment, stress, nutrition and obesity.

Student engagement with CI:

- "The students were very accepting. I think you need to make sure you emphasize that it is not punitive and stays in the classroom. It's a learning experience where they can learn from each other."
- "CI as you prepared it and we did it infused quite well. It didn't have any negative connotation, it was very positive for them. Judging from students' feedback it was a valuable piece."
- During the evaluator's observation the students appeared very engaged and comfortable talking about the material amongst themselves and with the instructor. They admitted to binge drinking and spoke about their perceptions of their friends' drinking habits. One class asked to use the social norms snowball game to gather information about their classmates drinking habits, to compare to their perceptions. When this data was compared it was found that the perceptions were inaccurate, which reinforced the lesson on social norms.

Level of seriousness with which the students responded to CI:

- "They took it very seriously. CI may have been taken more seriously than the regular assignments. CI held together well from the beginning to the end of the semester and the topic was of interest. It was a relevant theme for students."
- "They took it seriously – they left the room still chatting about it. They all turned their assignments in on time. Whether they know it or not, I think at the next keg party it will come flowing back to them."
- "I think they took it seriously. Once they know it's on the exam they pay attention. They took it as seriously as normal lessons. But again, it depends on how seriously the faculty take it. They knew I wasn't joking because I said 'this will be on the exam' and 'write this down'."
- "Somewhat seriously, but a little less than normal discussions since we were discussing social issues and not typical class content."
- Through observation the evaluator noticed that the students were engaged, took notes, and appeared to take the material seriously.

Persons involved in CI initiative:

- "I think the most important part was working with the faculty member to personalize it."
- All faculty said they felt adequately involved in the development of the curriculum: "Oh yeah, it is the most important part of what you're doing. I am the

professor and am still in control and have academic freedom. You have to let the professor know it's his stuff, and that you are just there to help. Your role and title as Health Educator is important and the nature of what you do fits well with this. You are here to help me, not to control what I teach. It's good that you are not part of the administration and that it's not coming from the administration."

- "I don't think you should be sneaky [in reference to how CI is implemented] because students will figure it out. The administration is sneaky, which is more of a reason why the CI can't come from the administration."

Unanticipated findings

Social norms:

- One instructor said that he diverged from the curriculum during the piece on social norms: "I added examples that weren't in the PowerPoint. Once you bring up social norms, you can't predict how many examples a student will need to believe the information."
- When asked what changes in the curriculum would have made it easier to follow, one instructor suggested including more examples for students about social norms.
- When asked about the success of integrating the piece on social norms to reduce misperceptions, instructors noted:
    - "It was valuable at reducing misperceptions; not sure it was highly effective, but effective."

- "It flowed ok – if I was to do it again, I would make a better connection with social norms."
- "I touched on social norms, but I'm not sure how much it stuck with them. Maybe it would have been better if we did this part up front."
- "I don't think I covered the social norms activity very well. I think it was partly due to time and partly because I felt that we had already covered the material through discussion."

Students' awareness of CI:

- Students did notice alcohol information was being infused based on the pre- and post- test but that it "wasn't a big deal."
- Students didn't notice the CI because "it fit in seamlessly" to the class content.
- One instructor noted that the pre- and post-test seemed confusing for the students because a couple days prior they took the National College Health Assessment in class, but that they were still engaged with the material.

Pre- and post-test:

- When asked what changes in the curriculum would have made it easier to follow, one instructor suggested emphasizing the instructions for pre- and post- test.
- To improve the ease of implementation, "emphasize the instructions on the pre- and post- test."

- It was observed by the evaluator that the instructors didn't read the pre-test instructions or state the debriefing on the post-test.
- "I would make the pre- and post-test as short as possible."

Training for instructors:

- "I think it [CI of alcohol information] demonstrated that faculty care enough by the fact that they infuse it. Even if they [students] notice, it makes it seem important because faculty spend time on it, which is why you need to make sure the faculty are committed to it or else it will backfire."
- "Once you bring up social norms, you can't predict how many examples a student will need to believe the information. You can train faculty on how to discuss this, though. As an instructor you have to stand behind the data or they won't believe you."
- "There should be consistency in how the steps are followed – make this easy. If CI is used across campus there should be a mandatory training with the steps you need to cover. You need to get them comfortable that they create a culture of learning where students lead class and discussion. For me, it was actually fun."
- In response to how to make the curriculum user-friendlier: "Include more information about where the statistics came from. The students had questions about this. It might have been difficult if you didn't have the background or the rapport with students to back your data."

- An expert reviewer said: "Give examples of norms, and then draw students to come up with more…don't leave it to chance for individual faculty to explain it, so add examples with descriptions." The evaluator did include examples in the developed curriculum, but based on study-site participant interview, more examples with discussion points are necessary.
- The evaluator observed in some classes that the instructor didn't know how to manage students when they made comments that could fuel misperceptions. The instructors eventually redirected the conversation, but did not debunk the myths. The instructors' body language made it appear to the evaluator that they were uncomfortable but did not know how to handle the situation.
- The evaluator observed one instructor say, "When you choose to drink," insinuating that all the students drink, rather than saying, "If you choose to drink."

Revisions to Curriculum

The data revealed that less edits were required for the content of the curriculum than for the process of CI. Suggested changes for the CI process are discussed in the next section. The following were edits made to the curriculum content based on the results from University A participant interview and class observations:

- Addition of social norms examples and talking points.
- The step "Ask students to carefully review the instructions at the top of the page before beginning" was added as a step to the pre- and post-survey steps for instructors.

DISCUSSION

The purpose of this study was to contribute practical information about the content and process of Curriculum Infusion (CI) to strengthen the intervention. The study sought to identify the elements necessary for successful development and implementation of CI, and was designed to address gaps in previous research. One of these gap areas was to clearly outline the process and teaching method employed in order to better evaluate the process of CI. Another was to explore the appropriate level of information for faculty to convey when implementing CI in their course.[4] Practically speaking, the process must be also user-friendly and meet the needs of the instructors' course if the intervention is to be employed widely. It is hoped that other higher education and public health professionals will find the following results useful for the creation and implementation of their own CI projects, as a strategy to decrease students' negative consequences related to drinking.

The level of information and teaching style varied between the instructors in this study, but in the curriculum implementation they all applied the standard learning outcomes for students as outlined in the curricula. It may be that the level of information and style are not as important as consistent messaging across the courses and clear, achievable outcomes. Adequate training for faculty who wish to implement CI may be one of the most significant findings of this research. Previous research has recommended the use of incentives such as grants or gift cards to incentivize faculty, but has not recommended how to recruit and select instructors to implement CI. Data from this study shows that recruitment of appropriate and committed faculty is an important element to

the success of CI, but should not include participation from the administration as this group was seen as "sneaky" and controlling of academic freedoms.

Furthermore, faculty must be willing to reflect on their behavior in the classroom, specifically behavior that reinforces misperceptions. Due to the sensitive nature of the content and ease with which instructors can unintentionally reinforce misperceptions, it is important that instructors participating in a CI project are self-reflective and are willing to attend professional development about the CI process prior to implementation. Training for instructors who wish to implement CI should be mandatory and include information about social norms, how to defend the data, consistent messaging and how to lead class discussion on sensitive topics without reinforcing myths.

Limitations and Delimitations

One of the primary delimitations of the study is that it used a convenience sample of only four participants and thus may not be representative of the entire University A faculty. Participants expressed that their interest in alcohol abuse prevention motivated them to volunteer as subjects in this study, which is likely not the case for all faculty. The particular culture of University A is not representative of all universities, and neither are the participants' teaching styles representative of all faculty. This limits the results' generalizability for other universities or faculty, as the data is mediated by the particular context of this study. While the generalizability of the data is limited, the data does still add useful general knowledge about the process of CI.

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TRANSLATION TO HEALTH EDUCATION PRACTICE

College binge drinking continues to be a pervasive issue across campuses nationwide that can have severe and costly impacts for the individual and her/his community, and is a preventable cause of morbidity and mortality. Strategies to reduce alcohol-related harm and increase knowledge of alcohol abuse and social norms are worthy of our attention, as they can help us to change not only individuals' behavior and knowledge but also campus culture and social impacts. Furthermore, it is important to ensure that such strategies are user-friendly and appropriately implemented in order to produce favorable results. In addition to ideas about successful content and curriculum

development that ensure user-friendliness and usefulness of the curriculum, this study also adds to the body knowledge about the faculty training necessary for successful implementation.

Future research about CI could benefit from student input on the process, through student focus groups or interviews. While not appropriate for the purposes of this study since our target population was faculty, students' experience of the curriculum may be helpful to gain insight into the degree to which the curriculum flows with the other class content, as well as the believability of the information presented. Expanding this research with faculty from other disciplines at other universities may add knowledge about differences that may exist between disciplines and could strengthen the generalizability of such information. It may also be useful to conduct further research with instructors about the best methods and incentives to engage them in CI initiatives. Additional fieldwork on this topic would serve to test the conclusions from this study as well as add additional information.

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Appendix A: Institutional Review Board Protocol Approval

EMORY
UNIVERSITY

Institutional Review Board

November 28, 2012

Sarah Kenney
Principal Investigator
Public Health

RE: **Exemption of Human Subjects Research**
IRB00062352
Curriculum Infusion (draft title)

Dear Principal Investigator:

Thank you for submitting an application to the Emory IRB for the above-referenced project. Based on the information you have provided, we have determined on 11/28/2012 that although it is human subjects research, it is exempt from further IRB review and approval.

This determination is good indefinitely unless substantive revisions to the study design (e.g., population or type of data to be obtained) occur which alter our analysis. Please consult the Emory IRB for clarification in case of such a change. Exempt projects do not require continuing renewal applications.

This project meets the criteria for exemption under 45 CFR 46.101(b)(1). Specifically, you will be examining ways in which the process of implementing Curriculum Infusion (CI) for alcohol abuse education can be improved for effectiveness and ease of use by college teachers. The study proposes to have college teachers review the curriculum and provide oral feedback in an in-person interview, as well as have them implement the CI curriculum in a classroom setting.

Please draft a debriefing statement to be read to the students that are enrolled in the courses in which the CI will be implemented. The debriefing statement

should be read to the students after they complete the post-survey. It should provide them with the purpose of implementing the CI in the course and a method to pass along any questions or concerns they may have to the PI whether it is by directly contacting the PI or having the instructor pass along the inquiries.

The following documents were reviewed with this submission:

- Protocol (November 16, 2012)
- Curriculum Infusion
- Faculty Interview Guide
- Interview Guide for Expert Reviewers
- Informed Consent Form (Version Date: 11/07/2012)

Please note that the Belmont Report principles apply to this research: respect for persons, beneficence, and justice. You should use the informed consent materials reviewed by the IRB unless a waiver of consent was granted. Similarly, if HIPAA applies to this project, you should use the HIPAA patient authorization and revocation materials reviewed by the IRB unless a waiver was granted. CITI certification is required of all personnel conducting this research.

Unanticipated problems involving risk to subjects or others or violations of the HIPAA Privacy Rule must be reported promptly to the Emory IRB and the sponsoring agency (if any).

In future correspondence about this matter, please refer to the study ID shown above. Thank you.

Sincerely,

Leslie Justice
Research Protocol Analyst
This letter has been digitally signed

Appendix B: Consent Form

Emory University

Consent to be a Research Subject

Title: Curriculum Infusion

Principal Investigator: Sarah Kenney, MPH candidate, Rollins School of Public Health

Introduction

You are being asked to be in a research study. This form is designed to tell you everything you need to think about before you decide to consent (agree) to be in the study or not to be in the study. **It is entirely your choice. If you decide to take part, you can change your mind later on and withdraw from the research study.**

Before making your decision:

- Please carefully read this form or have it read to you
- Please ask questions about anything that is not clear

You can take a copy of this consent form, to keep. Feel free to take your time thinking about whether you would like to participate. By signing this form you will not give up any legal rights.

Study Overview

The purpose of this study is to explore ways in which Curriculum Infusion can be improved for effectiveness and ease of use in a college classroom. Curriculum Infusion (CI) is the process of purposively integrating topic content into existing classes, rather than teaching that content through a standalone course dedicated solely to that topic.

Current research indicates that using CI in college classes as a means of disseminating and reinforcing the messages that 'misperceived social norms can encourage alcohol abuse' and that 'alcohol abuse has negative consequences' is an effective process for reducing students' negative consequences related to binge-drinking. However, there has been little research done about the ease to teachers of implementing CI in a college classroom on this topic.

The purpose of this study is to examine ways in which the process of implementing Curriculum Infusion for alcohol abuse education can be improved for effectiveness and ease of use by college teachers.

Procedures

You will either be asked to review the curriculum or you will be asked to review the curriculum and implement it in your course. If you are selected only to review the curriculum you will be asked to provide feedback about it during an in-person interview with the Principal Investigator (PI). If you are selected to review and implement the curriculum the PI will ask to observe the class in which you implement the curriculum and will also ask you to provide feedback about the process of implementing the curriculum after the completion of the class.

Risks and Discomforts

There are no expected discomforts associated with participating in this study. The only risk that you might face is loss of confidentiality concerning comments you make about the curriculum or the process of implementing it. This risk will be minimized by not linking your name and other facts that might point to you when we present this study or publish its results.

Benefits

This study is designed to learn more about the process of curriculum infusion, and the study results may be used to help other faculty like you in the future. The potential benefits to you of your participation in this study will be the use of study materials on alcohol prevention to supplement your existing curriculum and the results of any data that you collect on your students' attitudes, behaviors, and knowledge regarding alcohol during implementation of the curriculum.

Compensation

You will not be offered payment for being in this study.

Confidentiality

Certain offices and people other than the researchers may look at study records. Emory employees overseeing proper study conduct may look at your study records. These offices include the Emory Institutional Review Board and the Emory Office of Research Compliance. Emory will keep any research records we create private to the extent we are required to do so by law. A study number rather than your name will be used on study records wherever possible. Your name and other facts that might point to you will not appear when we present this study or publish its results.

Study records can be opened by court order. They may also be produced in response to a subpoena or a request for production of documents.

Voluntary Participation and Withdrawal from the Study

If you are selected to review the curriculum and then implement it in your class there will be no penalty for refusing permission to the PI to observe the class in which the curriculum is implemented; if you prefer, your participation in the study may be confined solely to reviewing the curriculum and providing feedback about it in an in-person interview. You have the right to leave a study at any time without penalty. You may refuse to answer any questions during the interview that you do not wish to answer.

Contact Information

Contact Sarah Kenney at #540-831-6281:

- if you have any questions about this study or your part in it, or
- if you have questions, concerns or complaints about the research

Contact the Emory Institutional Review Board at 404-712-0720 or 877-503-9797 or irb@emory.edu:

- if you have questions about your rights as a research participant.
- if you have questions, concerns or complaints about the research.
- You may also let the IRB know about your experience as a research participant through our Research Participant Survey at http://www.surveymonkey.com/s/6ZDMW75.

Consent

Please, print your name and sign below if you agree to be in this study. By signing this consent form, you will not give up any of your legal rights. We will give you a copy of the signed consent, to keep.

_____

Name of Subject

_____ _____

Signature of Subject Date

Time

_____ _____

Signature of Person Conducting Informed Consent Discussion Date

Time

Appendix C: Expert Reviewer Interview Guide

1. How would you describe your teaching style and/or how do you typically conduct a class? Please tell me about how you think that CI would work with your teaching style.
2. How useful is the curriculum?
3. How user-friendly is the curriculum?
4. What could be changed to increase the user-friendliness of the curriculum?
5. Do you feel that you have received enough information about the topic and strategy to successfully implement the curriculum in a (English, Management, Communications, Theater) class?
    a. What additional information would be useful to include?
6. Is the curriculum sufficiently generic for you to use it in your classes?
    a. How much would you have to change your course to integrate the curriculum infusion information?
    b. Would you consider infusing this curriculum into your (English, Management, Communications, Theater) courses?
    c. If not, what would need to change in order for you to consider using the curriculum?
7. How effective do you think the piece on social norms will be at reducing misperceptions?
8. How seriously do you think your students would take this curriculum, in comparison to your normal lessons?
9. What are other public health topics that you would consider infusing into your course?

Appendix D: Participant Interview Guide

1. How would you describe your teaching style?
    a. How do you typically conduct a class?
    b. Please tell me about how you think that CI worked with your teaching style.
2. On a scale of 1 to 5, with 1 being not at all difficult and 5 being impossibly difficult, how difficult has it been to implement CI in your class?
    a. [If '1' is given, ask this follow-up question] Why do you think that it wasn't at all difficult to implement CI in your class?
    b. [If any number other than '1' is given, ask this follow-up question] What could we have done differently to make implementing Curriculum Infusion in your class less difficult?
3. How much did you have to change your course to integrate the CI information?
4. On a scale of 1 to 5, with 1 being "I didn't follow it at all," and 5 being "I followed it to the letter, how closely did you end up following the provided curriculum while implementing CI in your class?
    a. [If '1' is given, ask this follow-up question] In retrospect, what could we have done differently to make it easier for you to follow the provided curriculum?
    b. [If any number other than '1' is given, ask this follow-up question] What parts of the curriculum were easy to follow?
    c. [If any number other than "5" is given, ask this follow-up question] What changes in the curriculum would have made it **easier** to follow?
5. How did your instruction diverge from the written curriculum?

Say this: "There is a difference between "useful" and "user-friendly." The next question is about how "useful" the curriculum was."

6. On a scale of 1 to 5, with 1 being not at all useful and 5 being exceptionally useful, how useful was the CI curriculum you used?
    a. [If '1' is given, ask this follow-up question] In retrospect, what could we have done differently to make the curriculum useful to you?

   b. [If any number other than '1' is given, ask this follow-up question] What parts of the curriculum were useful to you?
   c. [If any number other than "5" is given, ask this follow-up question] What changes in the curriculum would have made it **more** useful to you?

Say this: "The next question is about how "user-friendly" the curriculum was."

7. On a scale of 1 to 5, with 1 being not at all user-friendly and 5 being exceptionally user-friendly, how user-friendly was the CI curriculum you used?
   a. [If '1' is given, ask this follow-up question] In retrospect, what could we have done differently to make the curriculum user-friendly?
   b. [If any number other than '1' is given, ask this follow-up question] What parts of the curriculum were the most user-friendly?
   c. [If any number other than "5" is given, ask this follow-up question] What changes in the curriculum would have made it **more** user-friendly?
8. In retrospect, were you appropriately involved in the design of the curriculum?
   a. If we were to do it again, how should we do it differently?
9. How effective do you think the piece on social norms was at reducing misperceptions?
   a. How did the social norms piece flow with your course material?
   b. What were the kinds of misperceived norms that students named?
10. How did the piece on negative consequences flow with your course material?
   a. What were some of the negative consequences that were identified by students?
11. Do you think that the students noticed that material on alcohol was being infused into your curriculum?
   a. What are your thoughts about that and what it means for the process and utility of using Curriculum Infusion as a means of addressing sensitive topics?
12. How seriously did the students take this curriculum?
   a. How does this response compare to your normal lessons?
13. What else can you tell me that will help to improve the process?

14. What are other public health topics that you would consider infusing into your course?
15. How could you infuse alcohol information into future courses?
    a. Would you consider doing so?

Appendix E: English Curriculum

ENGLISH

CURRICULUM INFUSION

SARAH KENNEY

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ABOUT US

As a Health Educator I am enthusiastic about prevention of alcohol abuse and promotion of healthy living, and I think that a curriculum like this can move us closer to achieving these goals.

INTRODUCTION

Curriculum Infusion (CI) is the process of purposively integrating topic content into existing classes, rather than teaching the content through a standalone course dedicated solely to that topic.

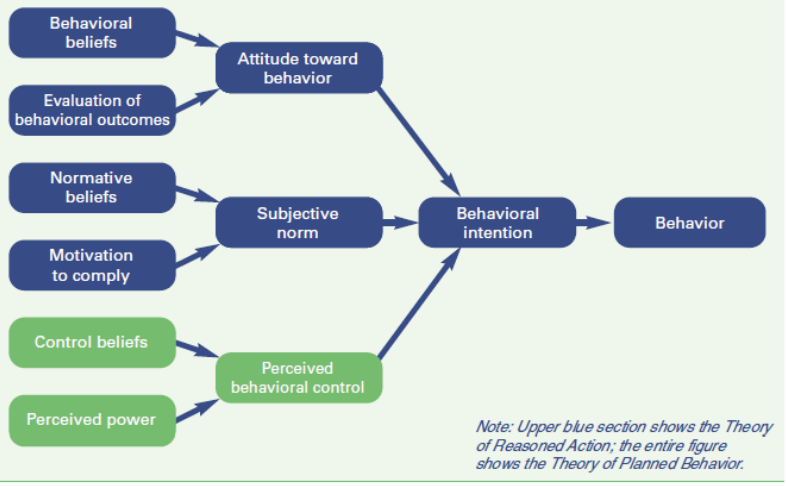
This curriculum has been designed for infusion in the English college course: Ethics in Healthcare or a similar class that has the flexibility to incorporate this curriculum. It is guided by the Theory of Planned Behavior and the strategies of Curriculum Infusion and Social Norms.

The single overriding communication objective that this curriculum is designed to reinforce through infusion is: "Misperceived social norms can encourage alcohol abuse and alcohol abuse has negative consequences."

THEORY OF PLANNED BEHAVIOR

Effective interventions are designed with a theoretical base and use a social ecological approach to identify intervention points (Glanz & Bishop, 2010). The Theory of Planned Behavior is an individual-level theory that guides this curriculum design. The Theory of Planned Behavior examines the relationships between an individual's beliefs, attitudes, intentions, behavior, and perceived control over that behavior. As shown in the figure below, "*behavioral intention* determines *behavior*, and how *attitude toward behavior*, *subjective norm*, and *perceived behavioral control* influence *behavioral intention*" (Glanz & Rimer, 2005, p. 18).

Figure 3. Theory of Reasoned Action and Theory of Planned Behavior



(Glanz & Rimer, 2005)

The CI curriculum at hand focuses primarily on the attitudes toward behavior and subjective norms portions of the Theory of Planned behavior.

- **Attitude towards behavior** stems from one's beliefs and evaluation of what is entailed and what outcomes may result from performing that behavior.
- **Subjective norms** include one's perception of the social pressure from valued others influencing oneself to engage (or not engage) in a behavior, which is influenced by normative beliefs about social standards and one's personal motivation to comply with those norms (Ajzen, 2011).

Two of the CI curriculum learning objectives are relevant to the Theory of Reasoned Action. The first learning objective, students will understand that alcohol abuse has negative consequences for themselves and others, will be accomplished by targeting the student's behavioral beliefs and their evaluations of behavioral outcomes. The second outcome, students will understand how misperceived social norms can affect behavior, will be achieved by targeting the students' normative beliefs and their motivation to comply. The achievement of latter objective, which is focused on social norms, will be further strengthened by the Social Norms Theory as described in the paragraph below.

SOCIAL NORMS

Social norms theory also provides a theoretical foundation for this CI project and curriculum. This theory is similar to the Theory of Planned Behavior and Reasoned Action described as it expands upon the idea of normative behavior by identifying how perceived descriptive and injunctive norms about peer behaviors affect an individual's behaviors. According to Collins and Carey (2007) the two types of norms in this context are *descriptive norms*, perceptions of how others drink, and *injunctive norms*, perceived peer approval of drinking (p. 499). Social Norms Theory posits that one can use normative statements in order to correct misperceptions of both descriptive and injunctive norms.

Perkins (2002) argued that "one can think of a group norm in this sense as the cause of much belief and action in addition to a descriptive characterization of the status quo, as a powerful independent variable accounting for or determining individual behavior" (p. 164). He also pointed out that students tend to think that their peers are more permissive in drinking attitudes and have more problem behaviors (consuming more frequently and more heavily) than is really the norm, which has been shown to promote and exacerbate problem drinking. Essentially students act according to their belief of how their peers are behaving, or *the norm*, including the quantity or frequency of alcohol consumption. **Correcting students' misperceived social norms can both constrain problem drinkers and empower responsible students.** Taking this argument into consideration, the **current CI curriculum aims to address misperceived norms with students, allowing them to critically examine their perceptions of how others drink and their perceived peer approval of drinking, in addition to the perception of the social pressure influencing one to engage in the behavior.**

CURRICULUM INFUSION

Curriculum Infusion has been used successfully to integrate alcohol abuse prevention content into courses regularly offered across disciplines, allowing the message to extend to traditionally hard-to-reach student populations. Research shows that CI **effectively reduces negative drinking consequences, increases knowledge about the dangers of alcohol abuse and social norms and, in many instances, also decreases alcohol consumption rates** (Perkins, 2002; Riley, Durbin, & D'Ariano, 2005; White, Park, & Cordero, 2010; Ziemelis, Bucknam, & Elfessi, 2002).

Research has also demonstrated that CI effectiveness does not vary across course subject or student demographics, and provides prevention messaging to students who may not seek out this information on their own (White et al., 2010). The effectiveness of CI lies in the indirect nature of the message, and allows students to critically engage with the information in a safe environment free from social stigma (Riley et al., 2005; Tulin, 1997; Ziemelis et al., 2002). The Fund for Improvement of Post-Secondary Education (FIPSE) sponsored drug-prevention programs found that decreases in binge drinking rates were greatest on campuses where CI on alcohol abuse was emphasized as part of the university's model for binge drinking prevention (Ziemelis et al., 2002).

This strategy of CI allows faculty to design prevention content that target beliefs, attitudes, and behavior related to binge drinking; a strength of this approach is that **faculty have the flexibility to design content that is specific to their courses and teaching style**. A limitation of many previous CI efforts is that the teaching method employed was not clearly defined or illustrated by examples, thus it has been difficult to evaluate the process of implementation. **Use of this curriculum will allow a Health Educator to further study the effectiveness of this approach**.

