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Knowledge, Behavior, and Attitudes of College Students Regarding HIV/AIDS

Abstract

The purpose of this qualitative study was to investigate college students' knowledge, behaviors, and attitudes regarding HIV/AIDS. This study also sought to explore why students who had HIV/AIDS knowledge participated in risky sexual behaviors, and the factors may be influencing them to do so. The theoretical framework of the health belief model (HBM) aided in the exploration of college students' rationales for sexual risk-taking and perceptions of HIV infection. The study used interpretative phenomenological analysis (IPA) and face-to-face semi-structured interviews, to collect data. Purposeful sampling was used to select 15 participants from a 4-year accredited university in New York State. Data analysis was conducted by reviewing audiotapes of every interview and coding the written transcripts. Results revealed that college students lack proper HIV knowledge and are often miseducated about the severity of HIV/AIDS. Participants were engaging in risky sexual behavior by not using condoms, not having conversations about their sexual history, and not getting tested regularly for HIV. Participants who were in a relationship expressed pregnancy to be more of a relevant risk than HIV. Overall, participants felt "untouchable" when it came to HIV/AIDS because they felt it was not relevant to them. They are generations removed from the AIDS epidemic and do not see HIV as a threat. It is recommended that campus wellness organizations and administration develop and implement HIV inclusive policies as well as educational initiatives for the campus community. These initiatives can bring HIV awareness to campus, and hopefully aid in behavior change for students to make better sexual health decisions.

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Knowledge, Behavior, and Attitudes of College Students Regarding HIV/AIDS

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Submitted in partial fulfillment
of the requirements for the degree
Ed.D. in Executive Leadership

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Dedication

I dedicate this dissertation to my mother, my angel in heaven who shaped the person I am today. As early as I can remember, we were always reading books together, whether it was at the library, reading in bed, it was something we loved to do. Who knew one day she was preparing me to read my doctoral dissertation! Her love and support were unconditional, she had a heart of gold and I know she is smiling down at this accomplishment. I did it, Mom; I love and miss you always.

This dissertation is the culmination of my journey in the Ed.D. program and was accompanied by encouragement and support from my family. To my fiancé, whose unwavering patience and support helped me accomplish my dream. You inspire me every day through your hard work, love, and guidance. To my father who sacrificed so much for his children, and who showed me what strong will and drive accomplishes. Your love and humor I am forever grateful for. To my niece whose smile and pigtailed light up a room, keep believing in the magic of learning. To my big brothers and my sister-in-law, thank you for supporting me and encouraging me to keep going through this process.

To my amazing committee chair, Dr. VanDerLinden who has guided me in this journey helped me over many obstacles, gave her time, understanding, and expertise, I am forever grateful. To my committee member Dr. Engelbride who offered kind words of support and perspective, I thank you. To the rest of the St. John Fisher College, faculty thank you for your wisdom and pushing me to become an executive leader within my organization. I will forever trust the process.

Biographical Sketch

Jessica Harris is an Assistant Professor in the department of health promotion and wellness at a University located in New York State. She teaches courses such as an introduction to health promotion and wellness, program planning for the health professions, wellness skills: application & assessment, evaluation for the health professions, critical health issues, and sexual wellness. Ms. Harris graduated with her Bachelor of Science in Community Health Education from the University of Maine at Farmington in 2011. She then completed her Master of Science in Health Science from the University of Arkansas in 2013. Previously, Ms. Harris taught introduction to health promotion, personal health and safety, and drug abuse and use in society at the University of Arkansas and was a Visiting Assistant Professor at Miami University teaching HIV/AIDS Etiology, Personal Health and Safety, and Drug Abuse and Use in Society. Ms. Harris began her doctoral studies at St. John Fisher College in the Ed.D. program in Executive Leadership. She pursued her research on knowledge, attitudes, and behaviors of college students regarding HIV/AIDS under the direction of her chair Dr. VanDerLinden and her committee member Dr. Engelbride and received the Ed.D. degree in 2019.

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I would like to acknowledge and thank the institution that I work for, for financially supporting me during my data collection for this dissertation. Funding through a faculty mini-grant aided in the data collection process.

Abstract

The purpose of this qualitative study was to investigate college students' knowledge, behaviors, and attitudes regarding HIV/AIDS. This study also sought to explore why students who had HIV/AIDS knowledge participated in risky sexual behaviors, and the factors may be influencing them to do so. The theoretical framework of the health belief model (HBM) aided in the exploration of college students' rationales for sexual risk-taking and perceptions of HIV infection.

The study used interpretative phenomenological analysis (IPA) and face-to-face semi-structured interviews, to collect data. Purposeful sampling was used to select 15 participants from a 4-year accredited university in New York State. Data analysis was conducted by reviewing audiotapes of every interview and coding the written transcripts.

