Teaching Sex, Drugs, and Drinking in a Relevant Way: A Qualitative Study Among Undergraduates Regarding Introductory Personal Health Course Topics

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A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy in Education in the field of Health Education

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Chapter 1

Introduction

“Education is the most powerful weapon which you can use to change the world.”

-Nelson Mandela

This chapter will provide an overview of the proposed study, through which I will investigate topics included in an undergraduate introductory health course. More specifically, I will be interviewing undergraduate students at two public institutions in middle Tennessee and one in Southern Illinois regarding the current topics included in an introductory health course curriculum, the issues that they find to be relevant to their lives, and how they would like these topics to be incorporated into an introductory health course. This chapter will cover the background of the problem, the statement of the problem, the purpose and significance of the study, the study’s theoretical framework, a list of research questions, the researcher’s assumptions, the study’s limitations and delimitations, and finally, the definitions of terms used throughout.

Background

Compared to the rest of the nation, the Southeast (including the states of Arkansas, Louisiana, Mississippi, Alabama, Georgia, South Carolina, North Carolina, Tennessee, Kentucky, West Virginia) in general, experiences poorer health outcomes, lower quality of life, and reduced life expectancy (Dwyer-Lindgren, Bertozzi-Villa, Stubbs, Morozoff, Mackenback, Van Lenthe, Mokdad, & Murray, 2017; Centers for Disease Control and Prevention [CDC], 2017). Additionally, these regional disparities have been increasing over the span of 34 years
due, in part, to socioeconomic and race/ethnicity factors, behavioral and metabolic risk factors, and health care factors (Dwyer-Lindgren et al., 2017). By understanding the relevance of these factors to our daily lives and learning how to address them as part of a lifestyle, we may be able to alter the scope and degree of these disparities. College students comprise an ideal target population for changing these dynamics, as they are primed to learn and are in a transitional period where they may be more receptive to new behaviors and ideas, including those impacting their health (Sparling, 2003; Cluskey & Grobe, 2009; Kulinna, Warfield, Jonaitis, Dean, & Corbin, 2009; Arnett, 2000; Dinger & Vesely, 2001; Sparling & Snow, 2002; Plotnikoff, Costigan, Kennedy, Robards, Germov, & Wild, 2019).

The overall number of students enrolled in post-secondary institutions increased between 2006 and 2016 to reach a total of 19.8 million; additionally, this population has become more diverse (U.S. Department of Education [USDOE], 2019). This increase also reflects a growing population to which health faculty or instructors have access. According to the American College Health Association’s National College Health Assessment II (2018), there is a gap regarding the health information students receive from their collegiate institutions and what they actually want to know about health and health outcomes. Many colleges and universities offer an introductory health course as a means of fulfilling a general requirement, and these courses could be used to help decrease this gap.

There is little consistency among colleges and universities in how these courses are presented and offered to students. For example, the academic unit in which the course is taught, its status as a required or elective course, and whether it is taught by a professor or graduate student, vary depending on the institution (Kulinna et al., 2009). With this variation in mind, the topics about which students want to know more could be incorporated fairly easily into course
content, thereby increasing the relevance and interest of the content for enrolled students. But, how do instructors know what students perceive as interesting and relevant to their health? To shed light on this question, we can go straight to the audience of interest.

**Statement of the Problem**

Based on current understanding of health as multifaceted, there is an abundance of factors that contribute to personal health. These factors are clearly relevant to our lives; however, gaining the attention and illustrating the relevance of these issues and how they can be incorporated into a person’s daily behavior and lifestyle can be challenging. Although collegians may prove to be an ideal population for a course designed to capture their attention, establish relevance, and help develop healthy behaviors and reduce unhealthy behaviors in a way that could help establish a culture and contribute to positive health outcomes, it can be difficult to motivate students to learn and adopt these behaviors. Capturing students’ attention by establishing the relevance of topics taught can have a positive impact on students’ motivation to learn and the related learning outcomes (Keller, 1987; Hodges, & Kim, 2013; Kalinowski, Moller, & Huett, 2008; ChanLin, 2009; Chen, 2014). The issue is, how do we know what health topics will capture undergraduates’ attention and what topics they find relevant to their lives that will continue to have meaning for the near future?

**Purpose of the Study**

Broadly, the purpose of this study is to identify topics college students would like to see incorporated into an introductory health course. More specifically, the purpose is to identify which topics students find immediately relevant to their lives as well as which they find relevant
to their future. With college enrollment just under 20 million, this is a large and captive population with the willingness to learn and establish new lifestyles (U.S. Department of Education, 2019). However, these students begin their collegiate careers with an array of knowledge, history, and exposure to the area of health. By talking with students and listening carefully and critically about the topics in which they are already well-versed, the areas they are lacking, the areas they view as immediately relevant, and the areas in which they have likely future interest, colleges and universities can develop a more responsive introductory health course.

**Significance of the Study**

The results of this study will be helpful in determining which topics college students feel are immediately relevant to their lives, as well as those that will be relevant to their ability to make future educated decisions regarding their health, such as choosing health insurance, family planning, and long-term health care planning. By understanding which factors students are facing in their daily lives that impact their health and ability to make healthy decisions, educators can incorporate these topics in a way illustrating both relevance and applicability, thereby increasing student engagement and interest. Although these courses already exist in many colleges, they often are taught through broad lectures, delivering information and statistics in a low appeal, unilateral, and unengaging way. Additionally, these courses may not be addressing issues student feel are interesting or relevant to their lives. As health educators/instructors, we think we are well-versed in the information students need; however, we may not be conveying the relevance of how this information can be applied to where they are in their lives and where they will be over the following years. This study will aide in bridging this gap between what they
They need to know and how they want to know it. This marketing approach to course development can help educators to cover these personal health topics in a way that engages students better and allows them to find applicability and relevance to the course, which in turn, will lead to adoption of healthier behaviors and improved application of this health knowledge to their lives.

College students are facing a multitude of issues they may not even realize are impacting their health and leading to poor health outcomes and risky health behavior. If this is the case, it may be impacting their ability to retain responsive information and apply it to their daily lives. By addressing these relevant issues in a comprehensive introductory health course responsive to their interests, students may feel more inspired to identify and apply this knowledge to address health issues now and in the future. By incorporating these topics in which students are interested and find relevant, course content can become more responsive. This may lead students to feel connected to the course material, motivated to learn, and interested in developing healthy behaviors that can serve them throughout their lives. By doing so, improved health decisions and behaviors may help to address the poorer health outcomes that have become characteristic of the southeastern region.

**Theoretical Framework**

This study will be conducted using a qualitative research design. I will be inquiring into the interest and relevance of health topics and issues among undergraduate students enrolled in three public universities across middle Tennessee and Southern Illinois. Because my focus will be on interest, relevance, and satisfaction with specific topics included in an introductory health course, I will be using the ARCS (Attention, Relevance, Confidence, Satisfaction) Model of Motivation developed by John Keller (1987).
The ACRS Model of Motivation was developed as a way to help address the issue of guiding instruction to stimulate a student’s motivation to learn. Previous theories and models focused more on psychological approaches or working to change individual characteristics; Keller wished to address issues faced by instructors regarding specific strategies to use on their given students (Keller, 1987). The ARCS Model is grounded in expectancy-value theory, where the assumption lies in the thought that people are motivated to engage if they feel their engagement will be linked to satisfaction and if they feel they can realistically expect success based on the engagement (Keller, 1987).

Because ARCS is an acronym for Attention, Relevance, Confidence, and Satisfaction, each of these components will be discussed in-depth in Chapter 2. These components were also used in developing the research questions and interview protocol and will be used as the thematic framework in coding and analyzing the data. In general, the model posits these four conditions need to be met for people to become motivated and stay motivated. In education, it is important not only to gain students’ attention and motivation, but to maintain attention and motivation throughout the course. ARCS was designed to help instructors do both. Whereas strategies will vary based on groups of students and situations, the ARCS Model also addresses the need for an instructor to define the audience and then tailor strategies to that group (Keller, 1987). This means that defining the group must be done regularly to ensure proper application of the model. Developing content for specific courses is not a “one and done” situation. Even if the information needed to be included does not update or change, the students do. Therefore, educators should be consistently checking in with those whom they are educating. This group needs to be regularly defined for the ACRS model to be properly applied. What is attention grabbing and relevant to one group of students may not be so to another, especially as society
and culture shifts and evolves. For example. The defined group of “college students” has likely evolved from the defined group from 20 years ago. The health issues they are facing may be similar (stress), but factors impacting those issues may be different (social media and fear of missing out or ‘FOMO’).