ASSESSMENT AND EVALUATION METHODS

The primary assessment tool for this curriculum is the interview that the Health Educator will conduct with the instructor. The Health Educator is interested in the instructor's perception of the curriculum design process, the user-friendliness of the curriculum and the ease of implementation.

A secondary assessment tool is the pre- and post-surveys that students will complete at the beginning and end of the curriculum, respectively. These assessments will ask questions targeting **attitudes, beliefs**, and **behaviors**, and will be based on the stated learning objectives of the lesson plans. The *pre- and post-surveys* can be found on pages 28 & 33. It is important to note, however, that the students' behavior cannot be adequately assessed from the pre- and post-survey unless conducted at various points during the semester.

FACTS ABOUT ALCOHOL ABUSE & HEALTH

IMPACT OF ALCOHOL ABUSE ON HEALTH

As noted in Healthy People 2020, "the effects of substance abuse are cumulative, significantly contributing to costly social, physical, mental, and public health problems" (U.S. Department of Health and Human Services Office of Disease Prevention and Health Promotion, 2012, para.3). Heavy drinking in particular is associated with many adverse health behaviors:

- smoking
- decreased physical activity
- increased physical health problems (hepatitis, hypertension, gastrointestinal problems)
- mental health difficulties (Paul, Grubaugh, Frueh, Ellis, & Egede, 2011).

In 2005 alone there were over **1.6 million hospitalizations and 4 million emergency department visits for alcohol-related issues** (Center for Disease Control and Prevention, 2010).

Excessive alcohol use is the **third leading lifestyle-related cause of death in the United States**, and **alcohol-related factors are the leading influence in the top three causes of death (automobile crashes, suicide and homicide) among youth 15-24 years old** (U.S. Department of Health and Human Services, 2007).

The Center for Disease Control and Prevention (CDC) estimated that there are approximately **79,000 deaths attributable to excessive alcohol use each year** in the United States (Center for Disease Control and Prevention, 2010). This translates to **2.3 million years of potential life lost or 30 years of potential life lost for each death**.

Excessive drinking also has **severe economic consequences**. The costs of excessive drinking in the U.S. in 2006 was approximately $223.5 billion (72.2% from lost productivity, **11.0% from healthcare costs**, 9.4% from criminal justice costs, and 7.5% from other effects), or $746 per person (Bouchery, Harwood, Sacks, Simon, & Brewer, 2011). Binge drinking represented 76.4% of this total cost, or $170.7 billion.

ALCOHOL ABUSE AMONG COLLEGE STUDENTS

Alcohol abuse **among college students is on the rise** (Hingson, 2010).

Furthermore, **college students appear to be at higher risk than their non-college peers**, probably as a result of the college environment (Dawson, Grant, Stinson, & Chou, 2004).

At-risk groups more likely to drink heavily: men are more likely than women, and **fraternity members** and **athletes** more likely than other groups on campus to drink heavily and suffer negative consequences (Huchting, Lac, Hummer, & LaBrie, 2011; Johnston, O'Malley, Bachman, & Schulenberg, 2007).

Negative consequences of binge drinking include:

- memory loss
- alcohol-related driving injuries and fatalities
- sexual and physical assaults
- risky sexual behavior
- poor academic performance
- acute illnesses
- alcohol-poisoning
- and death (Hingson, Zha, & Weitzman, 2009; National Institute on Alcohol Abuse and Alcoholism, 2007; Weitzman, Nelson, & Wechsler, 2003).

Individuals who binge-drink are also at **higher risk of using cigarettes, marijuana, cocaine, and other illegal drugs** (Jones, Oeltmann, Wilson, Brener, & Hill, 2001).

The American College Health Association asked university students about the following negative consequences on the National College Health Assessment in 2012 (American College Health Association, 2012):

> *College students who drank alcohol reported experiencing the following in the last 12 months when drinking alcohol:*
>
> - Did something they later regretted
> - Forgot where they were or what they did
> - Got in trouble with the police
> - Had sex without giving/receiving consent
> - Were physically injured
> - Physically injured another person
> - Seriously considered suicide

COMMUNITY IMPACT

Students who binge drink jeopardize the well-being of others, namely in terms of **drunk driving and physical and sexual assault** (Wechsler, Moeykens, Davenport, & Castillo, 1995).

From a NIAAA survey in 2005, at least 46% of the 4,553 people killed that year in alcohol-related crashes with college age drinking drivers were people other than the drinking driver (Hingson & Weitzman, 2009).

Each year more than 690,000 students are assaulted or hit by another student who had been drinking and more than 97,000 students experienced a sexual assault or date rape perpetrated by a drinking college student (Hingson & Weitzman, 2009).

Binge drinking among college students is harmful both to the individual and society, yet is a preventable cause of morbidity and mortality. Evidence-based strategies should be widely implemented in order to address this serious public health issue. Interventions must be implemented to enhance the protective factors that reduce initiation of binge drinking as well as decrease risk factors that encourage one to drink to excess.

HOW TO USE THE CURRICULUM

It is recommended that you read the curriculum in its entirety before facilitating, and then re-read the particular lesson that you will be teaching prior to delivering it.

PREREQUISITES

Prerequisites are not listed within each lesson, as those listed in this section are applicable to the entire curriculum.

FOR THE HEALTH EDUCATOR

The pre- and post-surveys are intended for the instructors' use only.

When this curriculum is being used for the purposes of research the pre- and post-surveys used as a part of the curriculum must be approved by an institution's IRB prior to dissemination. This will be the responsibility of the Health Educator.

FOR INSTRUCTORS

Prior to using this curriculum, instructors should:

- Be an instructor of English: Ethics in Healthcare or a similar English-related course
- Be capable of facilitating a group discussion on the problems of substance abuse (Resource: *Facts about Alcohol & Health,* page 7). If there is an instance in which a student asks a questions that the instructor is unable or uncomfortable answering, please refer the student to the *Local Resources* on page 13.
- Be familiar with the definitions of terms used in this curriculum (Resource: Glossary, page 16)
- Understand the basics behind the strategy of Curriculum Infusion and social norms

FOR PARTICIPANTS

- Be a student in English: Ethics Healthcare
- Have basic vocabulary about substance abuse; this will be covered in Lesson One – Reading Log

GETTING STARTED

Each lesson plan identifies learning objectives, time and preparation needed to conduct the infused elements and activities, and referral to resources as needed. Specific materials are noted in the lesson plan, as there are no general materials needed for all lessons. Lesson elements that are specifically related to the Curriculum Infusion project are highlighted in bold font.

SYMBOL KEY

*These symbols are adapted from Heather Zesiger's *Judaism and Sexuality* curriculum

The following symbols will be used in the Lesson Plans to designate parts:

- – "Say This:" Talking balloons indicate text that the instructor should read aloud to the participants. This text can be paraphrased given that the intent remains the same.
- – "Pay Attention to This:" Starred text is intended to be read silently by the instructor.
- – "Do This:" Movie clapboards indicate actions that the instructor should take in implementing the Lesson.
- → – "Ask This:" Arrows indicate questions that should be posed directly to students.
- [ ] – "Listen for This:" Brackets highlight possible answers to discussion questions. These can be used as prompts to encourage students to come up with their own answers, or as a guide for whether a question has been addressed comprehensively or if you need to allow more time for discussion. But, as in all good teaching, don't be afraid to let a few moments of silence pass before you say anything or provide hints, students will remember best what they were permitted to learn for themselves.
- "Discuss This:" Multiple balloons indicate discussion.

IMPORTANT NOTE

The activities included here and their length may be modified as needed, as long as the material is covered successfully and learning objectives are met. The strength of the Curriculum Infusion approach is that it is flexible and can be altered depending on the personality and teaching style of the faculty. All materials are intended to fit seamlessly into existing course content.

RESOURCES FOR FURTHER STUDY

Network for the Dissemination of Curriculum Infusion

http://www.neiu.edu/~cinfusi/

This website is a helpful resource to learn more about Curriculum Infusion and see sample curriculums as well as sample characteristics of a successful program.

National Social Norms Institute

http://www.socialnorms.org/

This is a great resource to obtain detailed descriptions of a select number of alcohol-focused social norms projects in both universities and high schools, and published research implementing this approach.

The Gordie Center

http://www.virginia.edu/case/education/prevention-plan.html

The Gordie Center provides helpful resources on drug and alcohol related issues. Learn about Gordie's story and how prevent alcohol poisoning.

College Drinking- Changing the Culture

http://www.collegedrinkingprevention.gov/

National Institute on Alcohol Abuse and Alcoholism's website specific to college drinking.

Center for Disease Control – Binge Drinking

http://www.cdc.gov/alcohol/fact-sheets/binge-drinking.htm

This Fact Sheet has statistics and information specific to the harms of binge drinking.

LOCAL RESOURCES

*Tailored to a school's on-campus and community resources

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GLOSSARY

The definitions are adapted from CDC's webpage on Alcohol and Public Health.

Alcohol: Ethyl alcohol, or ethanol, is an intoxicating ingredient found in beer, wine, and liquor. Alcohol is produced by the fermentation of yeast, sugars, and starches.

Alcoholism: A chronic disease, also known as dependency on alcohol or alcohol addiction. The signs and symptoms of alcohol dependence include:

- strong craving for alcohol
- continued use despite repeated physical, psychological, or interpersonal problems
- the inability to limit drinking

Alcohol Abuse: A pattern of drinking that results in harm to one's health, interpersonal relationships, or ability to work.

Binge Drinking: Consuming 5 or more alcoholic drinks for men, and 4 or more drinks for women, on a single occasion.

Curriculum Infusion: the process of purposively integrating topic content (on alcohol abuse prevention, in this case) into existing classes, rather than teaching that content through a standalone course dedicated solely to that topic.

Standard drink: A standard drink is equal to 14.0 grams (0.6 ounces) of pure alcohol. This amount of pure alcohol is found in:

- 12-ounces of beer.
- 8-ounces of malt liquor.
- 5-ounces of wine.
- 1.5-ounces or a "shot" of 80-proof distilled spirits or liquor (e.g., gin, rum, vodka, or whiskey).

Both a Solo cup and a Pint glass hold 16 ounces of liquor. In other words…

- 1 Solo cup or Pint glass = 1⅓ drinks of beer
- 1 Solo cup or Pint glass = 2 drinks of malt liquor
- 1 Solo cup or Pint glass = 3 drinks of wine
- 1 Solo cup or Pint glass = 10½ drinks of gin, rum, vodka, or whiskey

OUTLINE OF LESSONS

PRE-SURVEY

PURPOSE

Evaluate the students' attitudes, behaviors, and beliefs about alcohol prior to engaging with this curriculum.

Method	*Time*
Written Pre-survey	15 minutes
	Total = 15 minutes

LESSON ONE – READING LOG

PURPOSE

Introduce the Reading Log assignment.

LEARNING OBJECTIVES

At the end of class students will be able to:

- Describe the Reading Log assignment

Method	*Time*
Discussion #1 – Introducing the Assignment	10 minutes
	Total = 10 minutes

LESSON TWO – PRESENTATIONS

PURPOSE

Inspire critical thinking and debate about the topic of alcohol, social norms, and the negative consequences to self and others.

LEARNING OBJECTIVES

At the end of class students will be able to:

- Identify negative consequences related to alcohol abuse
- Explain the difference between a "misperceived social norm" and an "accurate norm," and how it alters people's behavior specific to drinking
- Define the following five terms: alcohol, alcoholism, alcohol abuse, binge drinking and standard drink

Method	*Time*
Activity #1 - Presentations	~3.5 hours. This will vary depending on number of students. Allocate 5 minutes for each student to present and then 5 minutes of discussion following each presentation (20 students = 200 minutes)
Activity #2 – Social Norms	20 minutes
Break	5 minutes
Activity #3 – Lessons Learned	5 minutes
	Total ≈ 3.5- 4 hours

POST-SURVEY

PURPOSE

Evaluate the students' attitudes, behaviors, and beliefs about alcohol after engaging with this curriculum.

Method	*Time*
Written Post-survey	15 minutes
	Total = 15 minutes

PRE-SURVEY

Giving a pre-survey will allow the instructor to evaluate the students' attitudes, behaviors, and beliefs about alcohol prior to infusing this Curriculum.

The pre-survey should be completed at the beginning of the first class of the semester (or before the first lesson).

MATERIAL LIST:

- Pre-surveys (page 28)
- Extra pencils/pens (in case not all students have one)

STEPS

1. Do welcome and introductions as standard for this course.
2. Distribute pre-surveys, one to each student.
3. Ask students to carefully read the top of the page for specific instructions.
4. Emphasize that the survey is anonymous; the answers cannot be linked to a particular student and will therefore not affect anyone's grade. **Do not explain to students that this is part of the Curriculum Infusion strategy**.
5. Allow students 10-15 minutes to complete the pre-surveys.
6. Collect the pre-surveys and put them in a secure place.

HOMEWORK FOR INSTRUCTOR

- Keep the surveys in order to compare them to the post-surveys. Note: The change, if any, in answers between the pre- and post- surveys for any single student are for your use only. The Health Educator is interested in how many (percentage and number) of students showed a positive change in their post-survey responses but not in the results provided by individual students.

LESSON ONE – READING LOG

In this lesson the instructor will infuse an alcohol assignment into the standard course Reading Log assignment.

LEARNING OBJECTIVES

At the end of lesson students will be able to:

- Implement the infused Reading Log assignment
- Define the following five terms: alcohol, alcoholism, alcohol abuse, binge drinking and standard drink

MATERIAL LIST

- Handout with reading log prompt and the specific deadlines for the assignment

LESSON OVERVIEW

Method	*Time*
Discussion #1 – Introducing the Assignment	10 minutes
	Total = 10 minutes

PREPARATION

1. Read Lesson Plan.
2. Include alcohol assignment on Reading Log handout to distribute to students.

DISCUSSION #1 – INTRODUCING THE ASSIGNMENT (10 MINUTES)

TEACHING OBJECTIVE

Clarify that one of the Reading Log assignments must incorporate critical analysis about the negative health consequences related to alcohol and must provide accurate definitions for the five alcohol terms (alcohol, alcoholism, alcohol abuse, binge drinking and standard drink).

MATERIALS

- Handout with assignment description.

STEPS

Distribute Reading Log handout and assignment information per usual routine.

During discussion of the assignment include the following information:

One of the 1-page papers that you write must be related to alcohol. This alcohol related reading log must be not only relevant to healthcare, but also to college-aged students. It must incorporate critical analysis about negative consequences related to alcohol.

- **In your reading log you must also accurately define the following five terms related to alcohol: alcohol, alcoholism, alcohol abuse, binge drinking and standard drink.**

After the reading log on alcohol is complete, you will be asked to deliver a five-minute presentation in class. During the presentation you must cover both sides of the argument and reference the articles you used. You must deliver an engaging presentation and should make use of multimedia presentation resources. At the end of each presentation we will have a short discussion and give the audience an opportunity to ask questions.

If appropriate, give class a five minute break. Ask them to think about the assignment during the break and what topics they may choose to write about, as well as any questions they have about the assignment. **The following questions will be best asked after students are given a few minutes to process the instructions.**

- → **What topics are you all considering for the alcohol-related Reading Log?**

Students will briefly discuss the topics they are considering.

- **Be sure that they hone in on the negative consequences, and that the topics relate to healthcare and college students.**

HOMEWORK FOR INSTRUCTOR

Post the assignment description if appropriate.

LESSON TWO – PRESENTATIONS

In this lesson students will give a short presentation of their reading log response to inspire critical thinking and debate about the topic of alcohol and the negative consequences to self and others.

LEARNING OBJECTIVES

At the end of class students will be able to:

- Identify negative consequences related to alcohol abuse
- Explain the difference between a "misperceived social norm" and an "accurate norm," and how it alters people's behavior specific to drinking
- Accurately define the five alcohol terms: alcohol, alcoholism, alcohol abuse, binge drinking and standard drink

MATERIAL LIST

- Glossary to refer to definitions during discussion (page 16)
- You do not need to bring any other materials. However, students must prepare their multimedia presentation and bring it to class.

LESSON OVERVIEW

This lesson must be conducted after the alcohol-related reading log due date.

Method	*Time*
Activity #1 - Presentations	~3.5 hours. This will vary depending on number of students. Allocate 5 minutes for each student to present and then 5 minutes of discussion following each presentation (20 students = 200 minutes)
Activity #2 – Social Norms	20 minutes
Break	5 minutes
Activity #3 – Lessons Learned	5 minutes
	Total ≈3.5 – 4 hours

Say This | Do This | Pay Attention to This | 22
Ask This | [] Listen for This | Discuss This

PREPARATION

1. Read Lesson Plan

ACTIVITY #1 – PRESENTATIONS (~3.5 HOURS)

OBJECTIVE

After the activity students will be able to identify negative consequences related to alcohol abuse.

MATERIALS

- None

STEPS

✪ There is not a formal break included in this activity, but you may choose to incorporate one about half way through the presentations if appropriate.

🗩 As you know, today you will deliver a five minute multimedia presentation on the topic of your choice related to alcohol. After each presentation you will have an opportunity for questions and discussion.

➔ Are there any volunteers who would like to go first?
  ✪ If no one volunteers, choose students at random to present.

🗩 After each presentation allow the discussion to unfold according to students' response. **Use the following questions to prompt discussion.**
  - ➔ Does anyone disagree or agree with the presenters' remarks?
  - ➔ What are some other consequences related to this topic?
  - ➔ Do you think that this is an issue on our campus? How about at other colleges?

✪ After all students have presented, ask for volunteers to accurately define the alcohol terms: alcohol, alcoholism, alcohol abuse, binge drinking and standard drink. (This was part of their reading log assignment prompt so all students should be able to recite the definitions). You may ask the students to define orally or write the definition on the board. Ask the class to confirm accuracy of the definitions; refer to the Glossary as needed.

ACTIVITY #2 – SOCIAL NORMS (20 MINUTES)

OBJECTIVE

After the discussion students will be able to explain the difference between a misperceived social norm and an accurate norm, as well as how a misperceived norm alters people's behavior specific to drinking.

MATERIALS

- Students will need a piece of paper and a pen/pencil. You may want to bring the pens/pencils so that every student writes with the same ink to make their responses more anonymous.

STEPS

- Say: **During our discussion I asked you all if you thought that some of these negative consequences are relevant to students on our campus. The activity we are going to do next will help us explore the topic of alcohol use by students.**

- Say: **We are going to do an activity called "Snowball Fight."** Your answers to the question in this activity are anonymous. Everyone please get out a sheet of paper and a pen.
  - Pay Attention to This: If you brought pens, you can hand them out at this time.

- Say: **I would like everyone to write down what they think is the percentage of students who either have never drank alcohol or who have not drank alcohol in the last 30 days.** Do not put your name of your paper. When you have written down the percentage, please crumple up the paper into a ball.

- Pay Attention to This: Wait a minute or two until everyone has crumpled up their paper.

- Say: On the count of three, throw your snowball (aka your paper) across the room as if you were having a "snowball fight."

- Say: Pick up a nearby "snowball" and throw it across the room.

- Say: Now everyone needs to find a "snowball" and return to their seats.

- Say: I would like everyone to unfold the snowball. One at a time everyone will say the percentage listed on the sheet.

- Ask This: **Who would be surprised to hear that the percentage of students who either have never drank alcohol or who have not drank alcohol in the last 30 days was 25% in 2012?**

- Say: Applying this percentage to our class, this would mean that about a quarter of you have not used alcohol ever, or in the last 30 days.

Say This | Do This | Pay Attention to This | 24
Ask This | [] Listen for This | Discuss This

This percentage comes from the National College Health Assessment that asks students about their health behaviors, including those pertaining to alcohol. Students were asked how often they drink alcohol in order to understand what the "norm" is for students.

The percentage that you wrote on your piece of paper was the **"perceived norm,"** or your perception of your classmates' drinking habits. It is not necessarily the reality of the situation, but the perceived reality. If this assumption of perceived norm is incorrect, or is a percentage greater than or less than 25%, it is called a **"misperceived norm."**

→ **Why do you think it may be important to correct students' misperceived norms about how much students drink?**

Student should discuss as a class. Be sure they cover the following:

[ ] It is human nature to behave according to what you believe to be the norm. If you think that everyone is drinking heavily (and more heavily than you) you are more likely to drink more heavily to fit in with others and match your perceive norm.

- This can go both ways – if you are drinking less than your perceived norm, you will likely start drinking *more heavily* to match others. But if you drink more than your perceived norm, you are more likely to *decrease* your consumption to match others.

[ ] On the whole, college students tend to think that their peers are more permissive in drinking attitudes and have more problem behaviors (consuming more frequently and more heavily) than is really the norm, *which has been shown to promote and exacerbate problem drinking* (Perkins, 2002).

[ ] **Correcting students' misperceived social norms can both *constrain problem drinkers and empower responsible students.***

BREAK (5 MINUTES)

If time allows, give students a five minute break. Ask them to think about what they learned from the presentations during their break. Tell them that they will be asked to write a few of these lessons learned when they return from break.

ACTIVITY #3 – LESSONS LEARNED (5 MINUTES)

OBJECTIVE

Students will be able to identify three things they learned from today's lesson related to negative consequences or social norms.

MATERIALS

- None

STEPS

Please take out a sheet of paper and a pen or pencil. **Write down three things you learned today from your classmates' presentations related to negative consequences or social norms.**

Collect the sheets of lessons learned.

HOMEWORK FOR INSTRUCTOR

Review the lessons learned to ensure that students did learn about negative consequences of alcohol abuse, as well as social norms.

POST-SURVEY

Giving a post-survey will allow the instructor to evaluate the students' attitudes, behaviors, and beliefs about alcohol after engaging with this curriculum.

The post-survey should be completed on the last day of use of this curriculum.

MATERIAL LIST

- Post-surveys (page 33)
- Extra pencils/pens (in case extra not all students have one)

STEPS

1. Do welcome and introductions as standard for this course.
2. Distribute post-surveys, one to each student.
3. Ask students to carefully read the top of the page for specific instructions.
4. Emphasize that the survey is anonymous; the answers cannot be linked to a particular student and will therefore not affect anyone's grade. Remind students to use the same code they used for the pre-survey. **Do not explain to students that this is part of the Curriculum Infusion strategy.**
5. Allow students 10-15 minutes to complete the post-survey.
6. Collect the post-surveys and put them in a secure place.
7. Read the following debriefing statement to students:

   "This course was used as part of a study that examined how the process of implementing Curriculum Infusion for alcohol abuse education can be improved for effectiveness and ease of use by college teachers. Some of the alcohol-related content used in this course was part of the study. However, students were not part of the target population for the study and your individual pre/post-survey information will not be used for research. If you have any questions about this study please let me know, and I can put you in touch with the study's Principal Investigator."

HOMEWORK FOR INSTRUCTOR

- Compare answers on the pre- and post-surveys

CODENAME:_____
COURSE:_____
DATE:_____

PRE-SURVEY

This survey will take approximately 5-10 minutes to complete. **Do not put your name on this survey**. Instead, create a codename. Write it down somewhere or remember it as you will use the same codename later on in the semester. Your answers will be completely anonymous as there is no way for the instructor or anyone else to link your answers to you.

Please place your completed survey in the envelope provided. Thank you!

1. On how many days did you have **one or more drinks of alcohol (beer, wine, liquor)** during the last 14 days **(two weeks)**? (Choose one)
    a) None: I have never used alcohol
    b) None: I have used alcohol in the past, but not in last 14 days
    c) On 1 - 2 days
    d) On 3 - 5 days
    e) On 6 - 9 days
    f) On 10 - 13 days
    g) On all 14 days

2. On how many days do you think a **typical student** at had one or more drinks of alcohol (beer, wine, liquor) during the **last two weeks**? (Choose one)
    a) None: The typical student does not drink alcohol
    b) None: The typical student drinks alcohol but probably did not drink any in the last 14 days
    c) On 1 - 2 days
    d) On 3 - 5 days
    e) On 6 - 9 days
    f) On 10 - 13 days
    g) On all 14 days

In the following questions you will be asked about the number of alcoholic "drinks."

A standard drink is equal to 14.0 grams (0.6 ounces) of pure alcohol. This amount of pure alcohol is found in:

- *12-ounces of beer.*
- *8-ounces of malt liquor.*
- *5-ounces of wine.*
- *1.5-ounces or a "shot" of 80-proof distilled spirits or liquor (e.g., gin, rum, vodka, or whiskey).*

Both a Solo cup and a Pint glass hold 16 ounces of liquor. In other words…

- *1 Solo cup or Pint glass =* ***1⅓ drinks of beer***
- *1 Solo cup or Pint glass =* ***2 drinks of malt liquor***
- *1 Solo cup or Pint glass =* ***3 drinks of wine***
- *1 Solo cup or Pint glass =* ***10½ drinks of gin, rum, vodka, or whiskey***

3. **Think about the last time you "partied" or socialized. How many alcoholic DRINKS did you have?** (Note: use the "drinks" measures on the previous page when calculating your answer)

   a) 0 drinks (I did not drink)
   b) < 1 drink
   c) 1-2 drinks
   d) 3-4 drinks
   e) 5-6 drinks
   f) 7-8 drinks
   g) 9-10 drinks
   h) 11-12 drinks
   i) 13-14 drinks
   j) 15-16 drinks
   k) 17 or more drinks

4. **Think about the last time you "partied" or socialized. Over how many HOURS did you drink alcohol?**

   a) 0 hours (I did not drink)
   b) < 1 hour
   c) 1-2 hours
   d) 3-4 hours
   e) 5-6 hours
   f) 7-8 hours
   g) 9-10 hours
   h) 11-12 hours

5. **How many DRINKS of alcohol do you think the typical student had the last time he/she "partied" or socialized?** (Note: use the "drinks" measures on the previous page when calculating your answer)

   a) 0 drinks (the typical student did not drink alcohol the last time they partied)
   b) < 1 drink
   c) 1-2 drinks
   d) 3-4 drinks
   e) 5-6 drinks
   f) 7-8 drinks
   g) 9-10 drinks
   h) 11-12 drinks
   i) 13-14 drinks
   j) 15-16 drinks
   k) 17 or more drinks

If you are a non-drinker (abstainer) please skip to question #13.