Results revealed that college students lack proper HIV knowledge and are often miseducated about the severity of HIV/AIDS. Participants were engaging in risky sexual behavior by not using condoms, not having conversations about their sexual history, and not getting tested regularly for HIV. Participants who were in a relationship expressed pregnancy to be more of a relevant risk than HIV. Overall, participants felt "untouchable" when it came to HIV/AIDS because they felt it was not relevant to them. They are generations removed from the AIDS epidemic and do not see HIV as a threat.

It is recommended that campus wellness organizations and administration develop and implement HIV inclusive policies as well as educational initiatives for the campus

community. These initiatives can bring HIV awareness to campus, and hopefully aid in behavior change for students to make better sexual health decisions.

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Chapter 1: Introduction

Human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) has impacted communities for decades, directly infecting more than 70 million individuals globally since the early 1980s (The World Health Organization [WHO], 2017). HIV is a virus that attacks the immune system, destroying an individual's white blood cells (Center for Disease Control and Prevention [CDC], 2018a). The target cell of HIV is the T4 or CD4 subset of T lymphocytes, which regulate the immune system (Stine, 2014). AIDS is a life-threatening syndrome caused by the HIV virus and characterized by the further breakdown of the body's immune defenses. The primary defect caused by AIDS is an acquired, persistent, quantitative functional depression of the T4 subset of lymphocytes (Stine, 2014).

HIV/AIDS is transmitted through bodily fluids such as blood, semen, pre-seminal fluid, rectal fluid, vaginal fluid, and breast milk from an infected individual (CDC, 2018b). Many risk factors can increase susceptibility to contracting HIV/AIDS, such as high-risk sexual behavior. High-risk sexual behavior includes not using a condom during anal sexual activity, during penile-vaginal sexual activity, and during oral sexual activity (CDC, 2015).

HIV/AIDS is a deadly, preventable disease yet, 37 years since AIDS was first officially reported by the CDC, there is still no cure (Stine, 2014). The origin of HIV/AIDS has been a subject of scientific debate for many years (AVERT, 2017). Research suggests that HIV was spread from chimpanzees to humans during the 1920s

within the historic trade routes of the Congo (AVERT, 2017). However, AIDS was not officially reported in the United States by the CDC until the spring of 1981, among young homosexual males (Curran & Jaffee, 2011). Given that there is a 10- to 11-year incubation period, it is likely that HIV was in the United States by 1965 or earlier (Stine, 2014). The long lag time between infection and the onset of severe HIV-related symptoms has and will have a profound impact on future rates of life expectancy and economic growth (Piot et al., 2001).

One population that might experience a profound impact are college students. College students are a generation removed from the HIV/AIDS pandemic, and many students are not getting the sexual health education they need, or sex education is not starting earlier enough (CDC, 2018c). Certain risk behaviors put college students at higher risk for HIV, including low HIV testing rates, substance abuse, low rates of condom use, and multiple sexual partners (CDC, 2018c). The college environment is prone to sexual experimentation, otherwise known as the “hookup culture,” and according to relevant literature, the hookup culture should give college and university administrators cause for concern (Klinger, 2016). Male and female college students are experiencing twice the number of hookups as opposed to first dates (Bradshaw, Kahn, & Saville, 2010). In addition, 91% of college students feel that their lives are dominated by the hookup culture; the median number of total hookups for a graduating senior is seven (Armstrong, Hamilton, & England, 2010). Calculating to 1.8 hookups per year assuming the student completes their degree within 4 years (Klinger, 2016) students aged 20-24 having the highest sexually transmitted infection (STI) rates of any other population (CDC, 2018d).

HIV/AIDS is a global story that requires a broad understanding of international politics, economics, scientific facts, and diverse cultural traditions (Stine, 2014). In order to understand the impact of HIV, an examination of prevalence and incidence rates on a global, national, and local level is essential.

HIV globally. An estimated 36 million individuals worldwide are currently living with HIV, and an estimated 29 million people have already died, giving a cumulative total number of HIV infections of 56 million worldwide (Piot et al., 2001). In 2016, 1.9 million individuals became newly infected with HIV globally, equivalent to 5,000 new infections per day (HIV, 2018). In addition to the number of new infections, only 60% of the current global population know their HIV status, leaving over 14 million people untested for HIV worldwide (HIV, 2018). In 2016, the Joint United Nations Programme on HIV/AIDS (UNAIDS) estimated 1.9 million new HIV infections annually are among individuals aged 15 and older (Staveteig, Croft, Kampa & Head, 2017). HIV remains a public health challenge worldwide, and while the United States is the greatest financial supporter of the global response to HIV, it has an ongoing epidemic itself (AVERT, 2018a).