The ARCS Model of Motivation will help guide a semi-structured interview protocol to use with students represented in focus groups. With this model in mind, I have defined the student group to work on gaining learning motivation: undergraduate students across three public institutions. With this audience in mind, the focus group questions will help prompt students to discuss and share issues and topics they find interesting (gaining their attention), relevant to their lives, confidence in their ability to learn and apply this information to their lives, and their satisfaction with a relevant, undergraduate, comprehensive introductory health course. Additionally, the specific interview items will reflect the pertinence of the ARCS Model.

**Research Questions**

This research will be guided by the following questions:

- What do undergraduate students think are the most important health issues they encounter in their daily lives?
- What topics would students be interested in learning in an introductory health course?
- What topics do students find to be relevant in learning in an introductory health course?
- How would students like to see topics incorporated into an introductory health course?
- Do students feel confident in their ability to learn information about these health topics and apply them to their lives?
- What topics would students like to have been addressed prior to entering college?
What age/grade level would students like to have had these topics addressed?

Assumptions

Assumptions are statements that a researcher or team of researchers take for granted to be true or understood about the study. These may influence the understanding of the findings of the study. However, assumptions are necessity in any research, they must be addressed.

Assumptions about the proposed study include:

1. Participants will be honest and open about their opinions.
2. Participants will be willing to discuss their opinions during a group setting.
3. Participants will understand the questions asked of them during the focus groups.
4. Participants will be able to identify health issues they find interesting and relevant to their daily lives.

Limitations

Limitations are aspects of a study that are out of the researcher’s control, but that can impact the design, methods, and results of the study. Whereas limitations can be perceived as weaknesses of a study, they nevertheless do not preclude a researcher gathering valuable information and disseminating findings that account for the study’s limitations. The following limitations affect the proposed study.

- Because this study is to be conducted with undergraduate students at three universities in Tennessee and Illinois, their responses may be different from ones that could be obtained from student participants outside these settings.
• Individual responses by focus group members may not be independently reported but be influenced by the moderator, the items that comprise the focus group interview guide, the other participants in the focus group, and by the overall group dynamic.

• Intellectualizing by participants to feel as if they are contributing to the development of ideas.

Delimitations

Delimitations are parameters of the study set by the researcher by design. This study is delimited to undergraduate students between the ages of 18 and 25 years who attend two public universities in Tennessee and one in Illinois, during the period of August through December 2020 who are enrolled in or have previously taken an introductory personal health courses and who volunteer to participate in focus groups scheduled at times mutually agreeable the primary researcher and themselves. In addition, the content of the findings is delimited to the specific items that are used to guide the focus group data collection.

Definition of Terms

For the purpose of the current study, I have defined the following terms operationally:

• Attention. In the current study, attention will be used as a condition of motivation for student learning. To engage students, it is crucial to capture their attention and maintain it throughout the course (Keller, 1987).

• Emerging adulthood. Refers to the period of time from ages 18-25, as a time of change and exploration. The age range in which traditional aged college students fall into (Arnett, 2000).
• **Interest.** Interest refers to something that arouses one’s attention (Merriam-Webster, 2018). In this study, it will specifically apply to what gains students’ attention and what they wish to learn.

• **Relevance.** Relevance refers to the applicability of the included health topics to students’ lives. Relevance can also refer to both content and delivery (Keller, 1987).

• **Undergraduate introductory health course.** This term is used to describe a general introductory course in an undergraduate program. Based on each institution, this course may or may not be a graduation requirement for all students, students in specific majors, or an elective. This course tends to include a wide range of topics such as, physical activity, nutrition, sexual health, infectious diseases, environmental health, and others (Middle Tennessee State University, 2018; Clemmens, Engler, & Chinn, 2004).

**Summary**

Although students begin their collegiate careers with a variety of knowledge, history, and exposure to the area of health, this time of emerging adulthood is an opportune time to help them establish a comprehensive base of knowledge about health. By talking with students and listening carefully and critically to the topics about which they are already well-versed, the areas they are lacking, and the areas they feel are relevant to their lives now and in the future (such as within the following 5-10 years), institutions of higher education can develop an introductory health course that is both responsive, relevant, and applicable. This improvement in relevant content can help students better understand the applicability of the material to their daily lives,
thus leading them to establish healthy behaviors which they can carry into the next stage of their lives.
Chapter 2
Review of Literature

Introduction

Our understanding of what the term “health” encompasses, as well as our understanding of the numerous factors that can impact our health, has evolved over the past few decades. As a field, health education has identified dimensions of health to include more than simply the absence of disease, but to include wellness dimensions such as physical, intellectual, emotional, social, spiritual, vocational, financial, and environmental (Substance Abuse and Mental Health Services Administration, 2016). Additionally, we are continuing to learn more about how various factors such as air quality, gender identity, self-isolation, stress, and addiction can impact a person’s overall health. Because of this increase in understanding, health education has grown from teaching hygiene practices in elementary schools and physical education in the K-12 school system, to increasingly more comprehensive curricula that include a variety of health issues.

The idea of health as a more comprehensive issue has led to an increased focus on other areas of life that impact our overall wellness. For example, the Healthy People initiative has evolved throughout its lifespan to reflect the changes in our understanding of factors that impact health. When developing the objectives for Healthy People 1990 and Healthy People 2000, the focus was on improving health status, health services, risk reduction, increased life expectancy, reduction of disability caused by chronic conditions, and reduction of infant mortality rate (CDC, 1989). However, when reviewing the current objectives for Healthy People 2020, although there are still specific objectives aimed at reducing or eliminating illnesses, disabilities and premature deaths, there are additional objectives with a broader focus – objectives that address social determinants of health, increase public health services, and improve health literacy and the
dissemination of health-related information (Office of Disease Prevention and Health Promotion, 2019).

As our understanding evolves and we gain insights as to the factors that contribute to our expanded concept of health and wellness, it is important for health educators to disseminate that information to the public. One way we can do this, is by teaching the next generation of college students how to incorporate healthy behaviors into their routine at a time when they are beginning to establish their own beliefs and behaviors in an adult and independent environment (Sparling, 2003; Cluskey & Grobe, 2009). By emphasizing why they need to know this information and showing the relevance of these topics in a way that is pertinent to them at this point in their life, we may be able to help them adopt these habits and behaviors in a way that leads them to carry said habits and behaviors throughout their lives.

Prior to college, many individuals are limited in their diet and physical activity knowledge as well as their ability to make healthy choices due to environmental and familial factors such as custodian and school decisions regarding foods available, or access to safe places to participate in physical activity. Additionally, they vary and are limited on prior education and knowledge they may possess regarding other dimensions of health, such as mental health, sexual health, and social health (CDC, 2016a; CDC, 2016b; ACHA, 2019b). However, college students are open to new experiences, have campus support services, and are at a time in their life where they are making their own decisions regarding health practices and behaviors. As health educators, we can capitalize on this opportunity to help teach them how to explore themselves using healthy decision-making behaviors, coping techniques, available resources, and other health-related skills.
The following literature review provides contextual information regarding health behaviors of undergraduate students in the United States, health outcomes, and how an introductory health course could play an integral part of both, supporting why this study focuses on the concept of relevancy and applicability within health education curriculum. This review also includes support and additional information on emerging collegiate health issues, current undergraduate health course content, and the ARCS Model of Motivation as the theoretical framework for the study.

Health Outcomes

**Nationwide changes.** Although small, there has been a decrease in the average life expectancy in the United States, from 78.7 years of age in 2016 to 78.6 in 2017 (Arias & Xu, 2019). Whereas this may not seem like a significant difference, it is indicative of a downward trend since 2014, where average life expectancy peaked at 78.9 years of age. In addition to this downward trend, there are still stark discrepancies between races with white Americans’ life expectancy averaging 78.8 years in 2017 and black Americans’ expectancy averaging 75.3 years the same year (Arias & Xu, 2019).

This decrease can be attributed to factors reflecting a societal shift in focus and understanding of what contributes to our overall health. According to Arias and Xu (2019), the decrease in life expectancy can be attributed to increases in death due to issues such as unintentional injuries, suicide, diabetes, Alzheimer’s disease, hypertension, and influenza. Interestingly, there has been research to show how education can impact many of these health issues seen throughout the United States. These findings will be discussed in the “health education” section of this literature review.
With suicide rates rising in almost every state, climbing in to the top 10 causes of death in the U.S. (CDC, 2018c; CDC, 2017b) and officially the second leading cause of death among college aged persons (CDC, 2018b), colleges are starting to investigate issues, campus services, and information surrounding mental health (ACHA, 2019b). The CDC (2018c) reported relationship problems, crisis in the past or upcoming two weeks, problematic substance abuse, and physical health problems accounting for the top factors contributing to suicide with percentages of 42%, 29%, 28%, and 22% respectively. Whereas more than one of these factors may contribute to a person taking their own life, many of these factors overlap with issues faced by college students and could be addressed on campuses. When asked, students indicated they had received information on depression and anxiety (67.3%); however, a majority of students reported they did not receive information on topics that could contribute to depression and anxiety, such as grief loss (66.7%), relationship difficulties (56.9%), violence prevention (53%), and eating disorders (69.7%) (ACHA, 2019b). Colleges are taking a broad look at depression and anxiety, but by addressing these subtopics and including them into an introductory personal health course, students can learn about prevention, early warning signs, and available resources which could possibly address and curb the events that have been shown to lead to suicidal thoughts, ideation, and action.