6. **Over the last two weeks (14 days), how many TIMES have you had five or more drinks of alcohol at any one sitting?**
   a) 0 times: I did not drink during the last 14 days
   b) 0 times: I drank during the last 14 days but I never had 5 or more drinks at any one sitting
   c) 1 time
   d) 2 times
   e) 3 times
   f) 4 times
   g) 5 times
   h) 6 times
   i) 7 times
   j) 8 times
   k) 9 times
   l) 10 or more times

7. **Which of the following statements best describes you?**
   a) I have never drunk more alcohol than I intended to
   b) I very, very rarely drink more alcohol than I intend to
   c) I occasionally drink more alcohol than I intend to
   d) I frequently drink more alcohol than I intend to
   e) I almost always drink more alcohol than I intend to
   f) Other. Please specify: _____

8. **Which of the following statements best describes you?**
   a) I am in total control of my alcohol use
   b) I am in partial control of my alcohol use
   c) I am not in control of my alcohol use
   d) Other. Please specify: _____

9. **Which of the following statements best describes you?**
   a) I have tried to quit drinking at least once
   b) I have thought about quitting drinking but I have not yet tried to
   c) I have never thought about quitting drinking
   d) Other. Please specify: _____

10. **Which of the following statements best describes why you drink?**
    (Choose all that apply and put a star next to the one that is the MOST true)
    a) I drink to "fit in" with a group
    b) Alcohol helps me relax
    c) Alcohol helps me overcome my inhibitions
    d) Alcohol helps me escape unpleasantness
    e) Other. Please specify: _____

11. **Which of the following best describes how your use of alcohol has affected your attendance at work and/or classes?**
    a) It has never, even once, resulted in my missing or being late to work or classes
    b) It has resulted in my missing or being late to work or classes before, but not in the last **30 days (month)**
    c) I have missed or been late to work or class because of alcohol **1 or 2 times** in the last month
    d) I have missed or been late to work or class because of alcohol **2 -4 times** in the last month
    e) I have missed or been late to work or class because of alcohol **5 times or more** in the last month

12. **Within recent memory, which of these have you experienced when drinking alcohol? Place an "X" in one box on each row.**

	Yes	**No**
Did something you later regretted		
Forget where you were or what you did		
Got in trouble with the police		
Someone had sex with me without my consent		
Had sex with someone without their consent		
Had unprotected sex		
Physically injured yourself		
Physically injured another person		
Seriously considered suicide		
Drove a motor vehicle after drinking any alcohol at all		
Drove motor vehicle after having 5 or more drinks		

14. Please indicate your gender.

a) Female
b) Male
c) Transgender
d) Other

15. Please indicate your age.

a) 17 or under
b) 18-19
c) 20-21
d) 22-23
e) 24
f) 25 or over

16. Do you belong to a Greek organization (sorority / fraternity)?

a) Yes
b) No

17. What is your approximate cumulative GPA (grade point average)?

a) 4.0–3.5
b) 3.49–3.0
c) 2.99–2.5
d) 2.49–2.0
e) 1.99 or below

CODENAME:_____
COURSE:_____
DATE:_____

POST-SURVEY

This survey will take approximately 5-10 minutes to complete. **Do not put your name on this survey**. Instead, use the same codename you used earlier in the semester. Your answers will be completely anonymous as there is no way for the instructor or anyone else to link your answers to you.

Please place your completed survey in the envelope provided. Thank you!

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   c) On 1 - 2 days
   d) On 3 - 5 days
   e) On 6 - 9 days
   f) On 10 - 13 days
   g) On all 14 days

2. On how many days do you think a **typical student** at had one or more drinks of alcohol (beer, wine, liquor) during the last two weeks (14 days)? (Choose one)
   a) None: The typical student does not drink alcohol
   b) None: The typical student drinks alcohol but probably did not drink any in the last 14 days
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- *1 Solo cup or Pint glass =* ***1⅓ drinks of beer***
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- *1 Solo cup or Pint glass =* ***3 drinks of wine***
- *1 Solo cup or Pint glass =* ***10½ drinks of gin, rum, vodka, or whiskey***

3. **Think about the last time you "partied" or socialized. How many alcoholic DRINKS did you have?**
(Note: use the "drinks" measures on the previous page when calculating your answer)

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d) 3-4 hours
e) 5-6 hours
f) 7-8 hours
g) 9-10 hours
h) 11-12 hours

5. **How many DRINKS of alcohol do you think the typical student had the last time he/she "partied" or socialized?**
(Note: use the "drinks" measures on the previous page when calculating your answer)

a) 0 drinks (the typical student did not drink alcohol the last time they partied)
b) < 1 drink
c) 1-2 drinks
d) 3-4 drinks
e) 5-6 drinks
f) 7-8 drinks
g) 9-10 drinks
h) 11-12 drinks
i) 13-14 drinks
j) 15-16 drinks
k) 17 or more drinks

If you are a non-drinker (abstainer) please skip to question #13.

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   a) 0 times: I did not drink during the last 14 days
   b) 0 times: I drank during the last 14 days but I never had 5 or more drinks at any one sitting
   c) 1 time
   d) 2 times
   e) 3 times
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   g) 5 times
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   c) I occasionally drink more alcohol than I intend to
   d) I frequently drink more alcohol than I intend to
   e) I almost always drink more alcohol than I intend to
   f) Other. Please specify: _____

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   b) I am in partial control of my alcohol use
   c) I am not in control of my alcohol use
   d) Other. Please specify: _____

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   a) I have tried to quit drinking at least once
   b) I have thought about quitting drinking but I have not yet tried to
   c) I have never thought about quitting drinking
   d) Other. Please specify: _____

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    (Choose all that apply and put a star next to the one that is the MOST true)
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    b) Alcohol helps me relax
    c) Alcohol helps me overcome my inhibitions
    d) Alcohol helps me escape unpleasantness
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11. **Which of the following best describes how your use of alcohol has affected your attendance at work and/or classes?**
    a) It has never, even once, resulted in my missing or being late to work and/or classes
    b) It has resulted in my missing or being late to work or classes before, but not in the last **30 days (month)**
    c) I have missed or been late to work and/or class because of alcohol **1 or 2 times** in the last month
    d) I have missed or been late to work and/or class because of alcohol **2 -4 times** in the last month
    e) I have missed or been late to work and/or class because of alcohol **5 times or more** in the last month

12. Within recent memory, which of these have you experienced when drinking alcohol? Place an "X" in one box on each row.

	Yes	**No**
Did something you later regretted		
Forget where you were or what you did		
Got in trouble with the police		
Someone had sex with me without my consent		
Had sex with someone without their consent		
Had unprotected sex		
Physically injured yourself		
Physically injured another person		
Seriously considered suicide		
Drove a motor vehicle after drinking any alcohol at all		
Drove motor vehicle after having 5 or more drinks		

13. Has the alcohol portion of this course caused you to become more aware of alcohol and related issues?

a) Yes
b) No

14. Has this alcohol-related class work encouraged you to think in-depth and critically examine the subject material?

a) Yes
b) No

15. Which of the following best describes your use of alcohol during the past 30 days? (select all that apply)

a) N/A, I do not drink
b) I drink, but I did not drink during the past 30 days

c) I averaged **more** drinks during any one sitting than in the previous month
d) I averaged **fewer** drinks during any one sitting than in the previous month

e) I drank **more** times than in the previous month
f) I drank **fewer** times than in the previous month

g) I **gave thought** to quitting drinking
h) I **did not give thought** to quitting drinking

16. Please indicate your gender.

a) Female
b) Male
c) Transgender
d) Other

17. Please indicate your age.

a) 17 or under
b) 18-19
c) 20-21
d) 22-23
e) 24
f) 25 or over

18. Do you belong to a Greek organization (sorority / fraternity)?

a) Yes
b) No

19. What is your approximate cumulative GPA (grade point average)?

a) 4.0–3.5
b) 3.49–3.0
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c) I averaged **more** drinks during any one sitting than in the previous month
d) I averaged **fewer** drinks during any one sitting than in the previous month

e) I drank **more** times than in the previous month
f) I drank **fewer** times than in the previous month

g) I **gave thought** to quitting drinking
h) I **did not give thought** to quitting drinking

16. Please indicate your gender.

a) Female
b) Male
c) Transgender
d) Other

17. Please indicate your age.

a) 17 or under
b) 18-19
c) 20-21
d) 22-23
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a) Yes
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a) 4.0–3.5
b) 3.49–3.0
c) 2.99–2.5
d) 2.49–2.0
e) 1.99 or below

Appendix F: Communications Curriculum

COMMUNICATIONS: PUBLIC RELATIONS

CURRICULUM INFUSION

SARAH KENNEY

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ABOUT US

As a Health Educator I am enthusiastic about prevention of alcohol abuse and promotion of healthy living, and I think that a curriculum like this can move us closer to achieving these goals.

INTRODUCTION

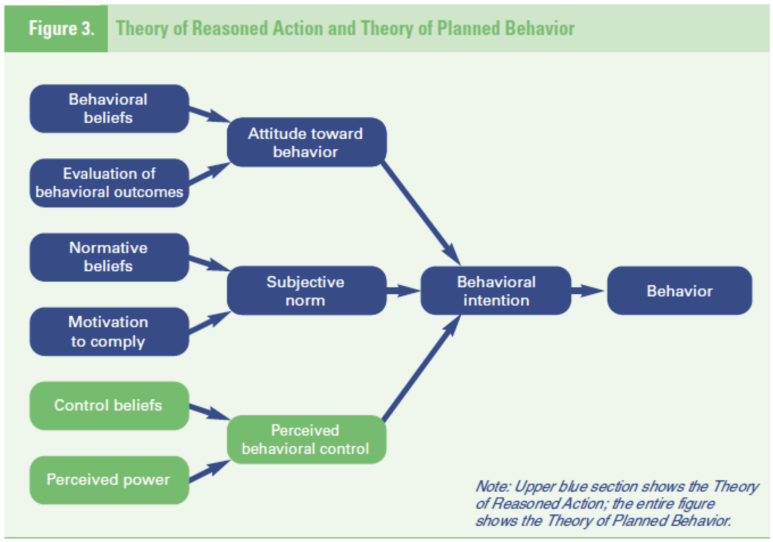
Curriculum Infusion (CI) is the process of purposively integrating topic content into existing classes, rather than teaching that content through a standalone course dedicated solely to that topic.

This curriculum has been designed for infusion in a public relations communications course or a similar class that has the flexibility to incorporate this curriculum. It is guided by the Theory of Planned Behavior and the strategies of Curriculum Infusion and Social Norms.

The single overriding communication objective that this curriculum is designed to reinforce through infusion is: "Misperceived social norms can encourage alcohol abuse and alcohol abuse has negative consequences."

THEORY OF PLANNED BEHAVIOR

Effective interventions are designed with a theoretical base and use a social ecological approach to identify intervention points (Glanz & Bishop, 2010). The Theory of Planned Behavior is an individual-level theory that guides this curriculum design. The Theory of Planned Behavior examines the relationships between an individual's beliefs, attitudes, intentions, behavior, and perceived control over that behavior. As shown in the figure below, "*behavioral intention* determines *behavior*, and how *attitude toward behavior*, *subjective norm*, and *perceived behavioral control* influence *behavioral intention*" (Glanz & Rimer, 2005, p. 18).



(Glanz & Rimer, 2005)

The CI curriculum at hand focuses primarily on the attitudes toward behavior and subjective norms portions of the Theory of Planned behavior.

- **Attitude towards behavior** stems from one's beliefs and evaluation of what is entailed and what outcomes may result from performing that behavior.
- **Subjective norms** include one's perception of the social pressure from valued others influencing oneself to engage (or not engage) in a behavior, which is influenced by normative beliefs about social standards and one's personal motivation to comply with those norms (Ajzen, 2011).

Two of the CI curriculum learning objectives are relevant to the Theory of Reasoned Action. The first learning objective, students will understand that alcohol abuse has negative consequences for themselves and others, will be accomplished by targeting the student's behavioral beliefs and their evaluations of behavioral outcomes. The second outcome, students will understand how misperceived social norms can affect behavior, will be achieved by targeting the students' normative beliefs and their motivation to comply. The achievement of latter objective, which is focused on social norms, will be further strengthened by the Social Norms Theory as described in the paragraph below.

SOCIAL NORMS

Social norms theory also provides a theoretical foundation for this CI project and curriculum. This theory is similar to the Theory of Planned Behavior and Reasoned Action described as it expands upon the idea of normative behavior by identifying how perceived descriptive and injunctive norms about peer behaviors affect an individual's behaviors. According to Collins and Carey (2007) the two types of norms in this context are *descriptive norms*, perceptions of how others drink, and *injunctive norms*, perceived peer approval of drinking (p. 499). Social Norms Theory posits that one can use normative statements in order to correct misperceptions of both descriptive and injunctive norms.

Perkins (2002) argued that "one can think of a group norm in this sense as the cause of much belief and action in addition to a descriptive characterization of the status quo, as a powerful independent variable accounting for or determining individual behavior" (p. 164). He also pointed out that students tend to think that their peers are more permissive in drinking attitudes and have more problem behaviors (consuming more frequently and more heavily) than is really the norm, which has been shown to promote and exacerbate problem drinking. Essentially students act according to their belief of how their peers are behaving, or *the norm*, including the quantity or frequency of alcohol consumption. **Correcting students' misperceived social norms can both constrain problem drinkers and empower responsible students.** Taking this argument into consideration, the **current CI curriculum aims to address misperceived norms with students, allowing them to critically examine their perceptions of how others drink and their perceived peer approval of drinking, in addition to the perception of the social pressure influencing one to engage in the behavior.**

CURRICULUM INFUSION

Curriculum Infusion has been used successfully to integrate alcohol abuse prevention content into courses regularly offered across disciplines, allowing the message to extend to traditionally hard-to-reach student populations. Research shows that CI **effectively reduces negative drinking consequences, increases knowledge about the dangers of alcohol abuse and social norms and, in many instances, also decreases alcohol consumption rates** (Perkins, 2002; Riley, Durbin, & D'Ariano, 2005; White, Park, & Cordero, 2010; Ziemelis, Bucknam, & Elfessi, 2002).

Research has also demonstrated that CI effectiveness does not vary across course subject or student demographics, and provides prevention messaging to students who may not seek out this information on their own (White et al., 2010). The effectiveness of CI lies in the indirect nature of the message, and allows students to critically engage with the information in a safe environment free from social stigma (Riley et al., 2005; Tulin, 1997; Ziemelis et al., 2002). The Fund for Improvement of Post-Secondary Education (FIPSE) sponsored drug-prevention programs found that decreases in binge drinking rates were greatest on campuses where CI on alcohol abuse was emphasized as part of the university's model for binge drinking prevention (Ziemelis et al., 2002).

This strategy of CI allows faculty to design prevention content that target beliefs, attitudes, and behavior related to binge drinking; a strength of this approach is that **faculty have the flexibility to design content that is specific to their courses and teaching style**. A limitation of many previous CI efforts is that the teaching method employed was not clearly defined or illustrated by examples, thus it has been difficult to evaluate the process of implementation. **Use of this curriculum will allow a Health Educator to further study the effectiveness of this approach**.

ASSESSMENT AND EVALUATION METHODS

The primary assessment tool for this curriculum is the interview that the Health Educator will conduct with the instructor. The Health Educator is interested in the instructor's perception of the curriculum design process, the user-friendliness of the curriculum and the ease of implementation.

A secondary assessment tool is the pre- and post-surveys that students will complete at the beginning and end of the curriculum, respectively. These assessments will ask questions targeting **attitudes, beliefs**, and **behaviors**, and will be based on the stated learning objectives of the lesson plans. The *pre- and post-surveys* can be found on pages 24 & 29. It is important to note, however, that the students' behavior cannot be adequately assessed from the pre- and post-survey unless conducted at various points during the semester.

FACTS ABOUT ALCOHOL ABUSE & HEALTH

IMPACT OF ALCOHOL ABUSE ON HEALTH

As noted in Healthy People 2020, "the effects of substance abuse are cumulative, significantly contributing to costly social, physical, mental, and public health problems" (U.S. Department of Health and Human Services Office of Disease Prevention and Health Promotion, 2012, para. 3). Heavy drinking in particular is associated with many adverse health behaviors:

- smoking
- decreased physical activity
- increased physical health problems (hepatitis, hypertension, gastrointestinal problems)
- mental health difficulties (Paul, Grubaugh, Frueh, Ellis, & Egede, 2011)

In 2005, there were over **1.6 million hospitalizations and 4 million emergency department visits for alcohol-related issues** (Center for Disease Control and Prevention, 2010).

Excessive alcohol use is the **third leading lifestyle-related cause of death in the United States**, and **alcohol-related factors are the leading influence in the top three causes of death (automobile crashes, suicide and homicide) among youth 15-24 years old** (U.S. Department of Health and Human Services, 2007).

The Center for Disease Control and Prevention (CDC) estimated that there are approximately **79,000 deaths attributable to excessive alcohol use each year** in the United States (Center for Disease Control and Prevention, 2010). This translates to **2.3 million years of potential life lost or 30 years of potential life lost for each death**.

Excessive drinking also has **severe economic consequences**. The costs of excessive drinking in the U.S. in 2006 was approximately $223.5 billion (72.2% from lost productivity, **11.0% from healthcare costs**, 9.4% from criminal justice costs, and 7.5% from other effects), or $746 per person (Bouchery, Harwood, Sacks, Simon, & Brewer, 2011). Binge drinking represented 76.4% of this total cost, or $170.7 billion.

ALCOHOL ABUSE AMONG COLLEGE STUDENTS

Alcohol abuse **among college students is on the rise** (Hingson, 2010).

Furthermore, **college students appear to be at higher risk than their non-college peers**, probably as a result of the college environment (Dawson, Grant, Stinson, & Chou, 2004).

At-risk groups more likely to drink heavily: men are more likely than women, and **fraternity members** and **athletes** more likely than other groups on campus to drink heavily and suffer negative consequences (Huchting, Lac, Hummer, & LaBrie, 2011; Johnston, O'Malley, Bachman, & Schulenberg, 2007).

Negative Consequences of binge drinking include:

- memory loss
- alcohol-related driving injuries and fatalities
- sexual and physical assaults
- risky sexual behavior
- poor academic performance
- acute illnesses
- alcohol-poisoning
- and death (R. Hingson, Zha, & Weitzman, 2009; National Institute on Alcohol Abuse and Alcoholism, 2007; Weitzman, Nelson, & Wechsler, 2003).

Individuals who binge-drink are also at **higher risk of using cigarettes, marijuana, cocaine, and other illegal drugs** (Jones, Oeltmann, Wilson, Brener, & Hill, 2001).

The American College Health Association asked university students about the following negative consequences on the National College Health Assessment in 2012 (American College Health Association, 2012):

> *College students who drank alcohol reported experiencing the following in the last 12 months when drinking alcohol:*
>
> - Did something they later regretted
> - Forgot where they were or what they did
> - Got in trouble with the police
> - Had sex without receiving/obtaining consent
> - Were physically injured
> - Physically injured another person
> - Seriously considered suicide

COMMUNITY IMPACT

Students who binge drink jeopardize the well-being of others, namely in terms of **drunk driving and physical and sexual assault** (Wechsler, Moeykens, Davenport, & Castillo, 1995).

From a NIAAA survey in 2005, at least 46% of the 4,553 people killed that year in alcohol-related crashes with college age drinking drivers were people other than the drinking driver (Hingson & Weitzman, 2009).

Each year more than 690,000 students are assaulted or hit by another student who had been drinking and more than 97,000 students experienced a sexual assault or date rape perpetrated by a drinking college student (Hingson &Weitzman, 2009).

Binge drinking among college students is harmful both to the individual and society, yet is a preventable cause of morbidity and mortality. Evidence-based strategies should be widely implemented in order to address this serious public health issue. Interventions must be implemented to enhance the protective factors that reduce initiation of binge drinking as well as decrease risk factors that encourage one to drink to excess.

HOW TO USE THE CURRICULUM

It is recommended that you read the curriculum in its entirety before facilitating, and then re-read the particular lesson that you will be teaching prior to delivering it.

PREREQUISITES

Prerequisites are not listed within each lesson, as those listed in this section are applicable to the entire curriculum.

FOR THE HEALTH EDUCATOR

The pre- and post-surveys are intended for the instructors' use only.

When this curriculum is being used for the purposes of research the pre- and post-surveys used as a part of the curriculum must be approved by an institution's IRB prior to dissemination. This will be the responsibility of the Health Educator.

FOR INSTRUCTORS

Prior to using this curriculum, instructors should:

- Be an instructor of Introduction to Public Relations, Public Relations Management, or Persuasion
- Be capable of facilitating a group discussion on the problems of substance abuse (Resource: *Facts about Alcohol & Health*, page 7)
- Be familiar with the definitions of terms used in this curriculum (Resource: *Glossary*, page 16)
- Understand the basics behind the strategy of Curriculum Infusion and social norms
- Become familiar with the general and local resources (pages 12 & 13), in order to refer students as needed. You may choose to print or post copies of the resources pages for students at the beginning of the curriculum.

FOR PARTICIPANTS

- Be a student in Introduction to Public Relations, Public Relations management, or Persuasion
- Have basic vocabulary about substance abuse; this will be covered in Lesson One –Theory of Reasoned Action

GETTING STARTED

Each lesson plan identifies learning objectives, time and preparation needed to conduct the infused elements and activities, and referral to resources as needed. Specific materials are noted in the lesson plan, as there are no general materials needed for all lessons. Lesson elements that are specifically related to the Curriculum Infusion project are highlighted in bold font.

SYMBOL KEY

*These symbols are adapted from Heather Zesiger's *Judaism and Sexuality* curriculum

The following symbols will be used in the Lesson Plans to designate parts:

- – "Say This:" Talking balloons indicate text that the instructor should read aloud to the participants. This text can be paraphrased given that the intent remains the same.
- – "Pay Attention to This:" Starred text is intended to be read silently by the instructor.
- – "Do This:" Movie clapboards indicate actions that the instructor should take in implementing the Lesson.
- – "Ask This:" Arrows indicate questions that should be posed directly to students.
- [ ] – "Listen for This:" Brackets highlight possible answers to discussion questions. These can be used as prompts to encourage students to come up with their own answers, or as a guide for whether a question has been addressed comprehensively or if you need to allow more time for discussion. But, as in all good teaching, don't be afraid to let a few moments of silence pass before you say anything or provide hints, students will remember best what they were permitted to learn for themselves.
- "Discuss This:" Multiple balloons indicate discussion.

IMPORTANT NOTE

The activities included here and their length may be modified as needed, as long as the material is covered successfully and learning objectives are met. The strength of the Curriculum Infusion approach is that it is flexible and can be altered depending on the personality and teaching style of the faculty. All materials are intended to fit seamlessly into existing course content.

RESOURCES FOR FURTHER STUDY

Network for the Dissemination of Curriculum Infusion

http://www.neiu.edu/~cinfusi/

This website is a helpful resource to learn more about Curriculum Infusion and see sample curriculums as well as sample characteristics of a successful program.

National Social Norms Institute

http://www.socialnorms.org/

This is a great resource to obtain detailed descriptions of a select number of alcohol-focused social norms projects in both universities and high schools, and published research implementing this approach.

The Gordie Center

http://www.virginia.edu/case/education/prevention-plan.html

The Gordie Center provides helpful resources on drug and alcohol related issues. Learn about Gordie's story and how prevent alcohol poisoning.

College Drinking- Changing the Culture

http://www.collegedrinkingprevention.gov/

National Institute on Alcohol Abuse and Alcoholism's website specific to college drinking.

Center for Disease Control – Binge Drinking

http://www.cdc.gov/alcohol/fact-sheets/binge-drinking.htm

This Fact Sheet has statistics and information specific to the harms of binge drinking.

LOCAL RESOURCES

*Tailored to a school's on-campus and community resources

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GLOSSARY

The definitions are adapted from CDC's webpage on Alcohol and Public Health.

Alcohol: Ethyl alcohol, or ethanol, is an intoxicating ingredient found in beer, wine, and liquor. Alcohol is produced by the fermentation of yeast, sugars, and starches.

Alcoholism: A chronic disease, also known as dependency on alcohol or alcohol addiction. The signs and symptoms of alcohol dependence include:

- strong craving for alcohol
- continued use despite repeated physical, psychological, or interpersonal problems
- the inability to limit drinking

Alcohol Abuse: A pattern of drinking that results in harm to one's health, interpersonal relationships, or ability to work.

Binge Drinking: Consuming 5 or more alcoholic drinks for men, and 4 or more drinks for women, on a single occasion.

Curriculum Infusion: The process of purposively integrating topic content (on alcohol abuse prevention, in this case) into existing classes, rather than teaching that content through a standalone course dedicated solely to that topic.

Standard drink: A standard drink is equal to 14.0 grams (0.6 ounces) of pure alcohol. This amount of pure alcohol is found in:

- 12-ounces of beer.
- 8-ounces of malt liquor.
- 5-ounces of wine.
- 1.5-ounces or a "shot" of 80-proof distilled spirits or liquor (e.g., gin, rum, vodka, or whiskey).

Both a Solo cup and a Pint glass hold 16 ounces of liquor. In other words…

- 1 Solo cup or Pint glass = 1⅓ drinks of beer
- 1 Solo cup or Pint glass = 2 drinks of malt liquor
- 1 Solo cup or Pint glass = 3 drinks of wine
- 1 Solo cup or Pint glass = 10½ drinks of gin, rum, vodka, or whiskey

OUTLINE OF LESSONS

PRE-SURVEY

PURPOSE

Evaluate the students' attitudes, behaviors, and beliefs about alcohol prior to engaging with this curriculum.

Method	*Time*
Written Pre-survey	15 minutes
	Total = 15 minutes

LESSON ONE – THEORY OF REASONED ACTION AND BEHAVIORAL NORMS

PURPOSE

Introduce students to Theory of Reasoned Action and the persuasive nature of norms and normative messages, using alcohol prevention as an example of how a university deals with the issue internally.

LEARNING OBJECTIVES

At the end of class students will be able to:

- Identify negative internal and external consequences for a university related to alcohol abuse
- Identify negative personal consequences related to alcohol abuse
- Define the following four terms: alcohol, alcoholism, alcohol abuse, and binge drinking
- Explain the difference between a "misperceived social norm" and an "accurate norm," and how it alters people's behavior specific to drinking
- Identify the differences between subjective, injunctive and descriptive norms
- Discuss the possibility of testing the use of social norms marketing on university parents

Method	*Time*
Activity #1 - Lecture	100 minutes
	Total = 100 minutes

POST-SURVEY

PURPOSE

Evaluate the students' attitudes, behaviors, and beliefs about alcohol after engaging with this curriculum.

Method	*Time*
Written Post-survey	15 minutes
	Total = 15 minutes

PRE-SURVEY

Giving a pre-survey will allow the instructor to evaluate the students' attitudes, behaviors, and beliefs about alcohol prior to infusing this Curriculum.

The pre-survey should be completed at the beginning of the first week of the semester (or before the first lesson).

MATERIAL LIST

- Pre-surveys (page 24)
- Extra pencils/pens (in case not all students have one)

STEPS

1. Do welcome and introductions as standard for this course.
2. Distribute pre-surveys, one to each student.
3. Ask students to carefully read the top of the pre-test for instructions.
4. Emphasize that the survey is anonymous; the answers cannot be linked to a particular student and will therefore not affect anyone's grade. **Do not explain to students that this is part of the Curriculum Infusion strategy**.
5. Allow students 10-15 minutes to complete the pre-surveys.
6. Collect the pre-surveys and put them in a secure place.

HOMEWORK FOR INSTRUCTOR

- Keep the surveys in order to compare them to the post-surveys. Note: The change, if any, in answers between the pre- and post- surveys for any single student are for your use only. The Health Educator is interested in how many (percentage and number) of students showed a positive change in their post-survey responses but not in the results provided by individual students.

LESSON ONE – THEORY OF REASONED ACTION AND BEHAVIORAL NORMS

In this lesson the instructor will conduct a lecture on Theory of Reasoned Action and the persuasive nature of normative messages, using alcohol as an example.

LEARNING OBJECTIVES

At the end of class students will be able to:

- Identify negative internal and external consequences for a university related to alcohol abuse
- Identify negative personal consequences related to alcohol abuse
- Define the following four terms: alcohol, alcoholism, alcohol abuse, and binge drinking
- Explain the difference between a "misperceived social norm" and an "accurate norm," and how it alters people's behavior specific to drinking
- Identify the differences between subjective, injunctive and descriptive norms
- Discuss the possibility of testing the use of social norms marketing on university parents

MATERIAL LIST

- PowerPoint Slides (page 34)

LESSON OVERVIEW

Method	*Time*
Activity #1 - Lecture	100 minutes
	Total = 100 minutes

PREPARATION

1. Read Lesson Plan.
2. Familiarize yourself with Glossary terms (page 16).

ACTIVITY #1 – LECTURE (100 MINUTES)

STEPS

- There is not a formal break included in this activity, but you may choose to deliver the lecture over two class periods.

- Deliver PowerPoint. When lecturing, be sure to cover:
  - **Standard definitions of the alcohol terms**
  - **Negative consequences of alcohol abuse**
  - **"Misperceived social norms" and "accurate norms"**

- Use the following teaching notes to accompany the PowerPoint:

  - This lecture introduces students to the Theory of Reasoned Action. Refer to the public relations textbook that discusses theories used in public relations campaigns.

  - Begin by explaining the relevance of health communication in a public relations course and how health-related issues can result in media attention, unfavorable public policy and reputational damage, specifically in the context of universities and colleges.

  - Continue lecture by discussing the Theory of Reasoned Action and the persuasive power of norms.
    - **When discussing the three types of norms, be sure to provide students with examples of roles served by norms at their university, specifically regarding descriptive, injunctive and subjective norms related to student drinking (slide 9). This allows students to begin to think about some of the reasons why they drink (if they do drink at all).**
    - Pay careful attention not to promote the misperception that all college students drink during the lecture or discussion.

  - Begin slide 16 as an introduction to how communication theory can be used to create strategic messages (e.g. social norms marketing).

  - In slide 18, **review with students the standard definitions regarding alcohol**, emphasizing that they are not always used correctly.
    - **Be sure to ask students what negative consequences they think their peers may experience from abusing alcohol.**

- Discuss slides 19-25 with a real focus on how to implement a social norms campaign; simultaneously, students will be actively processing the health-related information and analyzing it during the lecture.
  - Students who are able to see the data and theory behind social norms marketing view it as being more believable and credible at their own university. This also serves the purpose of the lecture of providing yet another example of how norms affect individual behavior.

- On slide 26 relate discussion back to public relations by discussing the possibility of using social norms marketing on parents.
  - This also provides a chance to discuss why people have an extravagant view of college life that may be invalid (e.g. Movies such as Animal House, Van Wilder, etc.)

HOMEWORK FOR INSTRUCTOR

- None

POST-SURVEY

Giving a post-survey will allow the instructor to evaluate the students' attitudes, behaviors, and beliefs about alcohol after engaging with this curriculum.

The post-survey should be completed on the last day of use of this curriculum.

MATERIAL LIST:

- Post-surveys (page 29)
- Extra pencils/pens (in case extra not all students have one)

STEPS

1. Do welcome and introductions as standard for this course.
2. Distribute post-surveys, one to each student.
3. Ask students to carefully read the top of the pre-test for instructions.
4. Emphasize that the survey is anonymous; the answers cannot be linked to a particular student and will therefore not affect anyone's grade. Remind students to use the same code they used for the pre-survey. **Do not explain to students that this is part of the Curriculum Infusion strategy.**
5. Allow students 10-15 minutes to complete the post-survey.
6. Collect the post-surveys and put them in a secure place.

HOMEWORK FOR INSTRUCTOR

- Compare answers on the pre- and post-surveys

CODENAME:_____
COURSE:_____
DATE:_____

PRE-SURVEY

This survey will take approximately 5-10 minutes to complete. **Do not put your name on this survey**. Instead, create a codename. Write it down somewhere or remember it as you will use the same codename later on in the semester. Your answers will be completely anonymous as there is no way for the instructor or anyone else to link your answers to you.

Please place your completed survey in the envelope provided. Thank you!

1. On how many days did you have **one or more drinks of alcohol (beer, wine, liquor)** during the last 14 days **(two weeks)**? (Choose one)
   a) None: I have never used alcohol
   b) None: I have used alcohol in the past, but not in last 14 days
   c) On 1 - 2 days
   d) On 3 - 5 days
   e) On 6 - 9 days
   f) On 10 - 13 days
   g) On all 14 days

2. On how many days do you think a **typical student** had one or more drinks of alcohol (beer, wine, liquor) during the **last two weeks**? (Choose one)
   a) None: The typical student does not drink alcohol
   b) None: The typical student drinks alcohol but probably did not drink any in the last 14 days
   c) On 1 - 2 days
   d) On 3 - 5 days
   e) On 6 - 9 days
   f) On 10 - 13 days
   g) On all 14 days

In the following questions you will be asked about the number of alcoholic "drinks."

A standard drink is equal to 14.0 grams (0.6 ounces) of pure alcohol. This amount of pure alcohol is found in:

- *12-ounces of beer.*
- *8-ounces of malt liquor.*
- *5-ounces of wine.*
- *1.5-ounces or a "shot" of 80-proof distilled spirits or liquor (e.g., gin, rum, vodka, or whiskey).*

Both a Solo cup and a Pint glass hold 16 ounces of liquor. In other words…

- *1 Solo cup or Pint glass =* ***1⅓ drinks of beer***
- *1 Solo cup or Pint glass =* ***2 drinks of malt liquor***
- *1 Solo cup or Pint glass =* ***3 drinks of wine***
- *1 Solo cup or Pint glass =* ***10½ drinks of gin, rum, vodka, or whiskey***

3. **Think about the last time you "partied" or socialized. How many alcoholic DRINKS did you have?** (Note: use the "drinks" measures on the previous page when calculating your answer)
    a) 0 drinks (I did not drink)
    b) < 1 drink
    c) 1-2 drinks
    d) 3-4 drinks
    e) 5-6 drinks
    f) 7-8 drinks
    g) 9-10 drinks
    h) 11-12 drinks
    i) 13-14 drinks
    j) 15-16 drinks
    k) 17 or more drinks

4. **Think about the last time you "partied" or socialized. Over how many HOURS did you drink alcohol?**
    a) 0 hours (I did not drink)
    b) < 1 hour
    c) 1-2 hours
    d) 3-4 hours
    e) 5-6 hours
    f) 7-8 hours
    g) 9-10 hours
    h) 11-12 hours

5. **How many DRINKS of alcohol do you think the typical student had the last time he/she "partied" or socialized?** (Note: use the "drinks" measures on the previous page when calculating your answer)
    a) 0 drinks (the typical student did not drink alcohol the last time they partied)
    b) < 1 drink
    c) 1-2 drinks
    d) 3-4 drinks
    e) 5-6 drinks
    f) 7-8 drinks
    g) 9-10 drinks
    h) 11-12 drinks
    i) 13-14 drinks
    j) 15-16 drinks
    k) 17 or more drinks

If you are a non-drinker (abstainer) please skip to question #13.

6. **Over the last two weeks (14 days), how many TIMES have you had five or more drinks of alcohol at any one sitting?**
   a) 0 times: I did not drink during the last 14 days
   b) 0 times: I drank during the last 14 days but I never had 5 or more drinks at any one sitting
   c) 1 time
   d) 2 times
   e) 3 times
   f) 4 times
   g) 5 times
   h) 6 times
   i) 7 times
   j) 8 times
   k) 9 times
   l) 10 or more times

7. **Which of the following statements best describes you?**
   a) I have never drunk more alcohol than I intended to
   b) I very, very rarely drink more alcohol than I intend to
   c) I occasionally drink more alcohol than I intend to
   d) I frequently drink more alcohol than I intend to
   e) I almost always drink more alcohol than I intend to
   f) Other. Please specify: _____

8. **Which of the following statements best describes you?**
   a) I am in total control of my alcohol use
   b) I am in partial control of my alcohol use
   c) I am not in control of my alcohol use
   d) Other. Please specify: _____

9. **Which of the following statements best describes you?**
   a) I have tried to quit drinking at least once
   b) I have thought about quitting drinking but I have not yet tried to
   c) I have never thought about quitting drinking
   d) Other. Please specify: _____

10. **Which of the following statements best describes why you drink?**
    (Choose all that apply and put a star next to the one that is the MOST true)
    a) I drink to "fit in" with a group
    b) Alcohol helps me relax
    c) Alcohol helps me overcome my inhibitions
    d) Alcohol helps me escape unpleasantness
    e) Other. Please specify: _____

11. **Which of the following best describes how your use of alcohol has affected your attendance at work and/or classes?**
    a) It has never, even once, resulted in my missing or being late to work or classes
    b) It has resulted in my missing or being late to work or classes before, but not in the last **30 days (month)**
    c) I have missed or been late to work or class because of alcohol **1 or 2 times** in the last month
    d) I have missed or been late to work or class because of alcohol **2 -4 times** in the last month
    e) I have missed or been late to work or class because of alcohol **5 times or more** in the last month

12. **Within the last month (thirty days), which of these have you experienced when drinking alcohol? Place an "X" in one box on each row.**

	Yes	**No**
Did something you later regretted		
Forget where you were or what you did		
Got in trouble with the police		
Someone had sex with me without my consent		
Had sex with someone without their consent		
Had unprotected sex		
Physically injured yourself		
Physically injured another person		
Seriously considered suicide		
Drove a motor vehicle after drinking any alcohol at all		
Drove motor vehicle after having 5 or more drinks		

13. Please indicate your gender.

a) Female
b) Male
c) Transgender
d) Other

14. Please indicate your age.

a) 17 or under
b) 18-19
c) 20-21
d) 22-23
e) 24
f) 25 or over

15. Do you belong to a Greek organization (sorority / fraternity)?

a) Yes
b) No

16. What is your approximate cumulative GPA (grade point average)?

a) 4.0–3.5
b) 3.49–3.0
c) 2.99–2.5
d) 2.49–2.0
e) 1.99 or below

CODENAME:_____
COURSE:_____
DATE:_____

POST-SURVEY

This survey will take approximately 5-10 minutes to complete. **Do not put your name on this survey**. Instead, use the same codename you used earlier in the semester. Your answers will be completely anonymous as there is no way for the instructor or anyone else to link your answers to you.

Please place your completed survey in the envelope provided. Thank you!

1. On how many days did you have **one or more drinks of alcohol (beer, wine, liquor)** during the last two weeks **(14 days)**? (Choose one)
   a) None: I have never used alcohol
   b) None: I have used alcohol in the past, but not in last 14 days
   c) On 1 - 2 days
   d) On 3 - 5 days
   e) On 6 - 9 days
   f) On 10 - 13 days
   g) On all 14 days

2. On how many days do you think a **typical student** had one or more drinks of alcohol (beer, wine, liquor) during the last two weeks (14 days)? (Choose one)
   a) None: The typical student does not drink alcohol
   b) None: The typical student drinks alcohol but probably did not drink any in the last 14 days
   c) On 1 - 2 days
   d) On 3 - 5 days
   e) On 6 - 9 days
   f) On 10 - 13 days
   g) On all 14 days

In the following questions you will be asked about the number of alcoholic "drinks."

A standard drink is equal to 14.0 grams (0.6 ounces) of pure alcohol. This amount of pure alcohol is found in:

- *12-ounces of beer.*
- *8-ounces of malt liquor.*
- *5-ounces of wine.*
- *1.5-ounces or a "shot" of 80-proof distilled spirits or liquor (e.g., gin, rum, vodka, or whiskey).*

Both a Solo cup and a Pint glass hold 16 ounces of liquor. In other words…

- *1 Solo cup or Pint glass =* ***1⅓ drinks of beer***
- *1 Solo cup or Pint glass =* ***2 drinks of malt liquor***
- *1 Solo cup or Pint glass =* ***3 drinks of wine***
- *1 Solo cup or Pint glass =* ***10½ drinks of gin, rum, vodka, or whiskey***

3. **Think about the last time you "partied" or socialized. How many alcoholic DRINKS did you have?** (Note: use the "drinks" measures on the previous page when calculating your answer)
   a) 0 drinks (I did not drink)
   b) < 1 drink
   c) 1-2 drinks
   d) 3-4 drinks
   e) 5-6 drinks
   f) 7-8 drinks
   g) 9-10 drinks
   h) 11-12 drinks
   i) 13-14 drinks
   j) 15-16 drinks
   k) 17 or more drinks

4. **Think about the last time you "partied" or socialized. Over how many HOURS did you drink alcohol?**
   a) 0 hours (I did not drink)
   b) < 1 hour
   c) 1-2 hours
   d) 3-4 hours
   e) 5-6 hours
   f) 7-8 hours
   g) 9-10 hours
   h) 11-12 hours

5. **How many DRINKS of alcohol do you think the typical student had the last time he/she "partied" or socialized?** (Note: use the "drinks" measures on the previous page when calculating your answer)
   a) 0 drinks (the typical student did not drink alcohol the last time they partied)
   b) < 1 drink
   c) 1-2 drinks
   d) 3-4 drinks
   e) 5-6 drinks
   f) 7-8 drinks
   g) 9-10 drinks
   h) 11-12 drinks
   i) 13-14 drinks
   j) 15-16 drinks
   k) 17 or more drinks

If you are a non-drinker (abstainer) please skip to question #13.

6. **Over the last two weeks (14 days), how many <u>TIMES</u> have you had five or more drinks of alcohol at <u>any one sitting</u>?**
   a) 0 times: I did not drink during the last 14 days
   b) 0 times: I drank during the last 14 days but I never had 5 or more drinks at any one sitting
   c) 1 time
   d) 2 times
   e) 3 times
   f) 4 times
   g) 5 times
   h) 6 times
   i) 7 times
   j) 8 times
   k) 9 times
   l) 10 or more times

7. **Which of the following statements best describes you?**
   a) I have never drunk more alcohol than I intended to
   b) I very, very rarely drink more alcohol than I intend to
   c) I occasionally drink more alcohol than I intend to
   d) I frequently drink more alcohol than I intend to
   e) I almost always drink more alcohol than I intend to
   f) Other. Please specify: _____

8. **Which of the following statements best describes you?**
   a) I am in total control of my alcohol use
   b) I am in partial control of my alcohol use
   c) I am not in control of my alcohol use
   d) Other. Please specify: _____

9. **Which of the following statements best describes you?**
   a) I have tried to quit drinking at least once
   b) I have thought about quitting drinking but I have not yet tried to
   c) I have never thought about quitting drinking
   d) Other. Please specify:
   _____

10. **Which of the following statements best describes why you drink?**
    (Choose all that apply and put a star next to the one that is the MOST true)
    a) I drink to "fit in" with a group
    b) Alcohol helps me relax
    c) Alcohol helps me overcome my inhibitions
    d) Alcohol helps me escape unpleasantness
    e) Other. Please specify: _____

11. **Which of the following best describes how your use of alcohol has affected your attendance at work and/or classes?**
    a) It has never, even once, resulted in my missing or being late to work and/or classes
    b) It has resulted in my missing or being late to work or classes before, but not in the last **30 days (month)**
    c) I have missed or been late to work and/or class because of alcohol **1 or 2 times** in the last month
    d) I have missed or been late to work and/or class because of alcohol **2 -4 times** in the last month
    e) I have missed or been late to work and/or class because of alcohol **5 times or more** in the last month

12. **Within the last month (thirty days), which of these have you experienced when drinking alcohol? Place an "X" in one box on each row.**

	Yes	**No**
Did something you later regretted		
Forget where you were or what you did		
Got in trouble with the police		
Someone had sex with me without my consent		
Had sex with someone without their consent		
Had unprotected sex		
Physically injured yourself		
Physically injured another person		
Seriously considered suicide		
Drove a motor vehicle after drinking any alcohol at all		
Drove motor vehicle after having 5 or more drinks		

13. **Has the alcohol portion of this course caused you to become more aware of alcohol and related issues?**
    a) Yes
    b) No

14. **Which of the following best describes your use of alcohol during the past 30 days? (select all that apply)**
    a) N/A, I do not drink
    b) I drink, but I did not drink during the past 30 days

    c) I averaged **more** drinks during any one sitting than in the previous month
    d) I averaged **fewer** drinks during any one sitting than in the previous month

    e) I drank **more** times than in the previous month
    f) I drank **fewer** times than in the previous month

    g) I **gave thought** to quitting drinking
    h) I **did not give thought** to quitting drinking

15. **Please indicate your gender.**
    a) Female
    b) Male
    c) Transgender
    d) Other

16. **Please indicate your age.**
    a) 17 or under
    b) 18-19
    c) 20-21
    d) 22-23
    e) 24
    f) 25 or over

17. **Do you belong to a Greek organization (sorority / fraternity)**
    a) Yes
    b) No

18. **What is your approximate cumulative GPA (grade point average)?**
    a) 4.0–3.5
    b) 3.49–3.0
    c) 2.99–2.5
    d) 2.49–2.0
    e) 1.99 or below

POWERPOINT SLIDES

Theory of Reasoned Action and the persuasive nature of normative messages

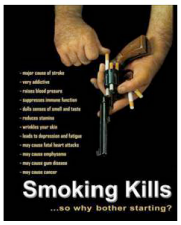
1

Attitudes and Behavior

Are YOUR behaviors always consistent with your attitudes?

2

34


Smoking Kills
...so why bother starting?

But…….

BANKS
SUCK

But……

3

ASSEMBLE YOUR
FANTASY TEAM.
VIVE Cuervo

ENDLESS
OPPORTUNITIES
SUPERIOR
DRINKABILITY
BUD LIGHT

4

35

5

Self-Monitoring

- Personality dimension that is the focus of some attitude-behavior research
- The act of behaving appropriately depending on a specific situation and the expectations of others
- Viewed as deceptive or superficial by some
- High self-monitors have many selves, resulting from various situations in which they have mimicked their environment. Low self-monitors have one true self.
- High-self monitors do not act consistently with their attitudes.

6

36

Norms

7

Norms

- Beliefs about how one is supposed to act or behave in a certain situation (**contextual**)
- Often constrain individual behavior (make people act in an inconsistent manner with their attitudes).
- Can be both positive and negative for the individual, depending the appropriateness of the normative behavior

8

37

Types of Norms

- Descriptive - perceptions of how other people are actually behaving
- Injunctive - behaviors that are perceived as being approved of by other people.
- Subjective - beliefs about what other people think you should do

9

Theory of Reasoned Action

- Posits that behavioral intentions, which are the immediate antecedents (*previous circumstances*) to behavior, are a function of salient information or beliefs about the likelihood that performing a particular behavior will lead to a specific outcome
- People heavily consider the wisdom of a given course of action (hence the term, "reasoned action"

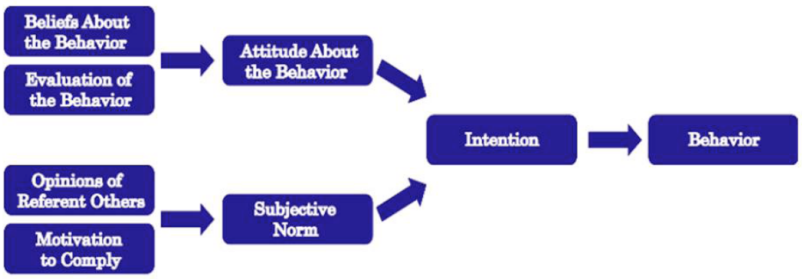
10

38

Behavioral Intention

- Behavioral intention based on
  a) His or her attitude toward the behavior in question
  b) Subjective norms regarding the behavior

11



Fishbein-Aizen Theory of Reasoned Action

12

39

How can this theory be used to create effective persuasive messages?

13

TRA and Persuasion

- Persuasive messages can be designed to change behavioral intention
- **HOW IS THIS DONE? -** by affecting a person's attitude and the perceived subjective norms to promote specific behaviors.
  - How do you change a person's attitudes?
  - How do you change or modify subjective norms?

14

40

15

Social Norms Marketing

16

41

Social Norms Marketing

- Not part of TRA, however, it does use injunctive and descriptive norms in a persuasive manner
- E.g. - An exaggerated misperception exists on college campuses about how much and how often the typical student drinks alcohol
- As a result of this misperception, some students increase their drinking behaviors to "fit in" with this invalid norm

17

Drinking Behaviors

- **First, let's define our terms:**

  Alcohol: Ethyl alcohol, or ethanol, is an intoxicating ingredient found in beer, wine, and liquor. Alcohol is produced by the fermentation of yeast, sugars, and starches.

  Alcoholism: A chronic disease, also known as dependency on alcohol or alcohol addiction. The signs and symptoms of alcohol dependence include: strong craving for alcohol; continued use despite repeated physical, psychological, or interpersonal problems; the inability to limit drinking

  Alcohol Abuse: A pattern of drinking that results in harm to one's health, interpersonal relationships, or ability to work.

  Binge Drinking: Consuming 5 or more alcoholic drinks for men, and 4 or more drinks for women, on a single occasion.

- **What are some negative consequences students may experience if they abuse alcohol or binge drink?**

18

How does it work?

19

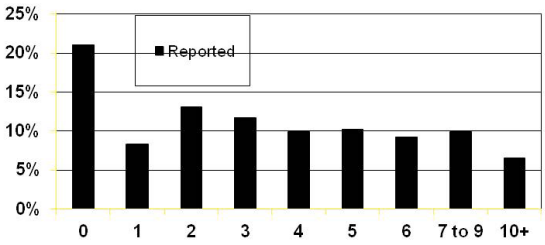
Surveys

- Use random sample of college students to determine 1) how much they drink and 2) how much they think their peers drink
- Identify a misperception (from #2 above)
- Correct it with the valid drinking norm (from #1 above)

20

43

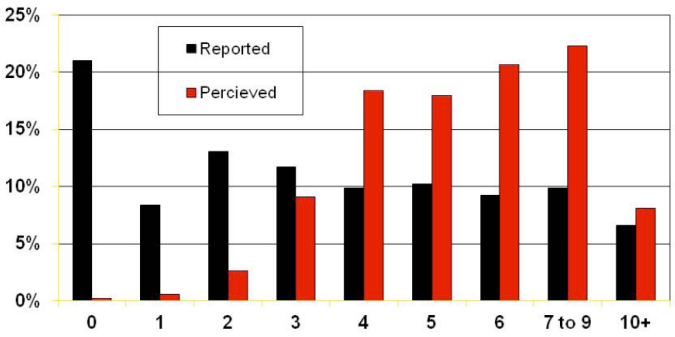
When (if) Students Drink



21% reported they do not drink
64% reported four or fewer

21

When (if) Students Drink



21% reported they do not drink
64% reported four or fewer
69% thought 5 or more

22

44

Social norms marketing used internally

72% of RU students have never allowed drinking to get in the way of performing well on an academic test.
LiveWell = Academic Success

23

Social norms marketing used internally

88% of RU students never ride with a friend that has been drinking
LiveWell = Safety

24

45

Social norms marketing used internally

Social norms marketing used externally on parents?