**College Student Health and Emerging Undergraduate Health Issues**

As Chapter 1 shows, the overall number of students enrolled in post-secondary institutions reached 19.8 million as of 2016, and the number of full-time students rose 13 percent from 2006-2016 (NCES, 2019). Additionally, many subpopulations such as males, females, Hispanic, Asian/Pacific Islander, and black students experienced an increase in enrollment as well over the same time frame (NCES, 2019). These numbers illustrate a large and growing
population of individuals who are transitioning from adolescence into adulthood and are, for many, living on their own for the first time, open to establishing new patterns of behavior, and believe education to be relevant to their lives. Arnett (2000, p.469) discusses “emerging adulthood,” which he defines as the period of time from ages 18-25, as a time of change and exploration. During these years, emerging adults are developing characteristics crucial to becoming self-sufficient and making independent decisions and may use this new control over their lifestyle to possibly establish a healthy lifestyle pattern of behavior (Arnett, 2000; Dinger & Vesely, 2001; Plotnikoff, Costigan, Kennedy, Robards, Germov, & Wild, 2019; Sparling & Snow, 2002).

An abundance of research over many years has focused on topics such as risky sexual behaviors, alcohol consumption, drug use, and depression among college students. Although these health issues are still prevalent, they are not necessarily remaining stagnant. There has been an increase in some risky behaviors, decreases in healthy decisions, and increases in knowledge regarding nuances of certain topics which, in turn, lead to more recently uncovered factors affecting undergraduate student health.

The American College Health Association’s (ACHA) research survey, the National College Health Assessment (NCHA), is conducted twice annually and over 740 colleges and universities across the United States have participated (ACHA, 2019a). This instrument was designed to help give colleges and universities a better understating of relevant data regarding the health of their student body, as well as how their institution compares to others who have also participated in the survey, allowing institutions to better address their students’ health needs.

Keeping in mind the evolving understanding of health, the NCHA has been updated twice since 2015, to reflect the changing relevance of health issues, now including questions on e-cigarettes and veteran status, as well as revising, editing, and clarifying questions about sex and gender.
identity, sexual orientation, alcohol consequences, race/ethnicity, and disability status (AHCA, 2019b).

**Sexual and reproductive health.** One example of topics that may traditionally be included in introductory personal health courses, but perhaps are not being covered in a useful or responsive way are the areas of sexual health, reproductive health, and relationship issues. Evidence of this may be found in an overall increase in sexually transmitted infections/disease (STIs). When looking solely at collegiate data, the rates for gonorrhea, chlamydia, and syphilis have all risen between the years of 2007-2017 with rates rising to 1.4% from 0.6%, 7.5% from 3.7%, and 0.7% from 0.3% respectively (ACHA, 2019c). When considering these rates, it is important to also consider contraceptive use of college students reported on the same survey. For instance, among sexually active students, those who reported using a condom or other protective barrier during vaginal sex within the last 30 days was 43.4%. Additionally, among those students who answered “yes” to using contraception during their last vaginal intercourse experience, 51.7% of students indicated birth control pills were the chosen method, 33.1% indicated other birth control methods (shots, implants, patch, vaginal ring, and intrauterine device), and 29.5% indicated withdrawal as their method (ACHA, 2019b). These statistics indicate a focus on methods that prevent unwanted pregnancy, but methods which may not prevent the spread of various STIs. Although highly effective in preventing the spread of STIs, barriers for using condoms still exist among college students. These barriers include reduced pleasure, knowing a partner’s sexual history, and limiting intimacy (Fehr, Vidourek, King, & Nabors, 2017). Although preventing unwanted and unplanned pregnancies is a vital aspect of sexual and reproductive health, educators need to be cognizant of helping students understand the importance of preventing STIs as well.
Additional risky sexual behaviors have been studied, including complexities of sexual consent and sexual assault issues among college students. These findings include a persistency in college students ascribing to traditional beliefs regarding the sexual roles of men and women, including the idea of men as the initiators and even aggressively so, and women as the gatekeepers, who may have deceptive techniques used on them by men to gain consent (Jozkowski, & Peterson, 2013), as well as how gendered expectations, party culture, and alcohol can impact consent, sexual aggression, and positive and negative cues regarding sexual risk and consent (Muehlenhard, Humphreys, Jozkowski, & Peterson, 2016). These perceptions by students regarding their sexual behaviors may also be influenced by the aspect of the collegiate “hook up” culture and students’ misconception of social norms regarding frequency of “hooking up” among their peers. In a study of 274 college students, when asked how many times they engaged in a hookup during the school year, 45.9% reported 0 times; however, when asked how many times they believed the “typical” student had hooked up over during the same time frame, 31.3% reported 3 times and 26.1% reporting 2 times (Homlan & Sillars, 2012). This perceived social norm could have an impact on students if they begin to feel their sexual behaviors are not those of the “typical” student.

However, for many, college can be a time for sexual exploration and discovery. Whereas most research on sexual health in college focuses on sexual risk behaviors, there are very few studies which question sexual satisfaction. One study among undergraduate females found about 29% of respondents indicated vaginal sex during a hook up during their first semester of college and indicated a fairly low level of regret \( (M=3.0, \ SD=2.2 \) on a 7-point scale) (Fielder & Carey, 2010). Additionally, the issues surrounding sexual health, exploration, consent, and other aspects could lead to relationship difficulties, which is another area students have specifically
indicated as a relevant issue in their lives. When asked if students had received information from their college or university regarding relationship difficulties, almost 59% reported they had not, yet when asked if they would like to receive information on this topic, almost 52% said yes (ACHA, 2019b). These findings shed light on understanding how issues such as sexual behavior and sexual assault are viewed and influenced by and among undergraduate students, as well as illustrating a lack of understanding in how sexual satisfaction can impact their sexual health and wellbeing.

**Substance use and behaviors.** When considering the issues such as consent, it is also imperative to factor in the use of alcohol and drugs which may degrade the ability of college students to make safe decisions or reduce harm. This issue is also addressed in the NCHA survey among college students who drank alcohol experienced the following in the last 12 months: 2.3% of students reported someone having sex with them without their consent and 21.9% had unprotected sex (ACHA, 2019b). Recent research on this topic investigated the topic of internal consent (such as physical response and arousal) and external consent (such as nonverbal behaviors and direct verbal cues) and how alcohol consumption can impact those concepts. Findings indicate among college students participants, drinking prior to engaging in sexual acts has an influence on aspects of the students’ internal consent and indicate that drinking can impact a student to decide to consent to sex, thus leading to a situation where consent and cues may be misinterpreted during a sexual encounter (Jowzkowski & Wiersma, 2015). These findings indicate a link between several of these issues among undergraduate students leading to a need for addressing such issues in a way they relate to. Other aspects of alcohol and the impact it has on sexual risk include several studies highlighting the correlation between alcohol use, sex, and risky sexual behavior, including engaging in sex without a condom and sexual assault among
the general population as well as college students (George & Stoner, 2000; Gilmore, Granato, & Lewis, 2013). One study (Gilmore, Granato, & Lewis, 2013) found that by increasing protective behavioral strategies (PBS) for condom use was associated with greater condom use in general, as well as greater condom use while drinking, indicating that by having campuses focus on increasing condom-related PBS, they may be likely to increase condom use during sexual activity while under the influence of alcohol, thereby lowering risk of STIs and unplanned pregnancies.

In addition to the correlation between alcohol and sexual health, alcohol use has been linked to an increase in risk-taking behavior in general. Research has found prevalence of alcohol consumption to be associated with prevalence of risky behaviors such as use of drugs (street and prescription), sexual activities, gambling, driving a car under the influence, and doing something they later regretted (ACHA, 2019b; Ausherman, Black, & Kandakai, 2006; Pedrelli, Bitran, Shyu, Baer, …, & Farabaugh, 2011) and for traditional aged college students, many of them are violating laws simply by the act of drinking as many are under the age of 21.