- What if parents have an exaggerated misperception of typical student drinking at their student's university?
- Would they affect how they perceive their student's university? (e.g. Legitimacy, reputation)
- How would you use this assumption to test the use of social norms marketing as a public relations tool?

26

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Appendix G: Management Curriculum

MANAGEMENT: ORGANIZATIONAL BEHAVIOR

CURRICULUM INFUSION

SARAH KENNEY

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ABOUT US

As a Health Educator I am enthusiastic about prevention of alcohol abuse and promotion of healthy living, and I think that a curriculum like this can move us closer to achieving these goals.

INTRODUCTION

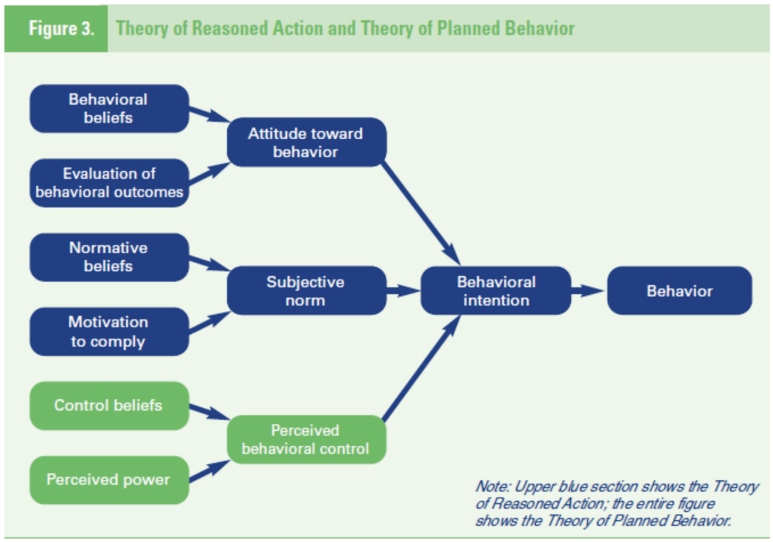
Curriculum Infusion (CI) is the process of purposively integrating topic content into existing classes, rather than teaching that content through a standalone course dedicated solely to that topic.

This curriculum has been designed for infusion in the business course Organizational Behavior or a similar class that has the flexibility to incorporate this curriculum. It is guided by the Theory of Planned Behavior and the strategies of Curriculum Infusion and Social Norms.

The single overriding communication objective that this curriculum is designed to reinforce through infusion is: "Misperceived social norms can encourage alcohol abuse and alcohol abuse has negative consequences."

THEORY OF PLANNED BEHAVIOR

Effective interventions are designed with a theoretical base and use a social ecological approach to identify intervention points (Glanz & Bishop, 2010). The Theory of Planned Behavior is an individual-level theory that guides this curriculum design. The Theory of Planned Behavior examines the relationships between an individual's beliefs, attitudes, intentions, behavior, and perceived control over that behavior. As shown in the figure below, "*behavioral intention* determines *behavior*, and how *attitude toward behavior*, *subjective norm*, and *perceived behavioral control* influence *behavioral intention*" (Glanz & Rimer, 2005, p. 18).



(Glanz & Rimer, 2005)

The CI curriculum at hand focuses primarily on the attitudes toward behavior and subjective norms portions of the Theory of Planned behavior.

- **Attitude towards behavior** stems from one's beliefs and evaluation of what is entailed and what outcomes may result from performing that behavior.
- **Subjective norms** include one's perception of the social pressure from valued others influencing oneself to engage (or not engage) in a behavior, which is influenced by normative beliefs about social standards and one's personal motivation to comply with those norms (Ajzen, 2011).

Two of the CI curriculum learning objectives are relevant to the Theory of Reasoned Action. The first learning objective, students will understand that alcohol abuse has negative consequences for themselves and others, will be accomplished by targeting the student's behavioral beliefs and their evaluations of behavioral outcomes. The second outcome, students will understand how misperceived social norms can affect behavior, will be achieved by targeting the students' normative beliefs and their motivation to comply. The achievement of latter objective, which is focused on social norms, will be further strengthened by the Social Norms Theory as described in the paragraph below.

SOCIAL NORMS

Social norms theory also provides a theoretical foundation for this CI project and curriculum. This theory is similar to the Theory of Planned Behavior and Reasoned Action described as it expands upon the idea of normative behavior by identifying how perceived descriptive and injunctive norms about peer behaviors affect an individual's behaviors. According to Collins and Carey (2007) the two types of norms in this context are *descriptive norms*, perceptions of how others drink, and *injunctive norms*, perceived peer approval of drinking (p. 499). Social Norms Theory posits that one can use normative statements in order to correct misperceptions of both descriptive and injunctive norms.

Perkins (2002) argued that "one can think of a group norm in this sense as the cause of much belief and action in addition to a descriptive characterization of the status quo, as a powerful independent variable accounting for or determining individual behavior" (p. 164). He also pointed out that students tend to think that their peers are more permissive in drinking attitudes and have more problem behaviors (consuming more frequently and more heavily) than is really the norm, which has been shown to promote and exacerbate problem drinking. Essentially students act according to their belief of how their peers are behaving, or *the norm*, including the quantity or frequency of alcohol consumption. **Correcting students' misperceived social norms can both constrain problem drinkers and empower responsible students.** Taking this argument into consideration, the **current CI curriculum aims to address misperceived norms with students, allowing them to critically examine their perceptions of how others drink and their perceived peer approval of drinking, in addition to the perception of the social pressure influencing one to engage in the behavior.**

CURRICULUM INFUSION

Curriculum Infusion has been used successfully to integrate alcohol abuse prevention content into courses regularly offered across disciplines, allowing the message to extend to traditionally hard-to-reach student populations. Research shows that CI **effectively reduces negative drinking consequences, increases knowledge about the dangers of alcohol abuse and social norms and, in many instances, also decreases alcohol consumption rates** (Perkins, 2002; Riley, Durbin, & D'Ariano, 2005; White, Park, & Cordero, 2010; Ziemelis, Bucknam, & Elfessi, 2002).

Research has also demonstrated that CI effectiveness does not vary across course subject or student demographics, and provides prevention messaging to students who may not seek out this information on their own (White et al., 2010). The effectiveness of CI lies in the indirect nature of the message, and allows students to critically engage with the information in a safe environment free from social stigma (Riley et al., 2005; Tulin, 1997; Ziemelis et al., 2002). The Fund for Improvement of Post-Secondary Education (FIPSE) sponsored drug-prevention programs found that decreases in binge drinking rates were greatest on campuses where CI on alcohol abuse was emphasized as part of the university's model for binge drinking prevention (Ziemelis et al., 2002).

This strategy of CI allows faculty to design prevention content that target beliefs, attitudes, and behavior related to binge drinking; a strength of this approach is that **faculty have the flexibility to design content that is specific to their courses and teaching style**. A limitation of many previous CI efforts is that the teaching method employed was not clearly defined or illustrated by examples, thus it has been difficult to evaluate the process of implementation. **Use of this Curriculum will allow a Health Educator to further study the effectiveness of this approach**.

ASSESSMENT AND EVALUATION METHODS

The primary assessment tool for this curriculum is the interview that the Health Educator will conduct with the instructor. The Health Educator is interested in the instructor's perception of the curriculum design process, the user-friendliness of the curriculum and the ease of implementation.

A secondary assessment tool is the pre- and post-surveys that students will complete at the beginning and end of the curriculum, respectively. These assessments will ask questions targeting **attitudes, beliefs**, and **behaviors**, and will be based on the stated learning objectives of the lesson plans. The *pre- and post-surveys* can be found on pages 35 & 40. It is important to note, however, that the students' behavior cannot be adequately assessed from the pre- and post-survey unless conducted at various points during the semester.

FACTS ABOUT ALCOHOL ABUSE & HEALTH

IMPACT OF ALCOHOL ABUSE ON HEALTH

As noted in Healthy People 2020, "the effects of substance abuse are cumulative, significantly contributing to costly social, physical, mental, and public health problems" (U.S. Department of Health and Human Services Office of Disease Prevention and Health Promotion, 2012, para. 3). Heavy drinking in particular is associated with many adverse health behaviors:

- smoking
- decreased physical activity
- increased physical health problems (hepatitis, hypertension, gastrointestinal problems)
- mental health difficulties (Paul, Grubaugh, Frueh, Ellis, & Egede, 2011)

In 2005 alone there were over **1.6 million hospitalizations and 4 million emergency department visits for alcohol-related issues** (Center for Disease Control and Prevention, 2010).

Excessive alcohol use is the **third leading lifestyle-related cause of death in the United States**, and **alcohol-related factors are the leading influence in the top three causes of death (automobile crashes, suicide and homicide) among youth 15-24 years old** (U.S. Department of Health and Human Services, 2007).

The Center for Disease Control and Prevention (CDC) estimates that there are approximately **79,000 deaths attributable to excessive alcohol use each year** in the United States (Center for Disease Control and Prevention, 2010). This translates to **2.3 million years of potential life lost or 30 years of potential life lost for each death**.

Excessive drinking also has **severe economic consequences**. The costs of excessive drinking in the U.S. in 2006 was approximately $223.5 billion (**72.2% from lost productivity**, 11.0% from healthcare costs, 9.4% from criminal justice costs, and 7.5% from other effects), or $746 per person (Bouchery, Harwood, Sacks, Simon, & Brewer, 2011). Binge drinking represented 76.4% of this total cost, or $170.7 billion.

ALCOHOL ABUSE AMONG COLLEGE STUDENTS

Alcohol abuse **among college students is on the rise** (Hingson, 2010).

Furthermore, **college students appear to be at higher risk than their non-college peers**, probably as a result of the college environment (Dawson, Grant, Stinson, & Chou, 2004).

At-risk groups more likely to drink heavily: men are more likely than women, and **fraternity members** and **athletes** more likely than other groups on campus to drink heavily and suffer negative consequences (Huchting, Lac, Hummer, & LaBrie, 2011; Johnston, O'Malley, Bachman, & Schulenberg, 2007).

Negative consequences of binge drinking include:

- memory loss
- alcohol-related driving injuries and fatalities
- sexual and physical assaults
- risky sexual behavior
- poor academic performance
- acute illnesses
- alcohol-poisoning
- and death (Hingson, Zha, & Weitzman, 2009; National Institute on Alcohol Abuse and Alcoholism, 2007; Weitzman, Nelson, & Wechsler, 2003).

Individuals who binge-drink are also at **higher risk of using cigarettes, marijuana, cocaine, and other illegal drugs** (Jones, Oeltmann, Wilson, Brener, & Hill, 2001).

The American College Health Association asked university students about the following negative consequences on the National College Health Assessment in 2012 (American College Health Association, 2012):

> *College students who drank alcohol reported experiencing the following in the last 12 months when drinking alcohol:*
>
> - Did something they later regretted
> - Forgot where they were or what they did
> - Got in trouble with the police
> - Had sex without giving/receiving consent
> - Were physically injured
> - Physically injured another person
> - Seriously considered suicide

COMMUNITY IMPACT

Students who binge drink jeopardize the well-being of others, namely in terms of **drunk driving and physical and sexual assault** (Wechsler, Moeykens, Davenport, & Castillo, 1995).

From a NIAAA survey in 2005, at least 46% of the 4,553 people killed that year in alcohol-related crashes with college age drinking drivers were people other than the drinking driver (Hingson & Weitzman, 2009).

Each year more than 690,000 students are assaulted or hit by another student who had been drinking and more than 97,000 students experienced a sexual assault or date rape perpetrated by a drinking college student (Hingson & Weitzman, 2009).

Binge drinking among college students is harmful both to the individual and society, yet is a preventable cause of morbidity and mortality. Evidence-based strategies should be widely implemented in order to address this serious public health issue. Interventions must be implemented to enhance the protective factors that reduce initiation of binge drinking as well as decrease risk factors that encourage one to drink to excess.

HOW TO USE THE CURRICULUM

It is recommended that you read the curriculum in its entirety before facilitating, and then re-read the particular lesson that you will be teaching prior to delivering it.

PREREQUISITES

Prerequisites are not listed within each lesson, as those listed in this section are applicable to the entire curriculum.

FOR THE HEALTH EDUCATOR

The pre- and post-surveys are intended for the instructors' use only.

When this curriculum is being used for the purposes of research the pre- and post-surveys used as a part of the curriculum must be approved by an institution's IRB prior to dissemination. This will be the responsibility of the Health Educator.

FOR INSTRUCTORS

Prior to using this curriculum, instructors should:

- Be an instructor of Organizational Behavior
- Be capable of facilitating a group discussion on the problems of substance abuse (Resource: *Facts about Alcohol & Health*, page 7)
- Be familiar with the definitions of terms used in this curriculum (Resource: *Glossary*, page 16)
- Understand the basics behind the strategy of Curriculum Infusion and social norms

FOR PARTICIPANTS

- Be a student in Organizational Behavior
- Have basic vocabulary about substance abuse; this will be covered in Lesson Two – Discussion #1 Introducing Definitions and Social Norms

GETTING STARTED

Each lesson plan identifies learning objectives, time and preparation needed to conduct the infused elements and activities, and referral to resources as needed. Specific materials are noted in the lesson plan, as there are no general materials needed for all lessons. If a lesson requires handouts, they can be found at end of that particular lesson; the pre- and post-surveys are located at the end of the curriculum. Lesson elements that are specifically related to the Curriculum Infusion project are highlighted in bold font.

SYMBOL KEY

*These symbols are adapted from Heather Zesiger's *Judaism and Sexuality* curriculum

The following symbols will be used in the Lesson Plans to designate parts:

- – "Say This:" Talking balloons indicate text that the instructor should read aloud to the participants. This text can be paraphrased given that the intent remains the same.
- – "Pay Attention to This:" Starred text is intended to be read silently by the instructor.
- – "Do This:" Movie clapboards indicate actions that the instructor should take in implementing the Lesson.
- → – "Ask This:" Arrows indicate questions that should be posed directly to students.
- [ ] – "Listen for This:" Brackets highlight possible answers to discussion questions. These can be used as prompts to encourage students to come up with their own answers, or as a guide for whether a question has been addressed comprehensively or if you need to allow more time for discussion. But, as in all good teaching, don't be afraid to let a few moments of silence pass before you say anything or provide hints, students will remember best what they were permitted to learn for themselves.
- "Discuss This:" Multiple balloons indicate discussion.

IMPORTANT NOTE

The activities included here and their length may be modified as needed, as long as the material is covered successfully and learning objectives are met. The strength of the Curriculum Infusion approach is that it is flexible and can be altered depending on the personality and teaching style of the faculty. All materials are intended to fit seamlessly into existing course content.

RESOURCES FOR FURTHER STUDY

Network for the Dissemination of Curriculum Infusion

http://www.neiu.edu/~cinfusi/

This website is a helpful resource to learn more about Curriculum Infusion and see sample curriculums as well as sample characteristics of a successful program.

National Social Norms Institute

http://www.socialnorms.org/

This is a great resource to obtain detailed descriptions of a select number of alcohol-focused social norms projects in both universities and high schools, and published research implementing this approach.

The Gordie Center

http://www.virginia.edu/case/education/prevention-plan.html

The Gordie Center provides helpful resources on drug and alcohol related issues. Learn about Gordie's story and how to prevent alcohol poisoning.

College Drinking- Changing the Culture

http://www.collegedrinkingprevention.gov/

National Institute on Alcohol Abuse and Alcoholism's website specific to college drinking.

Center for Disease Control – Binge Drinking

http://www.cdc.gov/alcohol/fact-sheets/binge-drinking.htm

This Fact Sheet has statistics and information specific to the harms of binge drinking.

LOCAL RESOURCES

*Tailored to school's on-campus and community resources.

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GLOSSARY

The definitions are adapted from CDC's webpage on Alcohol and Public Health.

Alcohol: Ethyl alcohol, or ethanol, is an intoxicating ingredient found in beer, wine, and liquor. Alcohol is produced by the fermentation of yeast, sugars, and starches.

Alcoholism: A chronic disease, also known as dependency on alcohol or alcohol addiction. The signs and symptoms of alcohol dependence include:

- strong craving for alcohol
- continued use despite repeated physical, psychological, or interpersonal problems
- the inability to limit drinking

Alcohol Abuse: A pattern of drinking that results in harm to one's health, interpersonal relationships, or ability to work.

Binge Drinking: Consuming 5 or more alcoholic drinks for men, and 4 or more drinks for women, on a single occasion.

Curriculum Infusion: The process of purposively integrating topic content (on alcohol abuse prevention, in this case) into existing classes, rather than teaching that content through a standalone course dedicated solely to that topic.

Standard drink: A standard drink is equal to 14.0 grams (0.6 ounces) of pure alcohol. This amount of pure alcohol is found in:

- 12-ounces of beer.
- 8-ounces of malt liquor.
- 5-ounces of wine.
- 1.5-ounces or a "shot" of 80-proof distilled spirits or liquor (e.g., gin, rum, vodka, or whiskey).

Both a Solo cup and a Pint glass hold 16 ounces of liquor. In other words…

- 1 Solo cup or Pint glass = 1⅓ drinks of beer
- 1 Solo cup or Pint glass = 2 drinks of malt liquor
- 1 Solo cup or Pint glass = 3 drinks of wine
- 1 Solo cup or Pint glass = 10½ drinks of gin, rum, vodka, or whiskey

OUTLINE OF LESSONS

1. LESSON ONE - PRE-SURVEY (PAGE 20)

PURPOSE

Evaluate the students' attitudes, behaviors, and beliefs about alcohol prior to engaging with this curriculum.

Method	*Time*
Written Pre-survey	15 minutes
	Total = 15 minutes

2. LESSON TWO – RESEARCH PROJECT (PAGE 21)

PURPOSE

Inspire critical thinking about the impacts of alcohol in the workplace and/or a college campus.

LEARNING OBJECTIVES

At the end of this lesson and corresponding assignments students will be able to:

- Accurately define the following five terms: alcohol, alcoholism, alcohol abuse, binge drinking and standard drink
- Explain the difference between a "misperceived social norm" and an "accurate norm," and how it alters people's behavior specific to drinking
- Identify negative consequences related to alcohol abuse

Method	*Time*
Discussion #1 – Alcohol Definitions & Social Norms	10 minutes
Discussion #2 – Introducing the Assignments	20 minutes
	Total = 30 minutes

3. LESSON THREE – STATUS REPORTS (PAGE 30)

PURPOSE

Inspire critical thinking about the impacts of alcohol in the workplace and/or a college campus.

LEARNING OBJECTIVES

At the end of class students will be able to:

- Identify negative consequences related to alcohol abuse

Method	*Time*
Activity #1 – Status Reports	*~100 minutes (or 2 class periods).* This will vary depending on number of students. Allocate three to five minutes for each group to present and then 2 minutes of discussion following each presentation
	Total = 100 minutes

4. LESSON FOUR – PRESENTATIONS (PAGE 32)

PURPOSE

Inspire critical thinking about the impacts of alcohol in the workplace and/or a college campus.

LEARNING OBJECTIVES

At the end of class students will be able to:

- Critically analyze negative consequences related to alcohol abuse

Method	*Time*
Activity #1 - Presentations	*~ 150 minutes (or three class periods).* This will vary depending on number of students. Allocate 8-10 minutes for each group to present and then five minutes of discussion following each presentation
	Total = 150 minutes

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5. LESSON FIVE - POST-SURVEY (PAGE 34)

PURPOSE

Evaluate the students' attitudes, behaviors, and beliefs about alcohol after engaging with this curriculum.

Method	*Time*
Written Post-survey	15 minutes
	Total = 15 minutes

1. LESSON ONE: PRE-SURVEY

Giving a pre-survey will allow the instructor to evaluate the students' attitudes, behaviors, and beliefs about alcohol prior to infusing this Curriculum.

The pre-survey should be completed at the beginning of the second week of the semester (or before the second lesson).

MATERIAL LIST

- Pre-surveys (page 35)
- Extra pencils/pens (in case not all students have one)

STEPS

1. Do welcome and introductions as standard for this course.
2. Distribute pre-surveys, one to each student.
3. Ask the students to carefully read the instructions on the top of the page.
4. Emphasize that the survey is anonymous; the answers cannot be linked to a particular student and will therefore not affect anyone's grade. **Do not explain to students that this is part of the Curriculum Infusion strategy**.
5. Allow students 10-15 minutes to complete the pre-surveys.
6. Collect the pre-surveys and put them in a secure place.

HOMEWORK FOR INSTRUCTOR

- Keep the surveys in order to compare them to the post-surveys. Note: The change, if any, in answers between the pre- and post- surveys for any single student are for your use only. The Health Educator is interested in how many (percentage and number) of students showed a positive change in their post-survey responses but not in the results provided by individual students.

2. LESSON TWO – RESEARCH PROJECT

In this lesson the students will complete a research project (paper and presentation) about how alcohol affects the workplace and/or a college campus and what type of management strategies could be used to prevent/address this issue.

LEARNING OBJECTIVES

At the end of this lesson and corresponding assignments students will be able to:

- Accurately define the following four terms: alcohol, alcoholism, alcohol abuse, binge drinking and standard drink
- Explain the difference between a "misperceived social norm" and an "accurate norm," and how it alters people's behavior specific to drinking
- Identify negative consequences related to alcohol abuse

MATERIAL LIST

- Handout with alcohol terms and description of social norms (page 24)
- Handouts with assignment guidelines - 1) research project (page 26) 2) status report (page 29)

LESSON OVERVIEW

Method	*Time*
Discussion #1 – Alcohol Definitions & Social Norms	10 minutes
Discussion #2 – Introducing the Assignments	20 minutes
	Total = 30 minutes

PREPARATION

1. Read Lesson Plan.
2. Print the two handouts in the Material List.

DISCUSSION #1 – ALCOHOL DEFINITIONS & SOCIAL NORMS (10 MINUTES)

OBJECTIVE

After the discussion students will be able to:

- Accurately define the following four terms: alcohol, alcoholism, alcohol abuse, binge drinking and standard drink
- Explain the difference between a "misperceived social norm" and an "accurate norm," as well as how a misperceived norms alters people's behavior specific to drinking

MATERIALS

- Handout with alcohol terms and description of social norms (page 24)

STEPS

💬 **Standard definitions surrounding alcohol are not always used in the same way by everyone.** While completing your research project, please remember to use the standard terms defined on this handout.

🖬 **Distribute handout and review alcohol terms with students.**

💬 In your research paper you must also **discuss how social norms may influence the issue of alcohol in the workplace or on a college campus. You will see a brief description of social norms on the second page of the handout.** The two types of norms are "descriptive norms" (for example, perceptions of how others drink) and "injunctive norms" (for example, perceived peer approval of drinking).

💬 **It is human nature to behave according to what you believe to be the norm. If you think that everyone is drinking heavily (and more heavily than you) you are more likely to drink more heavily to fit in with others and match your perceived norm.**

- **This can go both ways** – if you are drinking less than your perceived norm, you will likely start drinking *more heavily* to match others. But if you drink more than your perceived norm, you are more likely to *decrease* your consumption to match others.

💬 On the whole, people tend to think that their peers are more permissive in drinking attitudes and have more problem behaviors (consuming more frequently and more heavily) than is really the norm, ***which has been shown to promote and exacerbate problem drinking*** (Perkins, 2002).

💬 **Correcting a person's misperceived social norms can both *constrain problem drinkers and empower responsible individuals.***

DISCUSSION #2 – INTRODUCING THE ASSIGNMENTS (20 MINUTES)

TEACHING OBJECTIVE

Clarify that the research paper and presentation must incorporate critical analysis about the negative consequences of alcohol in the workplace and/or on a college campus.

MATERIALS

- Handouts with assignment guidelines - 1) research project (page 26) 2) status report (page 29)

STEPS

Distribute assignment information and handouts (research paper, status report, presentation) per usual routine.

During discussion of the assignment include the following information (further details are on the assignment handout):

Your initial assignment is to write a research paper in groups about how alcohol affects the workplace and/or a college campus.

You are expected to provide the class with a status report of your work half way through the semester, in which you will present for 3-5 minutes as a group.

After the paper is complete you will be asked to deliver an 8-10 minute presentation in class. You must deliver an engaging presentation and should make use of multimedia presentation resources. At the end of each presentation we will have a short discussion and give the audience an opportunity to ask questions.

- Note: if you determine that the class size is too large to incorporate the status report assignment (Lesson Three, page 30) and/or the presentations (Lesson Four, page 32) you can choose to eliminate or modify this portion of the curriculum. One alternative to the presentation piece is to ask the students, after completing the research paper, to write a brief reflection in response to the following question: "What did you personally learn as a result of this project?"

HOMEWORK FOR INSTRUCTOR

If desired, post the handouts in the Material List

ALCOHOL TERMS AND DESCRIPTION OF SOCIAL NORMS HANDOUT

Standard definitions surrounding alcohol are not always used in the same way by everyone. While completing your research project, please remember to use the standard terms defined on this handout.

Alcohol: Ethyl alcohol, or ethanol, is an intoxicating ingredient found in beer, wine, and liquor. Alcohol is produced by the fermentation of yeast, sugars, and starches.

Alcoholism: A chronic disease, also known as dependency on alcohol or alcohol addiction. The signs and symptoms of alcohol dependence include:

- strong craving for alcohol
- continued use despite repeated physical, psychological, or interpersonal problems
- the inability to limit drinking

Alcohol Abuse: A pattern of drinking that results in harm to one's health, interpersonal relationships, or ability to work.

Binge Drinking: Consuming 5 or more alcoholic drinks for men, and 4 or more drinks for women, on a single occasion.

Standard Drink: A standard drink is equal to 14.0 grams (0.6 ounces) of pure alcohol. This amount of pure alcohol is found in:

- 12-ounces of beer.
- 8-ounces of malt liquor.
- 5-ounces of wine.
- 1.5-ounces or a "shot" of 80-proof distilled spirits or liquor (e.g., gin, rum, vodka, or whiskey).

Both a Solo cup and a Pint glass hold 16 ounces of liquor. In other words…

- 1 Solo cup or Pint glass = 1⅓ drinks of beer
- 1 Solo cup or Pint glass = 2 drinks of malt liquor
- 1 Solo cup or Pint glass = 3 drinks of wine
- 1 Solo cup or Pint glass = 10½ drinks of gin, rum, vodka, or whiskey

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In your research paper you must also discuss about how social norms may influence the issue of alcohol in the workplace or on a college campus.

- The two types of norms are "descriptive norms" (for example, perceptions of how others drink) and "injunctive norms" (for example, perceived peer approval of drinking).
- It is human nature to behave according to what you believe to be the norm. If you think that everyone is drinking heavily (and more heavily than you) you are more likely to drink more heavily to fit in with others and match your perceived norm.
    - This can go both ways – if you are drinking less than your perceived norm, you will likely start drinking *more heavily* to match others. But if you drink more than your perceived norm, you are more likely to *decrease* your consumption to match others.
- On the whole, people tend to think that their peers are more permissive in drinking attitudes and have more problem behaviors (consuming more frequently and more heavily) than is really the norm, *which has been shown to promote and exacerbate problem drinking.*
- Correcting a person's misperceived social norms can both *constrain problem drinkers and empower responsible individuals.*

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RESEARCH PROJECT GUIDELINES HANDOUT

OBJECTIVE: To research and evaluate (include your suggested improvements) a company and/or problem/opportunity based on course content discussed in class, in text, and updated with your own research. In other words, you may choose to research and evaluate a company with a problem/opportunity, **or** a generic problem/opportunity. ***For either selection, you must focus your project on how alcohol abuse affects the workplace and/or college campuses.***

IMPORTANT: Bring the facts and issues in the case current through research, before you begin writing your case. Also, do your SWOT Analysis before analyzing and writing the following sections.

WRITTEN CASE: Format in sentences and paragraphs, double space, staple in left hand corner, do not use binders and include the following 10 headings:

1. **COVER PAGE**
   Include your team's name, individual names, my name, course name and number, date due, and location of class. Include title of case.
2. **THESIS STATEMENT (One or two sentences)**
   Present a clear statement of the major problem/opportunity in the case in one or two sentences. Although there may be several problems/opportunities, agree on one to solve in your case. Focus on solving the one main problem/opportunity that you identify.
3. **INTRODUCTION (One or two paragraphs)**
   Include pertinent facts in the case in one or two paragraphs. Do not give a lengthy history of the company and/or problem/opportunity.
4. **ALTERNATIVES AVAILABLE (One of the longer sections)**
   Identify and analyze various alternatives (minimum of three) to resolve the problem/opportunity. In your analysis, describe some of the advantages and disadvantages of each alternative. Use subheadings for each alternative.
5. **RECOMMENDATION (One or two sentences)**
   From your alternatives that you evaluated in the previous section, recommend one "best fit" alternative to resolve the problem/opportunity. State why you selected this particular alternative. Do not combine alternatives, that is, pick only one.
6. **ACTION PLAN (One of the longer sections)**
   Develop a step-by-step approach to implement your recommendation. Your action plan should solve the problem/opportunity. If your action plan does not solve your problem/opportunity, either you picked the wrong problem/opportunity or developed an incorrect action plan and must rework case.

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7. **ANTICIPATED OUTCOME (One or two paragraphs)**
   Discuss what you expect to achieve and how you will know you have achieved it.
8. **SUMMARY (One or two paragraphs)**
   Conclude with one or two summary paragraphs. Do not present any new information in the Summary.
9. **BIBLIOGRAPHY (Start new page)**
   Use a minimum of four resources dated 2007 or later. Use the latest APA style guidelines available through the library for citations. The written report focuses on current, researched information about your company and/or problem/opportunity from academic and professional resources. If you find relevant information from other sources, you may use these as long as you meet the academic resources requirement above.
10. **APPENDICES (Start new page for each appendix and single space.) ALL REQUIRED**
    Appendix A. Show meeting dates, times met, who met, and what was accomplished.
    Appendix B. SWOT Analysis (I will explain format in class, plus refer to D2L.)
    Appendix C. Quantitative Analysis that must be your own work.
    Appendix D. Include current information about the company, industry/market potential in dollars, company potential & forecast in dollars, and demographics for area served in your own words, charts, and graphs.

ORAL CASE PRESENTATIONS - format:

1. Use visual aids. At least one type of visual aid is mandatory.
2. Plan carefully for oral presentations (about 8 to 10 minutes or as otherwise stated in class). Prepare a presentation on the major headings in your Case Analysis. It is neither necessary nor desirable to cover every part of your written work in detail.
3. All team members must be involved in the presentation. For Oral Status Reports, there is no dress code. For Written Case Analysis and Presentations, dress appropriately – this means business dress.
4. If you "read" your presentation, I will deduct Presentation points. Reading from screen or notes, or note cards is still reading and will reduce your grade.
5. Students are expected to ask questions and give feedback to case presenters. Immediately after the presentation, each student will turn in one written question (questions are considered as part of Participation). I will select questions to ask case presenters. This may be modified as necessary due to time constraints.

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IMPORTANT NOTES:

1. Students are expected to meet outside of class to coordinate written effort and practice presentation skills and roles. Occasionally, there may be some in-class time available.
2. Limit to a maximum of 10 pages, not counting the Appendices, Bibliography, and Cover Page. The main point is to complete the assignment according to text, class instructions, and these instructions.
3. Please ask questions in class about items that are of general interest. If your team has particular questions about your case, please make team arrangements to meet with me.
4. The Oral Status Reports for Cases, and the Written Case Analysis and Presentations are due on dates shown on the syllabus or as discussed in class.
5. In essence, your team agreed on one major problem/opportunity, identified and analyzed various alternatives, made one alternative your recommendation, and developed an action plan to solve the problem/opportunity.
6. In general, grading for each case will follow the following approximation:

"Oral" Present not read, met time limits, appropriate dress, etc.	50%
"Written" Content, follow instructions, correct grammar & punctuation, etc.	50%

Possible Topics

- Productivity and efficiency
- Employee absenteeism
- Quality of work; poor decision making
- Injuries/Accidents
- Workers Compensation
- Impact on coworkers' interpersonal communication and morale
- Image/Public Relations
- Liability
- Theft
- High job turnover
- Economic loss (due to the above issues)

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STATUS REPORTS HANDOUT

Here are some helpful suggestions on Status Reports.

Oral Report – **Mandatory**:

Your team should plan for a minimum of 3 minutes, and a maximum of 5 minutes.

All team members must participate.

Please dress informally, but appropriately.

Written Component:

Optional – If you provide a written, draft copy, I will be glad to give you "free" feedback. (I will not be able to provide this service after the Status Report date since I have other classes and tasks to do. Please do not ask.)

Mandatory – Turn in written Bibliography of sources you plan to use. Your Bibliography must show that you will use a sufficient number of appropriate sources to complete the necessary research.

Notes:

1. The main objective of the Status Report is to insure that your team is on track, and has given thoughtful consideration to your project. This is excellent time management as suggested by previous teams and classes.
2. In class, I will cover some major "bullet points" for you to complete in your Oral Report.
3. Please ask questions, in class, for any clarifications that are on your mind.

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3. LESSON THREE – STATUS REPORTS

In this lesson the students will deliver status reports on their research paper, addressing how alcohol impacts the workplace and/or a college campus.

LEARNING OBJECTIVES

At the end of class students will be able to:

- Identify negative consequences related to alcohol abuse

MATERIAL LIST

- You do not need to bring any materials. However, students must prepare their presentations and bring any necessary materials to class.

LESSON OVERVIEW

Method	*Time*
Activity #1 – Status Reports	*~100 minutes (or 2 class periods).* This will vary depending on number of students. Allocate three to five minutes for each group to present and then 2 minutes of discussion following each presentation
	Total = 100 minutes

PREPARATION

1. Read Lesson Plan.

ACTIVITY #1 – STATUS REPORTS (100 MINUTES)

STEPS

Say: As you know, today you will deliver a three to five minute status report on the topic of your choice related to how alcohol affects the workplace and/or a college campus. After each presentation you will have an opportunity for questions and discussion.

Ask: Are there any volunteers who would like to go first?

Pay Attention: If no one volunteers, choose students at random to present.

Discuss: After each presentation allow the discussion to unfold according to students' response. Use the following questions for each group:

- Ask: What is your team's estimate of your percentage completion with this project?
- Ask: What will it take to get to 100% completion?

HOMEWORK FOR INSTRUCTOR

Do: None

Say This | Do This | Pay Attention to This | 31
Ask This | [] Listen for This | Discuss This

4. LESSON FOUR – PRESENTATIONS

In this lesson the students will deliver their research presentations, addressing how alcohol influences the workplace and/or a college campus.

LEARNING OBJECTIVES

At the end of class students will be able to:

- Identify negative consequences related to alcohol abuse

MATERIAL LIST

- You do not need to bring any materials. However, students must prepare their presentations and bring any necessary materials to class.

LESSON OVERVIEW

This lesson must be conducted after the research paper due date.

Method	*Time*
Activity #1 – Presentations	*~ 150 minutes (or three class periods).* This will vary depending on number of students. Allocate 8-10 minutes for each group to present and then five minutes of discussion following each presentation
	Total = 150 minutes

PREPARATION

1. Read Lesson Plan.

ACTIVITY #1 – PRESENTATIONS (150 MINUTES)

STEPS

As you know, today you will deliver an 8-10 minute presentation on the topic of your choice related to how alcohol affects the workplace and/or a college campus. After each presentation you will have an opportunity for questions and discussion.

→ Are there any volunteers who would like to go first?

- If no one volunteers, choose students at random to present.

After each presentation allow the discussion to unfold according to students' response. **Use the following question to prompt discussion.**

- → Individually, what did you personally learn as a result of this project?

HOMEWORK FOR INSTRUCTOR

- None

5. LESSON FIVE – POST-SURVEY

Giving a post-survey will allow the instructor to evaluate the students' attitudes, behaviors, and beliefs about alcohol after engaging with this curriculum.

The post-survey should be completed on the last day of use of this curriculum.

MATERIAL LIST

- Post-surveys (page 40)
- Extra pencils/pens (in case extra not all students have one)

STEPS

1. Do welcome and introductions as standard for this course.
2. Distribute post-surveys, one to each student.
3. Ask the students to carefully read the instructions on the top of the page.
4. Emphasize that the survey is anonymous; the answers cannot be linked to a particular student and will therefore not affect anyone's grade. Remind students to use the same code they used for the pre-survey. **Do not explain to students that this is part of the Curriculum Infusion strategy.**
5. Allow students 10-15 minutes to complete the post-survey.
6. Collect the post-surveys and put them in a secure place.

HOMEWORK FOR INSTRUCTOR

- Compare answers on the pre- and post-surveys

CODENAME:_____
COURSE:_____
DATE:_____

PRE-SURVEY

This survey will take approximately 5-10 minutes to complete. **Do not put your name on this survey**. Instead, create a codename. Write it down somewhere or remember it as you will use the same codename later on in the semester. Your answers will be completely anonymous as there is no way for the instructor or anyone else to link your answers to you.

Please place your completed survey in the envelope provided. Thank you!

1. On how many days did you have **one or more drinks of alcohol (beer, wine, liquor)** during the last 14 days **(two weeks)**? (Choose one)
    a) None: I have never used alcohol
    b) None: I have used alcohol in the past, but not in last 14 days
    c) On 1 - 2 days
    d) On 3 - 5 days
    e) On 6 - 9 days
    f) On 10 - 13 days
    g) On all 14 days

2. On how many days do you think a **typical student** had one or more drinks of alcohol (beer, wine, liquor) during the **last two weeks**? (Choose one)
    a) None: The typical student does not drink alcohol
    b) None: The typical student drinks alcohol but probably did not drink any in the last 14 days
    c) On 1 - 2 days
    d) On 3 - 5 days
    e) On 6 - 9 days
    f) On 10 - 13 days
    g) On all 14 days

In the following questions you will be asked about the number of alcoholic "drinks."

A standard drink is equal to 14.0 grams (0.6 ounces) of pure alcohol. This amount of pure alcohol is found in:

- *12-ounces of beer.*
- *8-ounces of malt liquor.*
- *5-ounces of wine.*
- *1.5-ounces or a "shot" of 80-proof distilled spirits or liquor (e.g., gin, rum, vodka, or whiskey).*

Both a Solo cup and a Pint glass hold 16 ounces of liquor. In other words…

- *1 Solo cup or Pint glass =* ***1⅓ drinks of beer***
- *1 Solo cup or Pint glass =* ***2 drinks of malt liquor***
- *1 Solo cup or Pint glass =* ***3 drinks of wine***
- *1 Solo cup or Pint glass =* ***10½ drinks of gin, rum, vodka, or whiskey***

3. **Think about the last time you "partied" or socialized. How many alcoholic DRINKS did you have?** (Note: use the "drinks" measures on the previous page when calculating your answer)
   a) 0 drinks (I did not drink)
   b) < 1 drink
   c) 1-2 drinks
   d) 3-4 drinks
   e) 5-6 drinks
   f) 7-8 drinks
   g) 9-10 drinks
   h) 11-12 drinks
   i) 13-14 drinks
   j) 15-16 drinks
   k) 17 or more drinks

4. **Think about the last time you "partied" or socialized. Over how many HOURS did you drink alcohol?**
   a) 0 hours (I did not drink)
   b) < 1 hour
   c) 1-2 hours
   d) 3-4 hours
   e) 5-6 hours
   f) 7-8 hours
   g) 9-10 hours
   h) 11-12 hours

5. **How many DRINKS of alcohol do you think the typical student had the last time he/she "partied" or socialized?** (Note: use the "drinks" measures on the previous page when calculating your answer)
   a) 0 drinks (the typical student did not drink alcohol the last time they partied)
   b) < 1 drink
   c) 1-2 drinks
   d) 3-4 drinks
   e) 5-6 drinks
   f) 7-8 drinks
   g) 9-10 drinks
   h) 11-12 drinks
   i) 13-14 drinks
   j) 15-16 drinks
   k) 17 or more drinks

If you are a non-drinker (abstainer) please skip to question #13.

6. **Over the last two weeks (14 days), how many TIMES have you had five or more drinks of alcohol at any one sitting?**
   a) 0 times: I did not drink during the last 14 days
   b) 0 times: I drank during the last 14 days but I never had 5 or more drinks at any one sitting
   c) 1 time
   d) 2 times
   e) 3 times
   f) 4 times
   g) 5 times
   h) 6 times
   i) 7 times
   j) 8 times
   k) 9 times
   l) 10 or more times

7. **Which of the following statements best describes you?**
   a) I have never drunk more alcohol than I intended to
   b) I very, very rarely drink more alcohol than I intend to
   c) I occasionally drink more alcohol than I intend to
   d) I frequently drink more alcohol than I intend to
   e) I almost always drink more alcohol than I intend to
   f) Other. Please specify: _____

8. **Which of the following statements best describes you?**
   a) I am in total control of my alcohol use
   b) I am in partial control of my alcohol use
   c) I am not in control of my alcohol use
   d) Other. Please specify: _____

9. **Which of the following statements best describes you?**
   a) I have tried to quit drinking at least once
   b) I have thought about quitting drinking but I have not yet tried to
   c) I have never thought about quitting drinking
   d) Other. Please specify: _____

10. **Which of the following statements best describes why you drink?**
    (Choose all that apply and put a star next to the one that is the MOST true)
    a) I drink to "fit in" with a group
    b) Alcohol helps me relax
    c) Alcohol helps me overcome my inhibitions
    d) Alcohol helps me escape unpleasantness
    e) Other. Please specify: _____

11. **Which of the following best describes how your use of alcohol has affected your attendance at work and/or classes?**
    a) It has never, even once, resulted in my missing or being late to work or classes
    b) It has resulted in my missing or being late to work or classes before, but not in the last **30 days (month)**
    c) I have missed or been late to work or class because of alcohol **1 or 2 times** in the last month
    d) I have missed or been late to work or class because of alcohol **2 -4 times** in the last month
    e) I have missed or been late to work or class because of alcohol **5 times or more** in the last month

12. **Within the last month (thirty days), which of these have you experienced when drinking alcohol? Place an "X" in one box on each row.**

	Yes	**No**
Did something you later regretted		
Forget where you were or what you did		
Got in trouble with the police		
Someone had sex with me without my consent		
Had sex with someone without their consent		
Had unprotected sex		
Physically injured yourself		
Physically injured another person		
Seriously considered suicide		
Drove a motor vehicle after drinking any alcohol at all		
Drove motor vehicle after having 5 or more drinks		

14. Please indicate your gender.

a) Female
b) Male
c) Transgender
d) Other

15. Please indicate your age.

a) 17 or under
b) 18-19
c) 20-21
d) 22-23
e) 24
f) 25 or over

16. Do you belong to a Greek organization (sorority / fraternity)?

a) Yes
b) No

17. What is your approximate cumulative GPA (grade point average)?

a) 4.0–3.5
b) 3.49–3.0
c) 2.99–2.5
d) 2.49–2.0
e) 1.99 or below

CODENAME:_____
COURSE:_____
DATE:_____

POST-SURVEY

This survey will take approximately 5-10 minutes to complete. **Do not put your name on this survey**. Instead, use the same codename you used earlier in the semester. Your answers will be completely anonymous as there is no way for the instructor or anyone else to link your answers to you.

Please place your completed survey in the envelope provided. Thank you!

1. On how many days did you have **one or more drinks of alcohol (beer, wine, liquor)** during the last two weeks **(14 days)**? (Choose one)
   a) None: I have never used alcohol
   b) None: I have used alcohol in the past, but not in last 14 days
   c) On 1 - 2 days
   d) On 3 - 5 days
   e) On 6 - 9 days
   f) On 10 - 13 days
   g) On all 14 days

2. On how many days do you think a **typical student** had one or more drinks of alcohol (beer, wine, liquor) during the last two weeks (14 days)? (Choose one)
   a) None: The typical student does not drink alcohol
   b) None: The typical student drinks alcohol but probably did not drink any in the last 14 days
   c) On 1 - 2 days
   d) On 3 - 5 days
   e) On 6 - 9 days
   f) On 10 - 13 days
   g) On all 14 days

In the following questions you will be asked about the number of alcoholic "drinks."

A standard drink is equal to 14.0 grams (0.6 ounces) of pure alcohol. This amount of pure alcohol is found in:

- *12-ounces of beer.*
- *8-ounces of malt liquor.*
- *5-ounces of wine.*
- *1.5-ounces or a "shot" of 80-proof distilled spirits or liquor (e.g., gin, rum, vodka, or whiskey).*

Both a Solo cup and a Pint glass hold 16 ounces of liquor. In other words…

- *1 Solo cup or Pint glass =* ***1⅓ drinks of beer***
- *1 Solo cup or Pint glass =* ***2 drinks of malt liquor***
- *1 Solo cup or Pint glass =* ***3 drinks of wine***
- *1 Solo cup or Pint glass =* ***10½ drinks of gin, rum, vodka, or whiskey***

3. **Think about the last time you "partied" or socialized. How many alcoholic DRINKS did you have?** (Note: use the "drinks" measures on the previous page when calculating your answer)
   a) 0 drinks (I did not drink)
   b) < 1 drink
   c) 1-2 drinks
   d) 3-4 drinks
   e) 5-6 drinks
   f) 7-8 drinks
   g) 9-10 drinks
   h) 11-12 drinks
   i) 13-14 drinks
   j) 15-16 drinks
   k) 17 or more drinks

4. **Think about the last time you "partied" or socialized. Over how many HOURS did you drink alcohol?**
   a) 0 hours (I did not drink)
   b) < 1 hour
   c) 1-2 hours
   d) 3-4 hours
   e) 5-6 hours
   f) 7-8 hours
   g) 9-10 hours
   h) 11-12 hours

5. **How many DRINKS of alcohol do you think the typical student had the last time he/she "partied" or socialized?** (Note: use the "drinks" measures on the previous page when calculating your answer)
   a) 0 drinks (the typical student did not drink alcohol the last time they partied)
   b) < 1 drink
   c) 1-2 drinks
   d) 3-4 drinks
   e) 5-6 drinks
   f) 7-8 drinks
   g) 9-10 drinks
   h) 11-12 drinks
   i) 13-14 drinks
   j) 15-16 drinks
   k) 17 or more drinks

If you are a non-drinker (abstainer) please skip to question #13.

6. **Over the last two weeks (14 days), how many <u>TIMES</u> have you had five or more drinks of alcohol at <u>any one sitting</u>?**
   a) 0 times: I did not drink during the last 14 days
   b) 0 times: I drank during the last 14 days but I never had 5 or more drinks at any one sitting
   c) 1 time
   d) 2 times
   e) 3 times
   f) 4 times
   g) 5 times
   h) 6 times
   i) 7 times
   j) 8 times
   k) 9 times
   l) 10 or more times

7. **Which of the following statements best describes you?**
   a) I have never drunk more alcohol than I intended to
   b) I very, very rarely drink more alcohol than I intend to
   c) I occasionally drink more alcohol than I intend to
   d) I frequently drink more alcohol than I intend to
   e) I almost always drink more alcohol than I intend to
   f) Other. Please specify: _____

8. **Which of the following statements best describes you?**
   a) I am in total control of my alcohol use
   b) I am in partial control of my alcohol use
   c) I am not in control of my alcohol use
   d) Other. Please specify: _____

9. **Which of the following statements best describes you?**
   a) I have tried to quit drinking at least once
   b) I have thought about quitting drinking but I have not yet tried to
   c) I have never thought about quitting drinking
   d) Other. Please specify: _____

10. **Which of the following statements best describes why you drink?**
    (Choose all that apply and put a star next to the one that is the MOST true)
    a) I drink to "fit in" with a group
    b) Alcohol helps me relax
    c) Alcohol helps me overcome my inhibitions
    d) Alcohol helps me escape unpleasantness
    e) Other. Please specify: _____

11. **Which of the following best describes how your use of alcohol has affected your attendance at work and/or classes?**
    a) It has never, even once, resulted in my missing or being late to work and/or classes
    b) It has resulted in my missing or being late to work or classes before, but not in the last **30 days (month)**
    c) I have missed or been late to work and/or class because of alcohol **1 or 2 times** in the last month
    d) I have missed or been late to work and/or class because of alcohol **2 -4 times** in the last month
    e) I have missed or been late to work and/or class because of alcohol **5 times or more** in the last month

12. **Within the last month (thirty days), which of these have you experienced when drinking alcohol? Place an "X" in one box on each row.**

	Yes	**No**
Did something you later regretted		
Forget where you were or what you did		
Got in trouble with the police		
Someone had sex with me without my consent		
Had sex with someone without their consent		
Had unprotected sex		
Physically injured yourself		
Physically injured another person		
Seriously considered suicide		
Drove a motor vehicle after drinking any alcohol at all		
Drove motor vehicle after having 5 or more drinks		

13. **Has the alcohol portion of this course caused you to become more aware of alcohol and related issues?**
    a) Yes
    b) No

14. **Which of the following best describes your use of alcohol during the past 30 days? (select all that apply)**
    a) N/A, I do not drink
    b) I drink, but I did not drink during the past 30 days

    c) I averaged **more** drinks during any one sitting than in the previous month
    d) I averaged **fewer** drinks during any one sitting than in the previous month

    e) I drank **more** times than in the previous month
    f) I drank **fewer** times than in the previous month

    g) I **gave thought** to quitting drinking
    h) I **did not give thought** to quitting drinking

15. **Please indicate your gender.**
    a) Female
    b) Male
    c) Transgender
    d) Other

16. **Please indicate your age.**
    a) 17 or under
    b) 18-19
    c) 20-21
    d) 22-23
    e) 24
    f) 25 or over

17. **Do you belong to a Greek organization (sorority / fraternity)?**
    a) Yes
    b) No

18. **What is your approximate cumulative GPA (grade point average)?**
    a) 4.0–3.5
    b) 3.49–3.0
    c) 2.99–2.5
    d) 2.49–2.0
    e) 1.99 or below

Appendix H: Theater Curriculum

THEATER: VOICE AND MOVEMENT

CURRICULUM INFUSION

SARAH KENNEY

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ABOUT US

As a Health Educator I am enthusiastic about prevention of alcohol abuse and promotion of healthy living, and I think that a curriculum like this can move us closer to achieving these goals.

INTRODUCTION

Curriculum Infusion (CI) is the process of purposively integrating topic content into existing classes, rather than teaching the content through a standalone course dedicated solely to that topic.

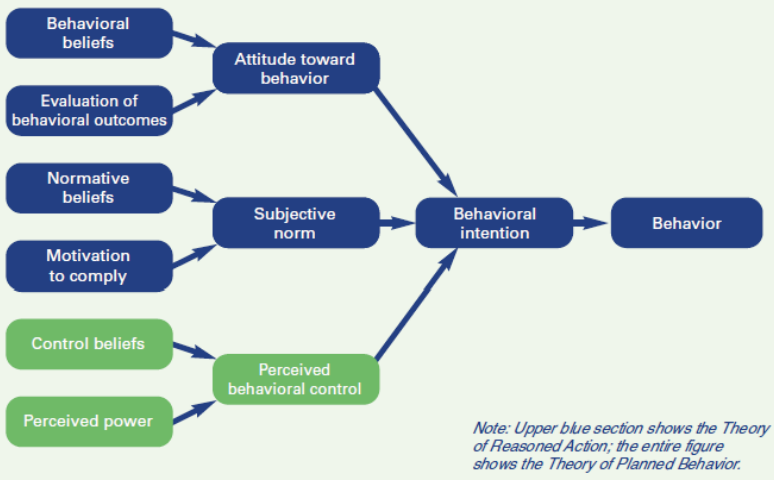
This curriculum has been designed for infusion in the Theater: Voice and Movement or a similar class that has the flexibility to incorporate this curriculum. It is guided by the Theory of Planned Behavior and the strategies of Curriculum Infusion and Social Norms.