According to the NCHA (ACHA, 2019b), only 26.4% of college students reported never using alcohol, with 55.8% reporting any use within the last 30 days; however, the age demographics of the students who participated showed 58.6% were 18-20 years old and 32.3% were 21-24. Those percentages indicate a significant number of drinkers are underage. This may lead to issues where students could be worried about approaching someone for help if they are struggling with drinking issues, have a friend who may have consumed too much, or needs a safe ride home, for fear of getting in trouble by campus or local police. One study indicated a university community where students felt the campus police where almost “bullying” them and would write them up and give them “an underage” instead of helping or encouraging them to get home safe (King &
The same study also indicated students were not interested or swayed by alcohol prevention education offered but would be interested in education focusing on risk reduction during alcohol consumption (safer ways to imbibe and what to do when drinking becomes dangerous). This sentiment is reflected in the NCHA with 64.6% of students reporting they were not interested in receiving information about alcohol and other drug use (ACHA, 2019b). If students are drinking, which all indication is they are, health educators should acknowledge student behaviors and instead of assigning blame and trying to prevent a behavior that historically is not preventable on a significant scale but continues to cause health and safety issues, should focus on how students can be educated to drink responsibly and lower their risk exposure. Even the CDC’s information for college health is minimal and focuses on prevention and avoidance of behaviors (CDC, 2016c).

Whereas alcohol is the most common substance used among college students, marijuana, recreational drugs, and prescription drugs are also reported on college campuses. The Spring 2019 NCHA reported the 30 day rate of marijuana use at about 21% and when considering prescription drug use without a prescription within the last 12 months, 3.4% reported using antidepressants, 4.2% reported using painkillers, 3.0% reported using sedatives, and almost 6% reported using stimulants (ACHA, 2019b). Whereas these percentages are small, they are still present and risk reduction may be beneficial to address in a setting that allows students the freedom to ask questions about safety measures and harm reduction without fear of retaliation by campus affiliates.

**Mental health.** The transition to college and the time spent as an undergraduate can be a time for growth and opportunities; however, many college students may struggle with varying aspects of this transition. Additionally, 75% of mental health conditions are presented in
individuals by the age of 25 (NAMI, 2019). This issue is reflected in the number of students reporting mental health issues on college campuses. According to ACHA (2019b), when asked about their mental health 28.7% report feeling lonely, 31.8% report feeling very sad, 16.7% reported feeling so depressed to the point where it was difficult to function, and almost 30% reported feeling overwhelming anxiety. Additional factors contributing to the mental health of undergraduates include sleep and stress. Both of which had significant numbers of students reporting issues. 35.2% of students indicate sleep difficulties and 45.3% reported their current level of stress as “more than average” (APHA, 2019b). As for trends over time, from 2009 to 2015, frequencies of diagnosis and treatments on college campuses have increased for many issues including the following: anxiety, ADHA, bipolar, depression, insomnia, OCD, and panic attacks (Oswalt, Lederer, Chesnut-Steich, Day, Halbritter & Ortiz, 2020).

Whereas these numbers are concerning, students do seem to be aware of these issues and indicate they would like information on resources and assistance with the issues they are facing. Most students expressed interest in receiving information on a variety of topics relating to mental health. Table 2.1 lists topics reported by the Spring 2019 NCHA, where students indicated they were interested in information on specific topics associated with mental health (stress, anxiety, sleep, suicide, and others).
Table 2.1

Spring 2019 NCHA Mental Health Topics on which Students Report an Interest in Receiving Information

<table>
<thead>
<tr>
<th>Topic</th>
<th>Percentage of students who indicated an interest in receiving information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression / Anxiety</td>
<td>65.1</td>
</tr>
<tr>
<td>Eating Disorders</td>
<td>44.5</td>
</tr>
<tr>
<td>Grief and loss</td>
<td>52.1</td>
</tr>
<tr>
<td>How to help others in distress</td>
<td>68.2</td>
</tr>
<tr>
<td>Sleep difficulties</td>
<td>65.1</td>
</tr>
<tr>
<td>Stress reduction</td>
<td>73.5</td>
</tr>
<tr>
<td>Suicide prevention</td>
<td>58.2</td>
</tr>
</tbody>
</table>

Therefore, although mental health issues are a prevalent and concerning issue on college campuses, many students are seeking help and are open to information and resources to address these issues and work towards increasing their mental health as well as academic persistence (ACHA, 2019b, Hartley, M., 2013; Hunt & Eisenberg, 2009; Kitzrow, 2003; Oswalt, Lederer, Chesnut-Steich, Day, Halbritter & Ortiz, 2020). Therefore, this issue is highly relevant and applicable to college student health and wellbeing and inclusion of this topic being covered in depth could prove to be beneficial for academic performance and persistence, as well as overall health and wellbeing.

**Addressing college health issues.** ACHA has developed mission statements and resources to help campuses address a variety of health issues college students face using research and data collected through the NCHA. Healthy Campus 2020, guided by the framework for Healthy People 2020 and ACHA, was developed to “include national health objectives for
students and faculty/staff...and provide a toolkit for implementation... These tools and resources will help institutions of higher education determine which objectives are relevant, achievable, and a priority on your campus.” (ACHA, 2018, para.2). By using an ecological approach, Healthy Campus works collaboratively with campus and community resources to develop methods and resources for campuses to then use for addressing a variety of health issues among students, staff, and faculty. Campus-based health promotion programs have been used to address issues such as bystander intervention, flu vaccines, reducing alcohol related outcomes, with success; however, there are some instances where similar programs have not been shown to impact health behaviors significantly, such as for drug use and smoking (Salazar, Vivolo-Kantor, Hardin, & Berkowitz, 2014; Huang, Francesconi, Cooper, Covello, Guo, & Gharib, 2018; Plotnikoff et al., 2019).

Whereas campus-wide collaborative interventions can be beneficial in addressing undergraduate health issues, these interventions can face barriers such as lack of administrative support, student involvement, funding, and are often offered intermittently due to time constraints. Another approach to addressing health behaviors among college students is, of course, a health course. The association between education and health outcomes and behaviors has been well-documented (Cutler & Lleras-Muney, 2006; Zajacova & Lawrence, 2018). Although exceptions occur, researchers studying this link have found consistent associations between education and health risk factors such as smoking, drinking, diet, physical activity, use of illegal drugs, use of preventive care, and use of care for illness such as hypertension and diabetes. Essentially, those who are more educated are less likely to smoke and more likely to exercise; although they are more likely to have tried illegal drugs (marijuana, cocaine, and “any other illegal drug” were explicitly included in the instrument used for measurement), they are
able to give them up more readily. Persons with more education also are more likely to seek preventive care (flu shots, vaccines, mammograms, gynecological tests, colonoscopies), and are more likely to have their chronic conditions under control (Cutler & Lleras-Muney, 2006). Additionally, persons with more education are more likely to report having good health, fewer multiple morbidities, and fewer functional limitations than their less-educated peers (Zajacova & Lawrence, 2018). Cutler and Lleras-Muney (2006) also state that education is related to income level and occupational choices, which impact factors like socioeconomic status and access to health care. A review of articles exploring the relationship between health risk behaviors (including violence, alcohol and other drug use, sexual behaviors, and others) and academic achievement found an inverse relationship between theses variables at a rate of 96.6% (Bradley & Greene, 2013). As stated earlier, these reflect factors impacting the nation’s leading causes of death, indicating that perhaps education could help decrease these preventable deaths.

**Health courses.** When developing curriculum for a collegiate health course, there are many factors to be considered, including: student prior knowledge, if the course is required or elective, relevancy of content to student health, and delivery of health messages. The next few sections will explore the impact of each of these areas on undergraduate health courses.

**K-12 health courses.** When reviewing health topics taught to students in kindergarten through grade 12 (K-12), there is little consistency throughout the nation with respect to what students are learning. According to the CDC’s School Health Policies and Practices Study (SHPFS) in 2016, the percentage of school districts that adopted these policies where high schools teach a comprehensive set of specific health topics ranged from 53.2% to 87.3% per topic listed (CDC, 2016a). For a complete list of health topics and percentage of district policies, see Table 2.2.
Table 2.2

*Percentage of districts with a policy ensuring schools will teach these specific subjects according to grade level.*

<table>
<thead>
<tr>
<th>Topic</th>
<th>Elementary</th>
<th>Middle</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol-or other drug-use prevention</td>
<td>63.9</td>
<td>79.7</td>
<td>86</td>
</tr>
<tr>
<td>Asthma awareness</td>
<td>40.0</td>
<td>47.4</td>
<td>53.2</td>
</tr>
<tr>
<td>Chronic disease prevention (e.g., diabetes or obesity prevention)</td>
<td>48.4</td>
<td>65.8</td>
<td>76.5</td>
</tr>
<tr>
<td>Emotional and mental health</td>
<td>56.9</td>
<td>74.2</td>
<td>82.2</td>
</tr>
<tr>
<td>Food allergies</td>
<td>44.8</td>
<td>50.2</td>
<td>59</td>
</tr>
<tr>
<td>Foodborne illness prevention</td>
<td>34.6</td>
<td>47.9</td>
<td>59.6</td>
</tr>
<tr>
<td>HIV prevention</td>
<td>29</td>
<td>70.6</td>
<td>82.4</td>
</tr>
<tr>
<td>Human sexuality</td>
<td>51.9</td>
<td>75.4</td>
<td>79.6</td>
</tr>
<tr>
<td>Injury prevention and safety</td>
<td>83.3</td>
<td>79.1</td>
<td>80.8</td>
</tr>
<tr>
<td>Infectious disease prevention (e.g., flu prevention)</td>
<td>55.1</td>
<td>63.4</td>
<td>71.6</td>
</tr>
<tr>
<td>Nutrition and dietary behavior</td>
<td>70.6</td>
<td>76.9</td>
<td>84.6</td>
</tr>
<tr>
<td>Oral health</td>
<td>57.7</td>
<td>54.9</td>
<td>56.1</td>
</tr>
<tr>
<td>Other STD prevention</td>
<td>22.9</td>
<td>69</td>
<td>81.6</td>
</tr>
<tr>
<td>Physical activity and fitness</td>
<td>60.7</td>
<td>71.4</td>
<td>79.6</td>
</tr>
<tr>
<td>Pregnancy prevention</td>
<td>18.9</td>
<td>59.7</td>
<td>76.3</td>
</tr>
<tr>
<td>Suicide prevention</td>
<td>36</td>
<td>65.4</td>
<td>78.6</td>
</tr>
<tr>
<td>Tobacco-use prevention</td>
<td>65.9</td>
<td>80</td>
<td>85.6</td>
</tr>
<tr>
<td>Violence prevention</td>
<td>86.3</td>
<td>85</td>
<td>87.3</td>
</tr>
</tbody>
</table>

Not all schools taught all topics listed, leading to gaps in some students’ knowledge regarding specific health topics. Additionally, the content for each topic was not addressed, indicating that even if the school included that topic, it could be covered differently per school. For example, a district may have a policy in place for their high schools to cover sexual health; however, the SHPPS 2016 data did not indicate whether the content approach was an abstinence-only based program, an abstinence-based program where abstinence is the focus, but other topics
maybe covered as well, or a comprehensive sexual health curriculum that includes topics such as safe sex practices, sexual identity, or reproductive choices (CDC, 2016a). In the area of sexual health, the CDC identified 19 sexual health topics recommended to be covered in any grade 9-12. The national median of all 19 of these topics being covered was 38.3%; however, the median of all 19 topics being covered among the southeast was 34.9% (CDC, 2016b). Due to these inconsistencies, students begin their college careers with a wide range of baseline knowledge regarding health content.

Undergraduate health education. The lack of standardization among health courses in the K-12 system has been well documented as evidenced in the section above. However, health education at the collegiate level is even less standardized. Prior to 1960, most universities required two to four semesters of a physical education (PE) class as a method of preparing men for war (Kulinna et al., 2009). However, requirements for offering a PE class, as well as the content within the classes offered, began to shift. To address a growing number of health topics, increase healthy behaviors, and reduce risky health behaviors, some higher education institutes offer personal health courses (PHCs) or Conceptually Based Fitness/Wellness (CBFW) courses. These types of courses have been implemented with success and some even show an impact on behaviors post-graduation (Becker et al., 2008; Clemmens, Engler, & Chinn, 2004), and there have been calls to require these types of courses as a general course requirement for students (Sparling, 2003; Krautmanis, 2013).

Although research indicates PHCs and CBFW courses can be successful, there remains variance regarding these courses being offered by institutions. Researchers investigated the availability, progression, and content of CBFW courses in American post-secondary institutions (Kulinna et al., 2009). Key findings included:
CBFW classes were most often taught by both adjunct and tenure-track faculty (35%).

CBFW classes were housed in a variety of departments on campus.

Availability varied based on size and type of institution.

CBFW as a required course varied on the size and type of institution (44% at universities, 61% at four-year colleges, and 27% at two-year colleges).

Additional findings reported 58 different titles for various CBFW classes offered at these institutions (Kulinna et al., 2009).

Klein, Kempland, Oswalt, and Rexillius (2017) studied the proportion of public and private (not proprietary and for-profit institutions) colleges/universities in the US which required a PHC as a graduation requirement and asked for a description of the nature of this requirement. The researchers described the PHC as, “one that covered a variety of topics related to a student’s own well-being” (Henry, Klein, Kempland, Oswalt, & Rexillius, 2017, p. 52). Of the 310 institutions sampled, only 10% required such a course for graduation exclusively, and 10% required it as an option. Additionally, only 55.8% of institutions surveyed offered this type of health course, and about one third offered a healthy education type of undergraduate major (Henry, Klein, Kempland, Oswalt, & Rexillius, 2017). Although this study helps to shed light on the number of institutions addressing health issues among collegians, it does not discuss what topics were included under the term of “variety of topics related to a student’s own well-being.”

Findings from these studies indicate that whereas we may be growing in our understanding of the benefit of PHCs/CBFWs, we are still unclear as to which health topics should be included in these type of classes, or which of these courses are required for students’ graduation requirements, thereby indicating that most students will finish their college career
without taking such a course (Kulinna et al., 2009; Henry, Klein, Kempland, Oswalt, & Rexilius, 2017). This lack of consistency in requirement and health topics included in collegiate health courses potentially impact the extent to which a course influences students’ health and health behaviors. The lack of consistency illustrates the importance of establishing a collegiate health course that can increase knowledge and teach students how to make informed health decisions aimed at improving the quality and length of life. However, specific topics to be included in a collegiate health course needs examination.

Conceptual Framework

**ARCS Model of Motivation.** The ARCS Model of Motivation was developed in the 1980’s by John M. Keller as a method to improve motivational appeal of instruction and instructional materials (Keller, 1987a). Keller’s model breaks down the understanding of student motivation into four conceptual categories of *Attention, Relevance, Confidence, and Satisfaction* (Keller, 1987a). Each of these four main categories includes three subcategories, which can be seen in Table 2.3 (Keller, 1987b.).

Table 2.3

**ARCS Model of Motivation Categories and subcategories**

<table>
<thead>
<tr>
<th>Categories</th>
<th>Subcategories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attention</td>
<td>A.1: Perceptual arousal</td>
</tr>
<tr>
<td></td>
<td>A.2: Inquiry arousal</td>
</tr>
<tr>
<td></td>
<td>A.3: Variability</td>
</tr>
<tr>
<td>Relevance</td>
<td>R.1: Goal orientation</td>
</tr>
<tr>
<td></td>
<td>R.2: Motive Matching</td>
</tr>
<tr>
<td></td>
<td>R.3: Familiarity</td>
</tr>
<tr>
<td>Confidence</td>
<td>C.1: Learning requirements</td>
</tr>
<tr>
<td></td>
<td>C.2: Success opportunities</td>
</tr>
</tbody>
</table>
Keller’s ARCS Model of Motivation identifies these four concepts as conditions of motivation which can work together to address motivational learning in students by fostering or maintaining motivation (Keller, 1987a). Grounded in the expectancy-value theory, the ARCS Model is designed to address the motivation aspect of what drives students to engage in learning. What is unique about Keller’s model compared to other applications-oriented motivational models and theories, is that the ARCS Model considers the given audience. To apply this model within a course, the instructor must analyze the audience and adapt the strategies to the specific areas the given audience needs addressed (Keller, 1987a). This allows the instructor to shift the focus to specific areas of improvement or a balanced approach (addressing all four conceptual categories), based upon the audience to help maintain or foster motivation.

Although this model is not traditionally used in the field of health education, it has been used successfully in higher education on a variety of topics. Although much of the research conducted in the United States is dated, the ARCS Model of motivation has been shown to increase college student motivation in areas such as improving attitudes towards mathematics in a college algebra course (Hodges, & Kim, 2013) and student motivation and retention in online courses through ARCS-based emails (Huett, Kalinowski, Moller, & Huett, 2008). Additionally, there has been a resurgence among researchers in other countries regarding ways to increase students’ motivation to learn. There are a few studies where researchers have applied the ARCS Model of Motivation successfully with college students to analyze student motivation in an
online course (ChanLin, 2009) as well as to strengthen learning motivation among hearing-impaired students (Chen, 2014).

Attention. The condition of attention refers to gaining and sustaining the attention of the students. Keller (1987a) admits that gaining students’ attention can be simple, but the trick is to keep that attention throughout the instructional period. Some initial insights into what some students find themselves willing to pay attention to were provided during the pilot testing of this study with focus groups at a medium-sized, liberal arts institution. Participants reported their interest in covering some of the topics currently included in the curriculum, such as sexual health, nutrition, and exercise techniques; however, they also expressed interest in additional topics not covered, such as stress management, how to handle peer pressure, and mental health topics.