The single overriding communication objective that this curriculum is designed to reinforce through infusion is: "Misperceived social norms can encourage alcohol abuse and alcohol abuse has negative consequences."

THEORY OF PLANNED BEHAVIOR

Effective interventions are designed with a theoretical base and use a social ecological approach to identify intervention points (Glanz & Bishop, 2010). The Theory of Planned Behavior is an individual-level theory that guides this curriculum design. The Theory of Planned Behavior examines the relationships between an individual's beliefs, attitudes, intentions, behavior, and perceived control over that behavior. As shown in the figure below, "*behavioral intention* determines *behavior*, and how *attitude toward behavior*, *subjective norm*, and *perceived behavioral control* influence *behavioral intention*" (Glanz & Rimer, 2005, p. 18).

Figure 3. Theory of Reasoned Action and Theory of Planned Behavior



(Glanz & Rimer, 2005)

4

The CI curriculum at hand focuses primarily on the attitudes toward behavior and subjective norms portions of the Theory of Planned Behavior.

- **Attitude towards behavior** stems from one's beliefs and evaluation of what is entailed and what outcomes may result from performing that behavior.
- **Subjective norms** include one's perception of the social pressure from valued others influencing oneself to engage (or not engage) in a behavior, which is influenced by normative beliefs about social standards and one's personal motivation to comply with those norms (Ajzen, 2011).

Two of the CI curriculum learning objectives are relevant to the Theory of Planned Behavior. The first learning objective, students will understand that alcohol abuse has negative consequences for themselves and others, will be accomplished by targeting the student's behavioral beliefs and their evaluations of behavioral outcomes. The second outcome, students will understand how misperceived social norms can affect behavior, will be achieved by targeting the students' normative beliefs and their motivation to comply. The achievement of latter objective, which is focused on social norms, will be further strengthened by the Social Norms Theory as described in the paragraph below.

SOCIAL NORMS

Social Norms Theory also provides a theoretical foundation for this CI project and curriculum. This theory is similar to the Theory of Planned Behavior and Reasoned Action described as it expands upon the idea of normative behavior by identifying how perceived descriptive and injunctive norms about peer behaviors affect an individual's behaviors. According to Collins and Carey (2007) the two types of norms in this context are *descriptive norms*, perceptions of how others drink, and *injunctive norms*, perceived peer approval of drinking (p. 499). Social Norms Theory posits that one can use normative statements in order to correct misperceptions of both descriptive and injunctive norms.

Perkins (2002) argued that "one can think of a group norm in this sense as the cause of much belief and action in addition to a descriptive characterization of the status quo, as a powerful independent variable accounting for or determining individual behavior" (p. 164). He also pointed out that students tend to think that their peers are more permissive in drinking attitudes and have more problem behaviors (consuming more frequently and more heavily) than is really the norm, which has been shown to promote and exacerbate problem drinking. Essentially students act according to their belief of how their peers are behaving, or *the norm*, including the quantity or frequency of alcohol consumption. **Correcting students' misperceived social norms can both constrain problem drinkers and empower responsible students.** Taking this argument into consideration, the **current CI curriculum aims to address misperceived norms with students, allowing them to critically examine their perceptions of how others drink and their perceived peer approval of drinking, in addition to the perception of the social pressure influencing one to engage in the behavior.**

CURRICULUM INFUSION

Curriculum Infusion has been used successfully to integrate alcohol abuse prevention content into courses regularly offered across disciplines, allowing the message to extend to traditionally hard-to-reach student populations. Research shows that CI **effectively reduces negative drinking consequences, increases knowledge about the dangers of alcohol abuse and social norms and, in many instances, also decreases alcohol consumption rates** (Perkins, 2002; Riley, Durbin, & D'Ariano, 2005; White, Park, & Cordero, 2010; Ziemelis, Buckman, & Elfessi, 2002).

Research has also demonstrated that CI effectiveness does not vary across course subject or student demographics, and provides prevention messaging to students who may not seek out this information on their own (White et al., 2010). The effectiveness of CI lies in the indirect nature of the message, and allows students to critically engage with the information in a safe environment free from social stigma (Riley et al., 2005; Tulin, 1997; Ziemelis et al., 2002). The Fund for Improvement of Post-Secondary Education (FIPSE) sponsored drug-prevention programs found that decreases in binge drinking rates were greatest on campuses where CI on alcohol abuse was emphasized as part of the university's model for binge drinking prevention (Ziemelis et al., 2002).

This strategy of CI allows faculty to design prevention content that target beliefs, attitudes, and behavior related to binge drinking; a strength of this approach is that **faculty have the flexibility to design content that is specific to their courses and teaching style**. A limitation of many previous CI efforts is that the teaching method employed was not clearly defined or illustrated by examples, thus it has been difficult to evaluate the process of implementation. **Use of this Curriculum will allow a Health Educator to further study the effectiveness of this approach**.

ASSESSMENT AND EVALUATION METHODS

The primary assessment tool for this curriculum is the interview that the Health Educator will conduct with the instructor. The Health Educator is interested in the instructor's perception of the curriculum design process, the user-friendliness of the curriculum and the ease of implementation.

A secondary assessment tool is the pre- and post-surveys that students will complete at the beginning and end of the curriculum, respectively. These assessments will ask questions targeting **attitudes, beliefs**, and **behaviors**, and will be based on the stated learning objectives of the lesson plans. The *pre- and post-surveys* can be found on pages 36 & 41. It is important to note, however, that the students' behavior cannot be adequately assessed from the pre- and post-survey unless conducted at various points during the semester.

FACTS ABOUT ALCOHOL ABUSE & HEALTH

IMPACT OF ALCOHOL ABUSE ON HEALTH

As noted in Healthy People 2020, "the effects of substance abuse are cumulative, significantly contributing to costly social, physical, mental, and public health problems" (U.S. Department of Health and Human Services Office of Disease Prevention and Health Promotion, 2012, para. 3). Heavy drinking in particular is associated with many adverse health behaviors:

- smoking
- decreased physical activity
- increased physical health problems (hepatitis, hypertension, gastrointestinal problems)
- mental health difficulties (Paul, Grubaugh, Frueh, Ellis, & Egede, 2011).

In 2005 alone there were over **1.6 million hospitalizations and 4 million emergency department visits for alcohol-related issues** (Center for Disease Control and Prevention, 2010).

Excessive alcohol use is the **third leading lifestyle-related cause of death in the United States**, and **alcohol-related factors are the leading influence in the top three causes of death (automobile crashes, suicide and homicide) among youth 15-24 years old** (U.S. Department of Health and Human Services, 2007).

The Center for Disease Control and Prevention (CDC) estimates that there are approximately **79,000 deaths attributable to excessive alcohol use each year** in the United States (Center for Disease Control and Prevention, 2010). This translates to **2.3 million years of potential life lost or 30 years of potential life lost for each death**.

Excessive drinking also has **severe economic consequences**. The costs of excessive drinking in the U.S. in 2006 was approximately $223.5 billion (72.2% from lost productivity, **11.0% from healthcare costs**, 9.4% from criminal justice costs, and 7.5% from other effects), or $746 per person (Bouchery, Harwood, Sacks, Simon, & Brewer, 2011). Binge drinking represented 76.4% of this total cost, or $170.7 billion.

ALCOHOL ABUSE AMONG COLLEGE STUDENTS

Alcohol abuse **among college students is on the rise** (Hingson, 2010).

Furthermore, **college students appear to be at higher risk than their non-college peers**, probably as a result of the college environment (Dawson, Grant, Stinson, & Chou, 2004).

At-risk groups more likely to drink heavily: men are more likely than women, and **fraternity members** and **athletes** more likely than other groups on campus to drink heavily and suffer negative consequences (Huchting, Lac, Hummer, & LaBrie, 2011; Johnston, O'Malley, Bachman, & Schulenberg, 2007).

Negative consequences of binge drinking include:

- memory loss
- alcohol-related driving injuries and fatalities
- sexual and physical assaults
- risky sexual behavior
- poor academic performance
- acute illnesses
- alcohol-poisoning
- and death (R. Hingson, Zha, & Weitzman, 2009; National Institute on Alcohol Abuse and Alcoholism, 2007; Weitzman, Nelson, & Wechsler, 2003).

Individuals who binge-drink are also at **higher risk of using cigarettes, marijuana, cocaine, and other illegal drugs** (Jones, Oeltmann, Wilson, Brener, & Hill, 2001).

The American College Health Association asked university students about the following negative consequences on the National College Health Assessment in 2012 (American College Health Association, 2012):

> *College students who drank alcohol reported experiencing the following in the last 12 months when drinking alcohol:*
>
> - Did something they later regretted
> - Forgot where they were or what they did
> - Got in trouble with the police
> - Had sex without giving/receiving consent
> - Were physically injured
> - Physically injured another person
> - Seriously considered suicide

COMMUNITY IMPACT

Students who binge drink jeopardize the well-being of others, namely in terms of **drunk driving and physical and sexual assault** (Wechsler, Moeykens, Davenport, & Castillo, 1995).

From a NIAAA survey in 2005, at least 46% of the 4,553 people killed that year in alcohol-related crashes with college age drinking drivers were people other than the drinking driver (Hingson & Weitzman, 2009).

Each year more than 690,000 students are assaulted or hit by another student who had been drinking and more than 97,000 students experienced a sexual assault or date rape perpetrated by a drinking college student (Hingson & Weitzman, 2009).

Binge drinking among college students is harmful both to the individual and society, yet is a preventable cause of morbidity and mortality. Evidence-based strategies should be widely implemented in order to address this serious public health issue. Interventions must be implemented to enhance the protective factors that reduce initiation of binge drinking as well as decrease risk factors that encourage one to drink to excess.

HOW TO USE THE CURRICULUM

It is recommended that you read the curriculum in its entirety before facilitating, and then re-read the particular lesson that you will be teaching prior to delivering it.

PREREQUISITES

Prerequisites are not listed within each lesson, as those listed in this section are applicable to the entire curriculum.

FOR THE HEALTH EDUCATOR

The pre- and post-surveys are intended for the instructors' use only.

When this curriculum is being used for the purposes of research the pre- and post-surveys used as a part of the curriculum must be approved by an institution's IRB prior to dissemination. This will be the responsibility of the Health Educator.

FOR INSTRUCTORS

Prior to using this curriculum, instructors should:

- Be an instructor of Theater: Voice and Movement
- Be capable of facilitating a group discussion on the problems of substance abuse (Resource: *Facts about Alcohol & Health*, page 7). If there is an instance in which a student asks a question that the instructor is unable or uncomfortable answering, please refer the student to the *Local Resources* on page 13.
- Be familiar with the definitions of terms used in this curriculum (Resource: *Glossary*, page 18)
- Understand the basics behind the strategy of Curriculum Infusion and social norms

FOR PARTICIPANTS

- Be a student in Theater: Voice and Movement
- Have basic vocabulary about substance abuse; this will be covered in preparation for Lesson One – Alcohol and Voice, Activity #1

GETTING STARTED

Each lesson plan identifies learning objectives, time and preparation needed to conduct the infused elements and activities, and referral to resources as needed. Specific materials are noted in the lesson plan, as there are no general materials needed for all lessons. Lesson elements that are specifically related to the Curriculum Infusion project are highlighted in bold font.

SYMBOL KEY

*These symbols are adapted from Heather Zesiger's *Judaism and Sexuality* curriculum

The following symbols will be used in the Lesson Plans to designate parts:

- – "Say This:" Talking balloons indicate text that the instructor should read aloud to the participants. This text can be paraphrased given that the intent remains the same.
- – "Pay Attention to This:" Starred text is intended to be read silently by the instructor.
- – "Do This:" Movie clapboards indicate actions that the instructor should take in implementing the Lesson.
- – "Ask This:" Arrows indicate questions that should be posed directly to students.
- [ ] – "Listen for This:" Brackets highlight possible answers to discussion questions. These can be used as prompts to encourage students to come up with their own answers, or as a guide for whether a question has been addressed comprehensively or if you need to allow more time for discussion. But, as in all good teaching, don't be afraid to let a few moments of silence pass before you say anything or provide hints, students will remember best what they were permitted to learn for themselves.
- "Discuss This:" Multiple balloons indicate discussion.

IMPORTANT NOTE

The activities included here and their length may be modified as needed, as long as the material is covered successfully and learning objectives are met. The strength of the Curriculum Infusion approach is that it is flexible and can be altered depending on the personality and teaching style of the faculty. All materials are intended to fit seamlessly into existing course content.

RESOURCES FOR FURTHER STUDY

Network for the Dissemination of Curriculum Infusion

http://www.neiu.edu/~cinfusi/

This website is a helpful resource to learn more about Curriculum Infusion and see sample curriculums as well as sample characteristics of a successful program.

National Social Norms Institute

http://www.socialnorms.org/

This is a great resource to obtain detailed descriptions of a select number of alcohol-focused social norms projects in both universities and high schools, and published research implementing this approach.

The Gordie Center

http://www.virginia.edu/case/education/prevention-plan.html

The Gordie Center provides helpful resources on drug and alcohol related issues. Learn about Gordie's story and how prevent alcohol poisoning.

College Drinking- Changing the Culture

http://www.collegedrinkingprevention.gov/

National Institute on Alcohol Abuse and Alcoholism's website specific to college drinking.

Center for Disease Control – Binge Drinking

http://www.cdc.gov/alcohol/fact-sheets/binge-drinking.htm

This Fact Sheet has statistics and information specific to the harms of binge drinking.

LOCAL RESOURCES

*Tailored to a school's on-campus and community resources.

RECOMMENDED READING - VOICE

Brodnitz, Friedrich S., M. D. Keep Your Voice Healthy. 2nd ed. Boston: College Hill Press, 1988.

Cazden, Joanna. Everyday Voice Care: The Lifestyle Guide for Singers and Talkers. Hal Leonard Books, 2012.

Devore, Kate Devore. The Voice Book: Caring For, Protecting, and Improving Your Voice. Chicago: Chicago Review Press, 2009.

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Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2007). Monitoring the Future National Survey Results on Drug Use, 1975–2006. Volume II: College Students and Adults ages 19–45. Bethesda, MD: National Institute on Drug Abuse.

Jones, S. E., Oeltmann, J., Wilson, T. W., Brener, N. D., & Hill, C. V. (2001). Binge drinking among undergraduate college students in the United States: Implications for other substance use. *Journal of American College Health, 50*(1), 33-38. doi: 10.1080/07448480109595709

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GLOSSARY

The definitions are adapted from CDC's webpage on Alcohol and Public Health.

Alcohol: Ethyl alcohol, or ethanol, is an intoxicating ingredient found in beer, wine, and liquor. Alcohol is produced by the fermentation of yeast, sugars, and starches.

Alcoholism: A chronic disease, also known as dependency on alcohol or alcohol addiction. The signs and symptoms of alcohol dependence include:

- strong craving for alcohol
- continued use despite repeated physical, psychological, or interpersonal problems
- the inability to limit drinking

Alcohol Abuse: A pattern of drinking that results in harm to one's health, interpersonal relationships, or ability to work.

Binge Drinking: Consuming 5 or more alcoholic drinks for men, and 4 or more drinks for women, on a single occasion.

Curriculum Infusion: the process of purposively integrating topic content (on alcohol abuse prevention, in this case) into existing classes, rather than teaching that content through a standalone course dedicated solely to that topic.

Standard Drink: A standard drink is equal to 14.0 grams (0.6 ounces) of pure alcohol. This amount of pure alcohol is found in:

- 12-ounces of beer.
- 8-ounces of malt liquor.
- 5-ounces of wine.
- 1.5-ounces or a "shot" of 80-proof distilled spirits or liquor (e.g., gin, rum, vodka, or whiskey).

Both a Solo cup and a Pint glass hold 16 ounces of liquor. In other words…

- 1 Solo cup or Pint glass = 1⅓ drinks of beer
- 1 Solo cup or Pint glass = 2 drinks of malt liquor
- 1 Solo cup or Pint glass = 3 drinks of wine
- 1 Solo cup or Pint glass = 10½ drinks of gin, rum, vodka, or whiskey

OUTLINE OF LESSONS

PRE-SURVEY

PURPOSE

Evaluate the students' attitudes, behaviors, and beliefs about alcohol prior to engaging with this curriculum.

Method	*Time*
Written Pre-survey	15 minutes
	Total = 15 minutes

LESSON ONE – ALCOHOL AND VOICE

PURPOSE

Inspire critical thinking about negative consequences related to alcohol.

LEARNING OBJECTIVES

At the end of class students will be able to:

- Accurately define the following five terms: alcohol, alcoholism, alcohol abuse, binge drinking and standard drink
- Identify negative consequences related to alcohol abuse
- Explain the difference between a "misperceived social norm" and an "accurate norm," and how it alters people's behavior specific to drinking
- Describe the reflection paper assignment

Method	*Time*
Activity #1 - Lecture	30 minutes
Discussion # 1 – Alcohol & Voice	15 minutes
Discussion # 2 – Introducing the Assignment	5 minutes
	Total = 50 minutes

POST-SURVEY

PURPOSE

Evaluate the students' attitudes, behaviors, and beliefs about alcohol after engaging with this curriculum.

Method	*Time*
Written Post-survey	15 minutes
	Total = 15 minutes

PRE-SURVEY

Giving a pre-survey will allow the instructor to evaluate the students' attitudes, behaviors, and beliefs about alcohol prior to infusing this Curriculum.

The pre-survey should be completed at the beginning of the first class of the semester (or before the first lesson).

MATERIAL LIST

- Pre-surveys (page 34)
- Extra pencils/pens (in case not all students have one)

STEPS

1. Do welcome and introductions as standard for this course.
2. Distribute pre-surveys, one to each student.
3. Ask students to carefully read the instructions on the top of the page.
4. Emphasize that the survey is anonymous; the answers cannot be linked to a particular student and will therefore not affect anyone's grade. **Do not explain to students that this is part of the Curriculum Infusion strategy**.
5. Allow students 10-15 minutes to complete the pre-surveys.
6. Collect the pre-surveys and put them in a secure place.

HOMEWORK FOR INSTRUCTOR

- Keep the surveys in order to compare them to the post-surveys. Note: The change, if any, in answers between the pre- and post- surveys for any single student are for your use only. The Health Educator is interested in how many (percentage and number) of students showed a positive change in their post-survey responses but not in the results provided by individual students.

LESSON ONE – ALCOHOL AND VOICE

In this lesson the instructor will conduct a lecture on the impacts of alcohol and smoking on the voice.

LEARNING OBJECTIVES

At the end of class students will be able to:

- Accurately define the following five terms: alcohol, alcoholism, alcohol abuse, binge drinking and standard drink
- Identify negative consequences related to alcohol abuse
- Explain the difference between a "misperceived social norm" and an "accurate norm," and how it alters people's behavior specific to drinking
- Describe the reflection paper assignment

MATERIAL LIST

- Alcohol Terms Handout (page 33)
- Glossary to refer to definitions if necessary (page 18)
- Visuals of how alcohol affects the body (page 30)
- Reflection Assignment Handout (page 29)

LESSON OVERVIEW

Method	*Time*
Activity #1 - Lecture	30 minutes
Discussion # 1 – Alcohol & Voice	15 minutes
Discussion # 2 – Introducing the Assignment	5 minutes
	Total = 50 minutes

PREPARATION

1. Read Lesson Plan.
2. Familiarize yourself with Glossary terms (page 18).
3. Print Reflection Assignment Handout (page 29).
4. Post or email the Alcohol Terms Handout to students (page 33). Ask students to review the handout prior to class. Emphasize that these definitions will be important for the lecture, discussion, and reflection assignment.

ACTIVITY #1 – LECTURE (30 MINUTES)

OBJECTIVE

After the discussion students will be able to identify negative consequences related to alcohol abuse.

MATERIALS

- Visuals (page 30)

STEPS

Lecture on the following information. The bolded words are essential.

SMOKING AND YOUR VOICE

Smoking is detrimental to vocal fold tissues. It also limits a person's ability to breathe deeply to provide good support for speaking. Worse yet, smoking is the leading cause of laryngeal cancer. Smoking marijuana may be even more devastating to the voice — as much as 20 times worse than cigarettes.

ALCOHOL AND VOCAL PROBLEMS

Too much alcohol can have specific consequences for your speaking and singing voice, as follows:

- Alcohol irritates laryngeal epithelium and mucosa, and has been linked to laryngeal cancer risk.

- The anesthetic effect of Alcohol masks any signs of vocal injury, therefore encouraging further abuse of the vocal folds.
- You'll also be less aware of vocally abusive behaviors, like consistently talking louder than you need to.
- Alcohol is a known diuretic and will dry out the chords. If you choose to use alcohol, replenish your body's hydration level by drinking extra water.
- Most mouthwashes have a high alcohol content, which can be irritating to the larynx. If you wish, use mouthwash to rinse your mouth only… if you must gargle, switch to a mouthwash without alcohol or use warm salt water.

ALCOHOL AND THE BODY

💬 **Whatever the body feels, will also be felt in the voice and in the emotions.**

✪ Project two visuals, both named "How Alcohol Affects Your Body" (pages 30 and 31), as you explain the following bullet points:

- Alcoholic drinks also dehydrate the body, just as they dry the voice.
- More than one or two drinks a week may promote aging. When you abuse alcohol, you tend to be undernourished, making your hair dry and giving you cracked lips.
- Alcohol can cause weight gain.
- Traveling to other parts of the body: Once alcohol is in your blood, it is carried to all the organs of your body. In most healthy individuals, blood circulates through the body in only 90 seconds! Thus alcohol is able to travel to all organs in 90 seconds.
- Alcohol slows brain activity. Alcohol initially induces individuals to feel physically and emotionally relaxed – however additional drinks may cause feelings of anxiety, depression, or aggression. According to a Boston University medical study, the male brain takes longer to recover from alcoholism than the female brain.
- Alcohol aggravates acne and makes your skin puffy.
- Alcohol may irritate your gastrointestinal tract, causing increased stomach acid production, heartburn and eventually ulcers. Alcohol use leads to destruction of liver cells, fat accumulation around the liver, and cirrhosis which is a fatal condition.
- Alcohol decreases the male hormone testosterone. The use of alcohol in men and women causes increased sexual desire, but decreased performance. The charts below also describe other effects on the reproductive system, including on a woman's menstrual cycle.

- People who come to college with previously existing medical conditions (i.e., heart conditions, mental illness, asthma) can find that those conditions worsen due to an increase in alcohol intake.
- **Alcohol depresses the body's immune system making you vulnerable to illness from viruses and bacteria, including bacterial pneumonia.**
  - ➔ **Do you ever wonder why so many people get sick during the semester, and take so long to recover?**
- The average liver detoxifies, or breaks down, alcohol at a rate of one half an ounce per hour. However, some people cannot detoxify that much alcohol in an hour – it depends on individual factors. Nothing will speed this rate.
- The presence of food in the stomach decreases the rate of alcohol absorption. Fasting increases the rate of absorption. It is important to eat a healthy meal before consuming any alcohol. Water also decreases the rate of absorption; however carbonated beverages increase the rate of absorption.
- Body weight and composition are two other factors that affect alcohol metabolism. These two factors explain why men generally metabolize alcohol faster than women. Men are larger and less body fat. Body fat contains little water and thus women have a lower concentration of water in their bodies than men.
- Alcohol dehydrogenase: men have more of this alcohol metabolizing enzyme than women – thus they can metabolize alcohol more rapidly.

💬 Alcohol also disrupts sleep patterns.

✪ Project the visual "Effects of Sleep Deprivation" (page 32) and highlight a few of the effects.

COLLABORATION

💬 **It is important to not only understand the effects of alcohol on the individual, but also how to deal with someone who has consumed too much alcohol. Clearly rehearsing or performing under the influence places everyone involved with a production in jeopardy. However, rehearsing the day after consuming too much alcohol can also affect your ability to collaborate and communicate effectively with others.**

- Psychological factors: The situation, your mood, and why you have chosen to drink on a particular occasion effect how alcohol affects you. There are studies that show even "alcohol placebos" can create a feeling of alcohol intoxication in individuals.

- Studies have shown that alcohol might affect men and women differently, resulting in increased aggression in men and increased compliance in women. Although these are gender-based generalizations, they do illustrate how the collaboration between performance partners can be affected.
  - ✪ Project visual "Extreme Aggression" (page 32) and highlight that there is a positive correlation between men's alcohol consumption and irritability, leading to extreme aggression.
- Tolerance: The body develops physical and psychological tolerance/dependence to alcohol over time. Increased alcohol consumption increases individual tolerance – requiring more alcohol to cause the same affect.

DISCUSSION # 1 – ALCOHOL & VOICE (15 MINUTES)

OBJECTIVE

After the discussion students will be able to identify negative consequences related to alcohol abuse.

MATERIALS

- None

STEPS

✪ Ask the following questions:

➔ What material in this presentation were you familiar with?

- How did you previously learn about this?

➔ What material in this presentation was new to you?

➔ What piece of information made the biggest impact on you?

➔ What changes in your behavior can you make to maximize your voice and body potential?

➔ How you think that your perception of how much or often your friends drink may impact your own behavior?