Relevance. Within the model, relevance refers to the learners’ perception of the content, how it fits contextually, or how it can be applied to reach goals (Kember, Ho, & Hong, 2008). This model can help answer the question of, “why do I need to know this?” often asked by learners of their instructors. It is this concept of relevancy and how it impacts and motivates learning, that can help instructors successfully motivate their students to engage with the content and increase students’ desire to learn. Chang and Lehman (2002) conducted a study focusing specifically on the relevant category of the ARCS Model of Motivation. They found they could increase undergraduate students learning of a foreign language regardless of their level of intrinsic motivation by using relevant enhancement strategies which were embedded in the web-based delivery system (Chang & Lehman, 2002).

Although content relevance is one aspect of this condition, relevance also can be applied to the way something is taught (Keller, 1987). If we only teach students what they want to
know, they may miss additional information they need. However, when teaching topics that may not necessarily capture their interest or attention, we can look at increasing the relevance of delivery. This issue also arose during the pilot test focus groups. Students indicated specifically that they were interested and understood the need to learn about nutritional diets, but they felt the way the content was delivered was not relevant to their current lifestyle (e.g., dorm room, cafeteria, financial restraints, chaotic schedules). By building course content with relevance in mind, instructors can illustrate how the course content and its delivery can be applied contextually and used to help students reach their overarching goals.

Confidence. Confidence is another key component of the ARCS Model of Motivation. The presence of confidence or being unconfident can impact a student’s motivation to learn. Confident students may be inherently more likely to enjoy learning because they feel they can accomplish their goals through their ability and actions; to the contrary, unconfident students may be more concerned with failing and disappointing others (Keller, 1987). This balance, although perhaps precarious, can be fostered by the instructor and used to help boost a student who is unconfident or help sustain an already confident student. This can be reached through instructional design and delivery methods where the instructor helps establish the framework where success can be achieved if the students put in the effort (Keller, 1987).

Satisfaction. This component is directed at the feeling people receive regarding their actions. Keller (1987) discusses how rewards can be used for motivation successfully if done in a way where the actions required, as well as the reward and scheduling is clearly laid out for instruction. The risk is with students who are intrinsically motivated; the use of rewards to help drive actions can be viewed by students as an instructor exerting their own control over the student, thereby fostering resentment towards the instructor, behavior, or activity (Keller, 1987).
Design and Methods

**Qualitative research.** Qualitative research is beneficial when researchers wish to gain detailed and complex understanding of an issue (Creswell, 2007). This can be done by diving into the meanings the participants would attribute to the problem and gaining an understanding of their perception of the issues. Qualitative research has been used to gain a deeper understanding of health and education specifically, allowing researchers insights into what the students and instructors find to be the most pertinent needs, both in identifying topics and delivery of instructions (Grabowski & Rasmussen, 2014; Quinn, Chaziri, Mangano, & Thund, 2019; Clemmens, Engler, & Chinn, 2004; Kember, Ho, & Hong, 2008). The advantage to using a qualitative research design for the current study as opposed to a quantitative design, is the ability to ask broad and open-ended questions to allow for a variety of answers not influenced or limited by boundaries set by an instrument. A qualitative design will also allow for participants to express their attitudes and explanations in an open and unbridled way, allowing for immediate follow-up and group feedback. Because the subject being studied is not of a sensitive nature, the issue of total confidentiality, which can be a limitation to focus groups, is not of major concern (Krueger & Casey, 2015). Participants should be comfortable with discussing course content with a small group of similar people.

Although a quantitative design would allow for a greater breadth of insights and greater generalization of findings, the aim of this study is to allow students to have the freedom and space to discuss with others issues they are facing. Using an instrument such as a survey or questionnaire could limit the options available to students, or it could be too specific or vague for students to identify with. However, having the ability to talk and discuss the identified issues,
may help students to realize an issue does affect them. For example, during a preliminary focus group, two students argued over the concept of mental health as a topic to be included and one student felt it was unnecessary as a health issue and needed to be covered in a psychology class. However, after the debate, the group, including the initial dissenter, agreed that mental health was a very important aspect and one of relevance to college students and they felt it should be given weight within an introductory health course. Had these students been participating in a quantitative study, this data could have been missed, especially by the student who initially disagreed and did not think mental health issues were relevant to him until the discussion ensued.

Whereas some quantitative instruments do allow for open ended questions which could help reduce or eliminate problems with topics and issue not being explicitly included, the goal of the current study is to provide not simply a list of topics and issues facing college students, but to provide context and insight into what students are facing, how it is impacting them and their wellbeing, and how these concepts can be incorporated into course content for an introductory health course. This area is not widely addressed in the literature and based on the research questions posed, a qualitative study design is better suited for addressing the issue at hand.

**Focus Groups.** The use of focus groups can help to gather data about opinions, perceptions, and feelings of a group of participants regarding a specific issue or shared experience (Krueger & Casey, 2015; Basch, 1987). Morgan (1996) discusses a particular strength of focus groups as a means to offer additional data on the “extent of consensus and diversity” as well as offer the researcher the ability to ask for comparisons among their experiences, as opposed to gathering individual data and comparing and speculating (Morgan, 1997, p. 139). The use of focus groups is ideal when a researcher’s aim is not only to gain a better understanding of an issue, but also is to look for ideas to emerge from a group (Krueger &
Casey, 2015). As the aim of the current study is to gain understanding, insight, and ideas around the issue of course content for a relevant and applicable undergraduate personal health course, the use of focus groups will be the primary method of gathering data. Because the aim is to improve understanding of the issues facing college students and impacting their health and wellbeing, a group setting will allow for observing a consensus or division among participants when an idea or topic arises. If individual interviews were the only means of interviewing, it may be difficult to draw conclusions about how common an issue is. One person may bring it up in their interview whereas others may not, and this may be so because it genuinely does not affect them, or simply because they had not thought of it during their interview. A group setting will allow for others to agree or disagree with the variety of topics and issues discussed during the interview process. Additionally, this method has proven successful in previous studies. Using this method with students, teachers, administrators, and parents regarding curriculum has provided rich information to researchers which can be used in developing more impactful instruction for a variety of topics targeted specifically for the undergraduate population in need (Quinn, Chaziri, Mangano, & Thund, 2019; Grabowski & Rasmussen, 2014; Gonzalo, Haidet, Blatt, & Wolpaw, 2016).

A semi-structured interview guide will be used to guide the discussion during the focus groups. This method has proven to be beneficial in qualitative studies in the field of health education as a means for gathering rich, contextual data (Grabowski & Rasmussen, 2014; Hilton, 2007; Lanning, Wetzel, Baines, & Byrne, 2012; Stuckey, 2013). A semi-structured guide, as opposed to structured or narrative, will be ideal for this study because it will allow for a basic outline of topics to be covered and questions to be addressed by the group while still offering the flexibility of new topics that arise to be followed if relevant to the study and research questions.
Unlike a structured interview, this allows for richer information to possibly be uncovered by the discussion regardless of whether or not the area discussed was anticipated by the researcher because the participants are not limited and are allowed and encouraged to express themselves (Cohen & Crabtree, 2006). But, unlike in a narrative interview, a semi-structured interview guide can help maintain the focus on the topic at hand and help the groups from becoming too lengthy. The development of the guide will be detailed in the following chapter using the ARCS Model as a guide.

**Summary**

College is a time of transition and undergraduate students are open to new experiences and learning. Due to the openness of these students, college is also a time to reach them and help develop healthy behaviors and reduce risky behaviors as they are establishing their independence and developing new insights and habits in their lives. PHCs/CBFW courses could be an ideal way to help guide students through this process, leading to healthy behaviors and decision making which can continue past the course. Through the use of the ARCS Model of Motivation as a guide for talking to students and discovering what topics are relevant to their health, as well as how they can cohesively adapt healthy behaviors into their lifestyle, I can gain an in-depth understanding of what issues are impacting these students’ health and how they can best be addressed within the context of an introductory health course. This, in turn, can help colleges develop course content aimed at the needs of this specific population. As we continue to grow our understanding of health and identify new facets relevant to our health, it is imperative that we regularly review and adapt health education curricula to reflect those relevant issues faced by those whom we are educating.
Chapter 3
Methods

This chapter outlines the process used to conduct the current study. The chapter includes a description of the research design, a description of a pilot study, participant recruitment, instrumentation, participant selection, data collection, and data analysis.

Research Design

Because this study is exploratory in nature due to the aspect of not just focusing on health behaviors and outcomes reported by college students, but on what issues college students indicate they are facing today, I will use a qualitative research design with a collective or multiple case study approach. This design is beneficial when a researcher aims to study “an issue explored through one or more cases within a bounded system” and uses in-depth data collection through multiple sources, in this case, focus groups, course textbooks, syllabi, and NCHA data review (Creswell, 2007). To improve understanding of the topics and issues college students find to be most relevant to their lives, I need to talk to them and gain insight into issues they regularly face. As Chapter 2 shows, there are numerous factors that impact health; however, students may be facing a variety of these without even realizing they are influencing their overall health and wellbeing. This design will allow me the ability to gain an understanding of what these students feel can help them to better equip themselves with knowledge they find useful to their lives and can apply directly.
Collective Case Study Approach

For this study, I will be using a case study approach. This approach is used to help researchers gain an in depth understating of an issue or concern, and a collective or multiple case study allows the researcher to compare and illustrate the issue or concern across different perspectives (Creswell, 2007). A “case” can be defined in a variety of ways such as a single unit or a group (Creswell, 2007; Patton, 2015), and in this study, a case will consist of university undergraduates and the issue or concern studied will be that of what issues they are facing which impact their daily lives and influence their health and wellbeing. This approach will allow me to uncover insights into how students view their daily struggles and how they impact their overall wellbeing. By asking students to reflect on this issue and add context, as well as reviewing textbooks on the subject for content, I will have a clearer idea of how these issues can be addressed and incorporated into an introductory health course which students will find relevant and applicable.

Data Collection

**Focus groups.** Data will be collected using focus groups. Focus groups will be conducted using a semi-structured interview guide, followed up by semi-structured individual interviews with available participants to check for validity in themes identified by the researcher. As stated in Chapter 2, a semi-structured interview guide will ensure the key questions are asked to gain insights and draw comparisons among the groups, but will also allow for flexibility by the researcher to pursue additional pertinent issues that may arise over the course of the group discussion (Creswell, 2007; Krueger & Casey, 2015; Patton, 2015).
The semi-structured interview guide will be developed through a process by the researcher, key informants, and content experts. Key informants will be current undergraduate students who meet the study demographic requirements, identified by the researcher and other instructors as those who are knowledgeable about issues on college campuses and are willing to assist with this study. These key informant students do not necessarily need to be experts on health issues; they merely need to be able to speak to issues they feel college students struggle with, understand how best to reach other students for a potential participant pool, help ensure understanding of the interview questions, and are willing to lend their insights to the study. The initial development of interview guide will be conducted by the researcher and other undergraduate instructors and teaching assistants at multiple institutions. The content experts will consist of other instructors who have experience teaching an introductory personal health course to college students and are familiar with the course content and have insights on student engagement with the material.

Questions will be brainstormed, sequenced, and phrased based on the collective insights by educators providing input. Next, the questions will be posed to current undergraduate students who have been identified by the researcher and those in the initial step as key informants and revision of the questions, sequence, and phrasing based on the student feedback will take place. The revised guide will then be pilot tested with a group of students to ensure items are understood by participants and elicit appropriate responses to answer the research questions. This method of developing is characteristic of the process in developing interview questions put forth by Krueger and Casey (2015).

The use of focus groups can be highly beneficial as a tool to gather data regarding the insights and perceptions of participants regarding a specific issue or experience (Basch, 1987;
The groups will range in size from 6-8 participants; this size should allow for effective participation and allow for each student to contribute meaningfully to the discussion (Basch, 1987; Krueger & Casey, 2015). This design will allow students an additional opportunity to discuss topics they find relevant and would like to see included in course content, providing a more comprehensive look into topics to be included.

To enable proper analysis of the data collected and to help eliminate recall issues, focus groups will be audio-recorded and transcribed verbatim by the researcher. All feasible attempts of deciphering garbled or inaudible discussion will be made by the researcher, such as the assistant moderator listening, consulting field notes, and reaching out to participants for their feedback. If audio is still unable to be deciphered, it will be transcribed as “inaudible.” This is an inherent limitation of this study design. Use of audio-recording will be stated during recruitment of participants and consent forms will be provided to participants and collected prior to the commencement of the focus group. If consent is refused or revoked during the focus group, participants will be excused and any feedback they provided will be excluded from analysis. Additionally, a note-taker will be used during each focus group. The inclusion of a note-taker separate from the moderator will allow the discussion and questions to flow more naturally, without the moderator having to pause the discussion to write notes. Having field notes to analyze along with the transcript of the audio will allow for a richer analysis, as well as provide back up data for analysis in case of a technical failure of the audio recording device.

At the conclusion of each focus group, the moderator will debrief the participants with an oral summary of what was covered and ask if anything was missed and needs to be included. Participants also will be reminded they may be contacted by the researcher for member checking and clarification of analysis to help establish trustworthiness through confirmability (Patton,
Follow-up interviews will be conducted with key informants identified from focus groups for triangulation purposes to check for consistency and clarity of findings (Patton, 2015). A debriefing also will occur with the researcher and assistant moderator to identify, compare, and address any specific instances that arose during that particular event (Krueger & Casey, 2015). Additional triangulation using AHCA data and document review of textbooks published for introductory health courses as well as course catalog descriptions and course syllabi will also enhance the trustworthiness of the study by illustrating credibility and dependency of data gathered from student participants (Patton, 2015).

**Saturation.** Saturation of data will determine the number of focus group conducted. The concept of saturation is vague and assumes that the collection of data and preliminary analysis is going hand-in-hand (Patton, 2015). For the current study I will begin using a single-category design with a non-segmented participant group. Following this design, I will plan for six focus groups. Based on resources available (students, time, etc.) this should be an adequate number of focus groups to allow me to generate an idea of whether saturation has been met or will be met soon. Although three to four focus groups tends to be the standard for deciding if saturation has been met or will likely be met soon (Krueger & Casey, 2015), I will be relying on the availability of instructors and teaching assistants for their assistance in recruitment and location and it would be better to over plan as opposed to conducting four groups and realizing saturation has not been established and having to regroup. The biggest issue I foresee is that of scheduling. Because I will be working with a variety of individuals and their separate schedules to conduct these groups, I plan to address this preemptively by organizing more groups than I expect to need for saturation. Based on the aforementioned standard of three to four groups, six is almost twice the amount needed, which should help minimize the consequences of any expected or unforeseen
circumstances that may lead to ineffective focus groups, such as not enough participants in attendance, not enough data generated, or having to cancel or reschedule due to campus event conflicts. Additionally, if feedback suggests a need to conduct segmented focus groups, I will move to a multiple-category design and will plan for three to four focus group for each segment and determine if saturation has been met. Focus groups should be homogenous, although homogeneity can be broadly defined for each study (Krueger & Casey, 2015). For this study I am defining the group as undergraduate students and will not be initially segmenting groups based on any other demographics or characteristics. Because these types of courses are taught to all undergraduates in this setting and are not segmented by any means, I believe it will be beneficial to keep the groups as similar to the make-up of a typical course. However, if through the conduct of the focus groups or follow-up interviews data emerge suggesting a need for additional groups to be segmented to gather richer data, I will address that and begin working with participants to conduct additional focus groups based on the determined need for segmentation.

**Interview protocol.** The current study will be guided using the following protocol as a starting point. These questions will be reviewed by other instructors and key informants. After the review process, questions will then be pilot tested to ensure questions are best stated in order to ensure participant understanding to maximize usable data. Questions were developed initially using the ARCS Model of motivation as a guide. The questions aim to capture students’ insights regarding topics they find are of interest, relevant to their lives, are confident they can learn, and can achieve satisfaction with their actions. Below is the initial interview protocol:

1. What do you think are the most relevant issues college students face? (relevance)
2. Do you think these issues are impacting the health and wellness of students? (relevance)

3. Do you think these issues are being addressed by campuses?

4. Where or to whom do you think students look for information on behaviors such as drinking, safer sex practices, and experimenting with drugs and alcohol?