[ ] It is human nature to behave according to what you believe to be the norm. If you think that everyone is drinking heavily (and more heavily than you) you are be more likely drink more heavily to fit in with others and match your perceived norm.

- This can go both ways – if you are drinking less than your perceived norm, you will likely start drinking *more heavily* to match others. But if you drink more than your perceived norm, you are more likely to *decrease* your consumption to match others.

[ ] On the whole, people tend to think that their peers are more permissive in drinking attitudes and have more problem behaviors (consuming more frequently and more heavily) than is really the norm, *which has been shown to promote and exacerbate problem drinking* (Perkins, 2002).

✪ **If not answered in the previous question, be sure to note that the two types of norms are "descriptive norms" (for example, perceptions of how others drink) and "injunctive norms" (for example, perceived peer approval of drinking), and that correcting a person's misperceived social norms can both *constrain problem drinkers and empower responsible individuals.***

DISCUSSION # 2 – INTRODUCING THE ASSIGNMENT (5 MINUTES)

TEACHING OBJECTIVE

Clarify that students must write a reflection about the Lesson One lecture.

MATERIALS

- Reflection Assignment Handout (page 29)

STEPS

Distribute handouts and reflection assignment information per usual routine. Briefly review the questions to be answered in the reflection.

- What vocal patterns or habits do you find yourself engaging in when you have a drink or two?
- What about physical ones?
- How much water have you been drinking after consuming alcohol?
- How much do your sleep patterns change when you are around alcohol?
- How does your social life impact your collaborations with other performers, when alcohol is involved?

HOMEWORK FOR INSTRUCTOR

- None

REFLECTION ASSIGNMENT HANDOUT

Write a reflection that answers the following questions:

- What vocal patterns or habits do you find yourself engaging in when you have a drink or two?
- What about physical ones?
- How much water have you been drinking after consuming alcohol?
- How much do your sleep patterns change when you are around alcohol?
- How does your social life impact your collaborations with other performers, when alcohol is involved?

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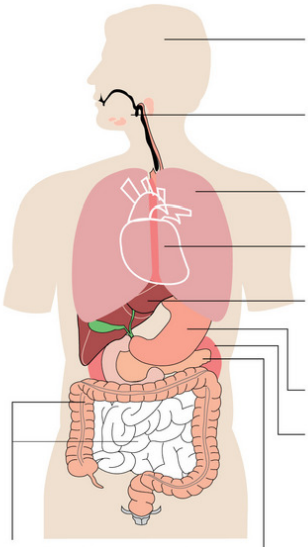
VISUALS FOR LECTURE

How alcohol affects your body

Most New Year's resolutions involve health improvements, whether increasing exercise, losing weight or quitting smoking. If yours involves drinking less alcohol, perhaps this information will help firm your resolve.

A new study by researchers with Kaiser Permanente found that drinking more than three alcoholic drinks per week raised the risk of breast cancer recurrence by 34 percent in a group of almost 1,900 women. About 90 percent of the women in the study drank wine, and women who imbibed two or more glasses a day were most likely to suffer a recurrence.

Excessive alcohol intake over a long period of time has adverse effects on just about every organ and body system.



Brain: Contracts brain tissue, kills cells.

Mouth, throat, larynx: 50 percent of cancers here are alcohol-related.

Lungs: Disrupts proteins that keep fluids out.

Heart: Increases heart rate, blood pressure.

Liver: Main organ involved in breaking down alcohol; can be scarred by excessive consumption.

Stomach: Causes excess excretion of acids.

Kidneys: Interferes with their ability to regulate the body's water, acid/base balance, certain hormones and minerals.

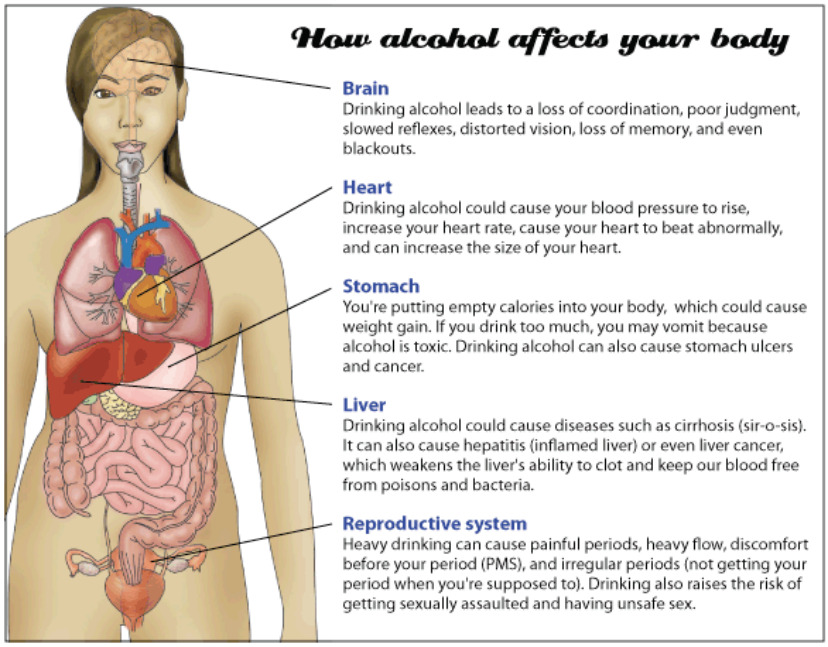
Small and large intestines: Damages cells lining the intestines; blocks absorption and breakdown of body's nutrients.

Pancreas: Reduces amount of digestive enzymes.

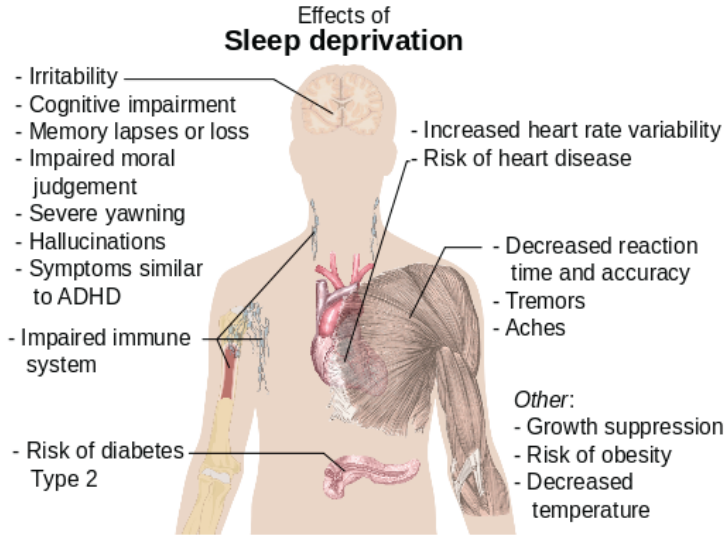
SOURCES: Johns Hopkins University; bloodalcohol.info; alcohol.org; McClatchy-Tribune

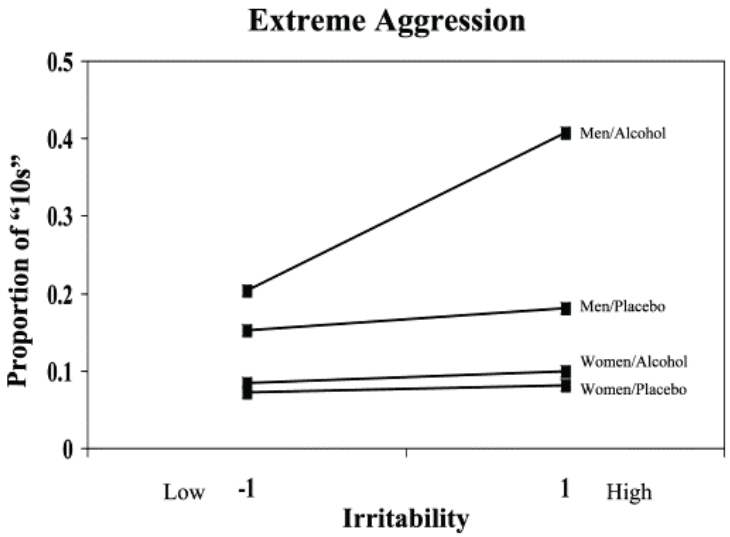
THE PLAIN DEALER

30


How alcohol affects your body
Brain
Drinking alcohol leads to a loss of coordination, poor judgment, slowed reflexes, distorted vision, loss of memory, and even blackouts.
Heart
Drinking alcohol could cause your blood pressure to rise, increase your heart rate, cause your heart to beat abnormally, and can increase the size of your heart.
Stomach
You're putting empty calories into your body, which could cause weight gain. If you drink too much, you may vomit because alcohol is toxic. Drinking alcohol can also cause stomach ulcers and cancer.
Liver
Drinking alcohol could cause diseases such as cirrhosis (sir-o-sis). It can also cause hepatitis (inflamed liver) or even liver cancer, which weakens the liver's ability to clot and keep our blood free from poisons and bacteria.
Reproductive system
Heavy drinking can cause painful periods, heavy flow, discomfort before your period (PMS), and irregular periods (not getting your period when you're supposed to). Drinking also raises the risk of getting sexually assaulted and having unsafe sex.

31


Effects of
Sleep deprivation
- Irritability
- Cognitive impairment
- Memory lapses or loss
- Impaired moral judgement
- Severe yawning
- Hallucinations
- Symptoms similar to ADHD
- Impaired immune system
- Risk of diabetes Type 2
- Increased heart rate variability
- Risk of heart disease
- Decreased reaction time and accuracy
- Tremors
- Aches
Other:
- Growth suppression
- Risk of obesity
- Decreased temperature


Extreme Aggression
Proportion of "10s"
0.5
0.4
0.3
0.2
0.1
0
Men/Alcohol
Men/Placebo
Women/Alcohol
Women/Placebo
Low
-1
1
High
Irritability

32

ALCOHOL TERMS HANDOUT

Standard definitions surrounding alcohol are not always used in the same way by everyone, which is why it is important to understand the correct definitions for these terms.

Alcohol: Ethyl alcohol, or ethanol, is an intoxicating ingredient found in beer, wine, and liquor. Alcohol is produced by the fermentation of yeast, sugars, and starches.

Alcoholism: A chronic disease, also known as dependency on alcohol or alcohol addiction. The signs and symptoms of alcohol dependence include:

- strong craving for alcohol
- continued use despite repeated physical, psychological, or interpersonal problems
- the inability to limit drinking

Alcohol Abuse: A pattern of drinking that results in harm to one's health, interpersonal relationships, or ability to work.

Binge Drinking: Consuming 5 or more alcoholic drinks for men, and 4 or more drinks for women, on a single occasion.

Standard Drink: A standard drink is equal to 14.0 grams (0.6 ounces) of pure alcohol. This amount of pure alcohol is found in:

- 12-ounces of beer.
- 8-ounces of malt liquor.
- 5-ounces of wine.
- 1.5-ounces or a "shot" of 80-proof distilled spirits or liquor (e.g., gin, rum, vodka, or whiskey).

Both a Solo cup and a Pint glass hold 16 ounces of liquor. In other words…

- 1 Solo cup or Pint glass = 1⅓ drinks of beer
- 1 Solo cup or Pint glass = 2 drinks of malt liquor
- 1 Solo cup or Pint glass = 3 drinks of wine
- 1 Solo cup or Pint glass = 10½ drinks of gin, rum, vodka, or whiskey

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POST-SURVEY

Giving a post-survey will allow the instructor to evaluate the students' attitudes, behaviors, and beliefs about alcohol after engaging with this curriculum.

The post-survey should be completed on the last day of use of this curriculum.

MATERIAL LIST

- Post-surveys (page 41)
- Extra pencils/pens (in case extra not all students have one)

STEPS

1. Do welcome and introductions as standard for this course.
2. Distribute post-surveys, one to each student.
3. Ask students to carefully read the instructions on the top of the page.
4. Emphasize that the survey is anonymous; the answers cannot be linked to a particular student and will therefore not affect anyone's grade. Remind students to use the same code they used for the pre-survey. **Do not explain to students that this is part of the Curriculum Infusion strategy.**
5. Allow students 10-15 minutes to complete the post-survey.
6. Collect the post-surveys and put them in a secure place.
7. Read the following debriefing statement to students:

   "This course was used as part of a study that examined how the process of implementing Curriculum Infusion for alcohol abuse education can be improved for effectiveness and ease of use by college teachers. Some of the alcohol-related content used in this course was part of the study. However, students were not part of the target population for the study and your individual pre/post-survey information will not be used for research. If you have any questions about this study please let me know, and I can put you in touch with the study's Principal Investigator."

HOMEWORK FOR INSTRUCTOR

- Compare answers on the pre- and post-surveys

CODENAME:_____
COURSE:_____
DATE:_____

PRE-SURVEY

This survey will take approximately 5-10 minutes to complete. **Do not put your name on this survey**. Instead, create a codename. Write it down somewhere or remember it as you will use the same codename later on in the semester. Your answers will be completely anonymous as there is no way for the instructor or anyone else to link your answers to you.

Please place your completed survey in the envelope provided. Thank you!

1. On how many days did you have **one or more drinks of alcohol (beer, wine, liquor)** during the last 14 days (**two weeks**)? (Choose one)
    a) None: I have never used alcohol
    b) None: I have used alcohol in the past, but not in last 14 days
    c) On 1 - 2 days
    d) On 3 - 5 days
    e) On 6 - 9 days
    f) On 10 - 13 days
    g) On all 14 days

2. On how many days do you think a **typical student** had one or more drinks of alcohol (beer, wine, liquor) during the **last two weeks**? (Choose one)
    a) None: The typical student does not drink alcohol
    b) None: The typical student drinks alcohol but probably did not drink any in the last 14 days
    c) On 1 - 2 days
    d) On 3 - 5 days
    e) On 6 - 9 days
    f) On 10 - 13 days
    g) On all 14 days

In the following questions you will be asked about the number of alcoholic "drinks."

A standard drink is equal to 14.0 grams (0.6 ounces) of pure alcohol. This amount of pure alcohol is found in:

- *12-ounces of beer.*
- *8-ounces of malt liquor.*
- *5-ounces of wine.*
- *1.5-ounces or a "shot" of 80-proof distilled spirits or liquor (e.g., gin, rum, vodka, or whiskey).*

Both a Solo cup and a Pint glass hold 16 ounces of liquor. In other words…

- *1 Solo cup or Pint glass =* ***1⅓ drinks of beer***
- *1 Solo cup or Pint glass =* ***2 drinks of malt liquor***
- *1 Solo cup or Pint glass =* ***3 drinks of wine***
- *1 Solo cup or Pint glass =* ***10½ drinks of gin, rum, vodka, or whiskey***

3. **Think about the last time you "partied" or socialized. How many alcoholic DRINKS did you have?** (Note: use the "drinks" measures on the previous page when calculating your answer)

   a) 0 drinks (I did not drink)
   b) < 1 drink
   c) 1-2 drinks
   d) 3-4 drinks
   e) 5-6 drinks
   f) 7-8 drinks
   g) 9-10 drinks
   h) 11-12 drinks
   i) 13-14 drinks
   j) 15-16 drinks
   k) 17 or more drinks

4. **Think about the last time you "partied" or socialized. Over how many HOURS did you drink alcohol?**

   a) 0 hours (I did not drink)
   b) < 1 hour
   c) 1-2 hours
   d) 3-4 hours
   e) 5-6 hours
   f) 7-8 hours
   g) 9-10 hours
   h) 11-12 hours

5. **How many DRINKS of alcohol do you think the typical student had the last time he/she "partied" or socialized?** (Note: use the "drinks" measures on the previous page when calculating your answer)

   a) 0 drinks (the typical student did not drink alcohol the last time they partied)
   b) < 1 drink
   c) 1-2 drinks
   d) 3-4 drinks
   e) 5-6 drinks
   f) 7-8 drinks
   g) 9-10 drinks
   h) 11-12 drinks
   i) 13-14 drinks
   j) 15-16 drinks
   k) 17 or more drinks

If you are a non-drinker (abstainer) please skip to question #14.

6. **Over the last two weeks (14 days), how many TIMES have you had five or more drinks of alcohol at any one sitting?**
   a) 0 times: I did not drink during the last 14 days
   b) 0 times: I drank during the last 14 days but I never had 5 or more drinks at any one sitting
   c) 1 time
   d) 2 times
   e) 3 times
   f) 4 times
   g) 5 times
   h) 6 times
   i) 7 times
   j) 8 times
   k) 9 times
   l) 10 or more times

7. **Which of the following statements best describes you?**
   a) I have never drunk more alcohol than I intended to
   b) I very, very rarely drink more alcohol than I intend to
   c) I occasionally drink more alcohol than I intend to
   d) I frequently drink more alcohol than I intend to
   e) I almost always drink more alcohol than I intend to
   f) Other. Please specify: _____

8. **Which of the following statements best describes you?**
   a) I am in total control of my alcohol use
   b) I am in partial control of my alcohol use
   c) I am not in control of my alcohol use
   d) Other. Please specify: _____

9. **Which of the following statements best describes you?**
   a) I have tried to quit drinking at least once
   b) I have thought about quitting drinking but I have not yet tried to
   c) I have never thought about quitting drinking
   d) Other. Please specify: _____

10. **Which of the following statements best describes why you drink?**
    (Choose all that apply and put a star next to the one that is the MOST true)
    a) I drink to "fit in" with a group
    b) Alcohol helps me relax
    c) Alcohol helps me overcome my inhibitions
    d) Alcohol helps me escape unpleasantness
    e) Other. Please specify: _____

11. **Which of the following best describes how your use of alcohol has affected your attendance at work and/or classes?**
    a) It has never, even once, resulted in my missing or being late to work or classes
    b) It has resulted in my missing or being late to work or classes before, but not in the last **30 days (month)**
    c) I have missed or been late to work or class because of alcohol **1 or 2 times** in the last month
    d) I have missed or been late to work or class because of alcohol **2 -4 times** in the last month
    e) I have missed or been late to work or class because of alcohol **5 times or more** in the last month

12. **Within recent memory, which of these have you experienced when drinking alcohol? Place an "X" in one box on each row.**

	Yes	**No**
Did something you later regretted		
Forget where you were or what you did		
Got in trouble with the police		
Someone had sex with me without my consent		
Had sex with someone without their consent		
Had unprotected sex		
Physically injured yourself		
Physically injured another person		
Seriously considered suicide		
Drove a motor vehicle after drinking any alcohol at all		
Drove motor vehicle after having 5 or more drinks		

13. Please indicate your gender.

a) Female
b) Male
c) Transgender
d) Other

14. Please indicate your age.

a) 17 or under
b) 18-19
c) 20-21
d) 22-23
e) 24
f) 25 or over

15. Do you belong to a Greek organization (sorority / fraternity)?

a) Yes
b) No

16. What is your approximate cumulative GPA (grade point average)?

a) 4.0–3.5
b) 3.49–3.0
c) 2.99–2.5
d) 2.49–2.0
e) 1.99 or below

CODENAME:_____
COURSE:_____
DATE:_____

POST-SURVEY

This survey will take approximately 5-10 minutes to complete. **Do not put your name on this survey**. Instead, use the same codename you used earlier in the semester. Your answers will be completely anonymous as there is no way for the instructor or anyone else to link your answers to you.

Please place your completed survey in the envelope provided. Thank you!

1. On how many days did you have **one or more drinks of alcohol (beer, wine, liquor)** during the last two weeks **(14 days)**? (Choose one)
   a) None: I have never used alcohol
   b) None: I have used alcohol in the past, but not in last 14 days
   c) On 1 - 2 days
   d) On 3 - 5 days
   e) On 6 - 9 days
   f) On 10 - 13 days
   g) On all 14 days

2. On how many days do you think a **typical student** had one or more drinks of alcohol (beer, wine, liquor) during the last two weeks (14 days)? (Choose one)
   a) None: The typical student does not drink alcohol
   b) None: The typical student drinks alcohol but probably did not drink any in the last 14 days
   c) On 1 - 2 days
   d) On 3 - 5 days
   e) On 6 - 9 days
   f) On 10 - 13 days
   g) On all 14 days

In the following questions you will be asked about the number of alcoholic "drinks."

A standard drink is equal to 14.0 grams (0.6 ounces) of pure alcohol. This amount of pure alcohol is found in:

- *12-ounces of beer.*
- *8-ounces of malt liquor.*
- *5-ounces of wine.*
- *1.5-ounces or a "shot" of 80-proof distilled spirits or liquor (e.g., gin, rum, vodka, or whiskey).*

Both a Solo cup and a Pint glass hold 16 ounces of liquor. In other words…

- *1 Solo cup or Pint glass =* ***1⅓ drinks of beer***
- *1 Solo cup or Pint glass =* ***2 drinks of malt liquor***
- *1 Solo cup or Pint glass =* ***3 drinks of wine***
- *1 Solo cup or Pint glass =* ***10½ drinks of gin, rum, vodka, or whiskey***

3. **Think about the last time you "partied" or socialized. How many alcoholic DRINKS did you have?** (Note: use the "drinks" measures on the previous page when calculating your answer)
   a) 0 drinks (I did not drink)
   b) < 1 drink
   c) 1-2 drinks
   d) 3-4 drinks
   e) 5-6 drinks
   f) 7-8 drinks
   g) 9-10 drinks
   h) 11-12 drinks
   i) 13-14 drinks
   j) 15-16 drinks
   k) 17 or more drinks

4. **Think about the last time you "partied" or socialized. Over how many HOURS did you drink alcohol?**
   a) 0 hours (I did not drink)
   b) < 1 hour
   c) 1-2 hours
   d) 3-4 hours
   e) 5-6 hours
   f) 7-8 hours
   g) 9-10 hours
   h) 11-12 hours

5. **How many DRINKS of alcohol do you think the typical student had the last time he/she "partied" or socialized?** (Note: use the "drinks" measures on the previous page when calculating your answer)
   a) 0 drinks (the typical student did not drink alcohol the last time they partied)
   b) < 1 drink
   c) 1-2 drinks
   d) 3-4 drinks
   e) 5-6 drinks
   f) 7-8 drinks
   g) 9-10 drinks
   h) 11-12 drinks
   i) 13-14 drinks
   j) 15-16 drinks
   k) 17 or more drinks

If you are a non-drinker (abstainer) please skip to question #14

6. **Over the last two weeks (14 days), how many <u>TIMES</u> have you had five or more drinks of alcohol at <u>any one sitting</u>?**
   a) 0 times: I did not drink during the last 14 days
   b) 0 times: I drank during the last 14 days but I never had 5 or more drinks at any one sitting
   c) 1 time
   d) 2 times
   e) 3 times
   f) 4 times
   g) 5 times
   h) 6 times
   i) 7 times
   j) 8 times
   k) 9 times
   l) 10 or more times

7. **Which of the following statements best describes you?**
   a) I have never drunk more alcohol than I intended to
   b) I very, very rarely drink more alcohol than I intend to
   c) I occasionally drink more alcohol than I intend to
   d) I frequently drink more alcohol than I intend to
   e) I almost always drink more alcohol than I intend to
   f) Other. Please specify: _____

8. **Which of the following statements best describes you?**
   a) I am in total control of my alcohol use
   b) I am in partial control of my alcohol use
   c) I am not in control of my alcohol use
   d) Other. Please specify: _____

9. **Which of the following statements best describes you?**
   a) I have tried to quit drinking at least once
   b) I have thought about quitting drinking but I have not yet tried to
   c) I have never thought about quitting drinking
   d) Other. Please specify: _____

10. **Which of the following statements best describes why you drink?**
    (Choose all that apply and put a star next to the one that is the MOST true)
    a) I drink to "fit in" with a group
    b) Alcohol helps me relax
    c) Alcohol helps me overcome my inhibitions
    d) Alcohol helps me escape unpleasantness
    e) Other. Please specify: _____

11. **Which of the following best describes how your use of alcohol has affected your attendance at work and/or classes?**
    a) It has never, even once, resulted in my missing or being late to work or classes
    b) It has resulted in my missing or being late to work or classes before, but not in the last **30 days (month)**
    c) I have missed or been late to work or class because of alcohol **1 or 2 times** in the last month
    d) I have missed or been late to work or class because of alcohol **2 -4 times** in the last month
    e) I have missed or been late to work or class because of alcohol **5 times or more** in the last month

12. **Within recent memory, which of these have you experienced when drinking alcohol? Place an "X" in one box on each row.**

	Yes	**No**
Did something you later regretted		
Forget where you were or what you did		
Got in trouble with the police		
Someone had sex with me without my consent		
Had sex with someone without their consent		
Had unprotected sex		
Physically injured yourself		
Physically injured another person		
Seriously considered suicide		
Drove a motor vehicle after drinking any alcohol at all		
Drove motor vehicle after having 5 or more drinks		

13. Has the alcohol portion of this course caused you to become more aware of alcohol and related issues?

a) Yes
b) No

14. Which of the following best describes your use of alcohol during the past 30 days? (select all that apply)

a) N/A, I do not drink
b) I drink, but I did not drink during the past 30 days

c) I averaged **more** drinks during any one sitting than in the previous month
d) I averaged **fewer** drinks during any one sitting than in the previous month

e) I drank **more** times than in the previous month
f) I drank **fewer** times than in the previous month

g) I **gave thought** to quitting drinking
h) I **did not give thought** to quitting drinking

15. Please indicate your gender.

a) Female
b) Male
c) Transgender
d) Other

16. Please indicate your age.

a) 17 or under
b) 18-19
c) 20-21
d) 22-23
e) 24
f) 25 or over

17. Do you belong to a Greek organization (sorority / fraternity)?

a) Yes
b) No

18. What is your approximate cumulative GPA (grade point average)?

a) 4.0–3.5
b) 3.49–3.0
c) 2.99–2.5
d) 2.49–2.0
e) 1.99 or below