5. What sort of topics were covered in your introductory to health course?

6. Which, if any, did you find you could relate to? (relevance)

7. Which, if any, did you find interesting? (attention)
   a. Why did you find these particular ones interesting?

8. Are there any topics that were not included that you think should have been?
   a. Why do you think those should be included? (interest, relevance)

9. Which topics do you think students would be able to learn and apply to their lives immediately/quickly? (confidence)

10. Which topics do you think students would like to learn about? (interest)

11. How do you think this course would be received by students if the focus was more in risk reduction than encouragement to abstain? (satisfaction)

12. How can these topics be taught in a way that encourages students to develop the skills and apply them to their lives? (satisfaction, relevance)

Research Setting and Sampling

Setting. Because this study is using a collective case study approach, the setting will vary. According to Creswell (2007), there is not set number of cases, but four or five tends to be standard and the selection of each being rationalized. The current study will be conducted at
three public institutions located throughout middle Tennessee and southern Illinois. Although differences may exist in settings of focus groups, the procedures will be as similar as possible, with any differences noted and included in data analysis. These institutions were selected based on size and demographics of enrollment, as well as the selection and requirement of an introductory health course. Tables 3.1 through 3.3 illustrate the demographic makeups of the selected institutions considered in selection. Additionally, as mentioned in the previous chapter, the Southeast is a region experiencing lower health outcomes than other regions, indicating an ideal setting for this exploratory study. Due to this, two of the institutions included in selection are from this region. The third institution in Illinois was selected in order to see if possible, differences exist among students in a different region.
Table 3.1

*Student demographics of TN institution 1*

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Number of students</th>
<th>Percentage of students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full time undergraduate enrollment</td>
<td>15,511</td>
<td>80.6%</td>
</tr>
<tr>
<td>Traditional age (under 25)</td>
<td>16,531</td>
<td>85.9%</td>
</tr>
<tr>
<td>Residents (TN)</td>
<td>17,500</td>
<td>90.9%</td>
</tr>
<tr>
<td>White</td>
<td>12,447</td>
<td>64.7%</td>
</tr>
<tr>
<td>Black or African American</td>
<td>3,780</td>
<td>19.6%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1,239</td>
<td>6.4%</td>
</tr>
<tr>
<td>Female students</td>
<td>10,367</td>
<td>53.9%</td>
</tr>
<tr>
<td>Male students</td>
<td>8,884</td>
<td>46.1%</td>
</tr>
</tbody>
</table>

Table 3.2

*Student demographics of TN institution 2*

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Number of students</th>
<th>Percentage of students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full time undergraduate enrollment</td>
<td>6,993</td>
<td>70.84%</td>
</tr>
<tr>
<td>Traditional age (under 25)</td>
<td>7,435</td>
<td>67.87%</td>
</tr>
<tr>
<td>Residents (TN)</td>
<td>9,589</td>
<td>87.54%</td>
</tr>
<tr>
<td>White</td>
<td>6,570</td>
<td>59.97%</td>
</tr>
<tr>
<td>Black or African American</td>
<td>2,312</td>
<td>21.10%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>796</td>
<td>7.26%</td>
</tr>
<tr>
<td>Female students</td>
<td>6,519</td>
<td>60%</td>
</tr>
<tr>
<td>Male students</td>
<td>4,435</td>
<td>40%</td>
</tr>
</tbody>
</table>

*numbers in red were not listed in institutional data set and were calculated by author
Table 3.3

*Student demographics of IL institution*

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Number of students</th>
<th>Percentage of students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full time undergraduate enrollment</td>
<td>8,088</td>
<td>63.1%</td>
</tr>
<tr>
<td>Traditional age (under 25)</td>
<td>Missing data</td>
<td>Missing data</td>
</tr>
<tr>
<td>Residents (IL)</td>
<td>9,376</td>
<td>73.15%</td>
</tr>
<tr>
<td>White</td>
<td>6,285</td>
<td>65.8%</td>
</tr>
<tr>
<td>Black or African American</td>
<td>1,418</td>
<td>14.8%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>880</td>
<td>9.2%</td>
</tr>
<tr>
<td>Female students</td>
<td>4,359</td>
<td>45.6%</td>
</tr>
<tr>
<td>Male students</td>
<td>5,153</td>
<td>53.9%</td>
</tr>
</tbody>
</table>

*numbers in red were not listed in institutional data set and were calculated by author*

Focus groups will meet in classrooms or meeting rooms located on each campus. Refreshments will be provided as an incentive for participation as well. In addition to the participants, the researcher will act as moderator with an assistant moderator to take notes. The assistant moderator will be the same individual for each focus group at all institutions in order to ensure consistency with procedures. This person will be trained by me and will also be present during the pilot testing phase. An audio-recorder will be used but will be placed in an inconspicuous location to limit the visibility to decrease discomfort students may feel with a visible reminder that they are being recorded. Additionally, a back up audio-recorder will be used in the event of a malfunction with the first.
Sample

Participants will be recruited using a mixed sampling strategy. Purposeful sampling will be used to identify potential participants for focus groups, with additional key informants identified for follow-up interviews. By conducting focus groups and then using follow-up interviews to clarify, corroborate, or even initiate ideas, credibility of findings can be established (Patton, 2015). Participants will be recruited for diversity of gender, race, and ethnicity; however, to maintain homogeneity of focus groups according to Krueger and Casey (2015) within the parameters of this study, participants will be limited to undergraduate students in the age range of 18-25. Initially, focus groups will be not be segmented but the researcher will expand the number of focus groups to include those segmented by gender, race, ethnicity, sexual orientation, or any other demographic if feedback from focus group participants or key informant interviews indicate a need for such.

Following IRB approval from Southern Illinois University Carbondale, Austin Peay State University, and Middle Tennessee State University, participants will be recruited purposively into focus groups and key informants will be identified for individual interviews. This will be done by the researcher visiting the introductory health courses (located in a single university department) and reading a prepared IRB approved script explaining the goals of the study written by the researcher. Additionally, fliers will be posted in the building where the classes are held, and instructors will be asked to mention it to their classes. Participants will be entered into a drawing to win a $25 gift card as an incentive for participating. With the inevitability of some recruited participants failing to show up to the focus group, Krueger and Casey (2015) suggest recruiting 2-3 more people per focus group than needed and with that retention rate in mind, the aim will be to recruit 11 participants per focus group.
Research Questions

This research will be guided by the following questions using the components of Keller’s (1987) ARCS Model of Motivation:

- What do undergraduate students think are the most important health issues they encounter in their daily lives?
- What topics would students be interested in learning in an introductory health course?
- What topics do students find to be relevant in learning in an introductory health course?
- How would students like to see topics incorporated into an introductory health course?
- Do students feel confident in their ability to learn information about these health topics and apply them to their lives?
- What topics would students like to have been addressed before college?
  a. When would students like to have had these topics addressed?

Data Analysis

Throughout the study, practicing positional reflexivity will be crucial. In qualitative research, the primary researcher is also the primary instrument and therefore it is paramount for the researcher to consider their own background, thoughts, morals, and values throughout the process (Patton, 2015). In order to help mitigate the ways in which my positionality can impact the current study I have done the following: studied existing literature for examples, gathered key informants to help assist with identifying issues among question development and coding the
data, will gather informed consent, triangulate methods, and will use member checking. Continually practicing positional reflexivity through the course of the study will also help establish and maintain trustworthiness.

After all the focus groups have been conducted, the discussions will be transcribed and those, along with the notes, will be open coded using a structural coding technique, and examined for emergent themes (Saldana, 2016). Creswell (2007) suggests categorical aggregation as a means of analyzing data in case studies. This allows the researcher to collect instances from the data and look for issue-relevant meanings to emerge (Creswell, 2007). Themes will also be cross-checked with the assistant moderator, who was present for the focus group or interview. After this has been done and themes have been established, these will be written and distributed to the participants for member checking to help establish credibility (Creswell, 2007). Participants will be contacted for member checking to ensure accurate analysis and interpretation of their words. This may be done with focus group members as well as key informants.

In addition to the transcription and field notes, a document analysis will also be conducted among NCHA data, syllabi, textbooks, and course descriptions. This triangulation of methods will help establish credibility by using multiple methods and sources to gather data on the issue (Patton, 2015). The document analysis will allow me to compare what students say are relevant issues they are facing, with those issues they report on surveys, and how these issues are or are not being addressed in current iterations of textbooks available for introductory health courses. Although this type of qualitative case study cannot be generalized, by providing what I find in context to larger settings, other researchers may be able to draw parallels to other populations they may be studying or will potentially study (Patton, 2015).
Summary

The current study will be conducted using a qualitative research design. Focus groups comprised of undergraduate students between the ages of 18-25 will be recruited from three public institutions. Participants will discuss insights regarding issues they believe are relevant to their lives and wellness. These issues will be used to help inform course content in an undergraduate introductory health course, in order to help ensure interest and relevance of the material to students. By doing so, including these topics will encourage student motivation to learn and connect with the material in a way that will perhaps lead to greater adopting of risk reducing behaviors and establishing of healthy behaviors among students. Interview protocol will be developed, reviewed, and pilot tested before use in the study with participants. In addition to focus groups, individual interviews will be conducted with key informants, document analysis of textbooks and syllabi, and analysis of NCHA data will be conducted for triangulation purposes to help establish trustworthiness. After transcription of focus groups and interviews is completed, transcripts will be open coded using a structural coding method (Saldana, 2016).

These methods will lend themselves to a better understanding of issues college students are facing that can impact their health and wellbeing. Once we understand these issues better, educators can use this information to guide course content to help establish attention, relevance, confidence, and satisfaction among their students, thereby increasing students’ motivation to learn the material and apply risk reducing behaviors in their daily lives.
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