United States and HIV. More than 1.1 million Americans are living with HIV (HIV, 2018) and over 507,351 Americans have died from complications of the virus (CDC, 2018e). As of 2010, an estimated 1,178,350 people aged >13 were infected with HIV (Zanoni & Mayer, 2014). In 2015, HIV was the ninth leading cause of death for Americans aged 25-34 and 34-44 (CDC, 2018e). In 2016, 39,782 new HIV infections were reported in the United States, with 21% of those infections among individuals aged 13-24 (CDC, 2018e). In 2014, those aged 13-29 represented 23% of the United States

population yet accounted for 40% of diagnosed HIV infections (Ocfemia et al.,2018).

Geographically, HIV/AIDS has affected all regions in the United States, but infection rates are the highest in the South and the Northeast (CDC, 2018f).

New York State and HIV. As of 2015, 128,681 people in New York State were living with HIV, with a rate of 768 people living with HIV per 100,000 of the population (AIDSVU, 2018). In 2016, there were 2,875 new HIV diagnoses in New York State, with a rate of new infections 17 per 100,000 (AIDSVU, 2018). The number of deaths of people diagnosed with HIV in New York State in 2015 was 1,789, a rate of 11 per 100,000 of the population (AIDSVU, 2018). Ages 13-19 account for 5.5% of all new HIV infections in New York State, ages 20-24 account for 17.7%, and ages 25-29 account for 20.9% of all new HIV infections in New York state (CDC, 2016).

College students and HIV. Students today did not witness the impact that HIV/AIDS had demographically, economically, politically, and socially throughout the world (Stine, 2014). In the early 1990s, it was estimated that 1 in 500 college students were HIV positive (Gayle et al., 1990). Alarming rates have since been estimated with 1 in 100 college students being HIV positive (Cooper, 2002). Overall, the incidence of HIV has declined in recent years, yet rates of HIV infection among young adults have not seen a proportionate decline (Adefuye, Abiona, Balogun, & Lukobo-Durrell, 2009). From 2010-2014, HIV infections per 100,000 of the population varied significantly among ages 13-29 years (Ocfemia et al., 2018) (see Table 1.1).

Table 1.1

Diagnoses of HIV Infection Among 13-29 Year Olds (Rates Per 100,000)

Age Group at diagnosis	2010 rates	2011 rates	2012 rates	2013 rates	2014 rates
13-15	0.7	0.8	0.8	0.6	0.6
16-17	5.0	4.6	4.3	4.4	4.2
18-19	17.7	17.4	16.7	14.9	15.6
20-21	30.1	29.7	27.3	27.5	28.3
22-23	35.3	33.7	34.6	32.7	34.1
24-25	32.4	32.6	34.4	34.0	35.4
26-27	30.2	30.1	29.9	32.4	33.9
28-29	28.9	28.9	28.9	27.6	29.1

As seen in Table 1.1, there is no dramatic increase in HIV infections rates; however, the problem is that the rates are not consistently decreasing. Potentially, statistics could be underreported based on the long lag time between infection and onset of severe HIV (Piot et al., 2001). Table 1.1 reveals that HIV infection is preceding diagnosis for young people in the United States by an average of 2.7 years (Hall, Song, Szwarcwald, & Green, 2015). These findings show the importance of prevention efforts geared towards individuals who are 18 years old continuing through the period of

elevated risk (Ocfemia et al., 2018), such as college-aged individuals as defined by the Department of Education as 18-24 years old (National Center for Education Statistics, 2018). However, the percentage of United States schools in which students are required to receive curriculum on HIV prevention has decreased from 64% in 2000 to 41% in 2014 (CDC, 2018c).

As of March 2016, 24 U.S. states, including the District of Columbia, require public schools to teach sex education, 21 of which mandate sex education and HIV education (NCSL, 2015). Thirty-five states, including the District of Columbia, allow parents to opt-out of HIV education on behalf of their children. Four U.S. states require parental consent before a child can receive any sexual education (NCSL, 2015).

Regarding curriculum, 20 states require information on condoms or contraception be discussed, 39 states require that abstinence be included and, 37 of those states require abstinence to be stressed (Guttmacher Institute, 2018). However, in New York State, parents have the right to opt their children out of any HIV education that is taught in school and is one of the 39 states that stresses abstinence-only practices (Guttmacher Institute, 2018).

College students are of interest because they are living away from home developing independence, exploring and experimenting with what is known as the “hookup culture” on college campuses. The college environment offers many opportunities for high-risk behavior, such as being sexually adventurous, often with multiple partners, and not consistently using condoms (Adefuye et al., 2009). The transition from living at home to living on a college campus is consistent with periods of considerable biologic and physiologic change during a time when engagement in high-

risk sexual behaviors, alcohol and drug use, and the risk for acquiring HIV infection increases and even peaks (Garofalo et al., 2016; Lall, Lim, Khairuddin, & Kamarulzaman, 2015). However, few HIV studies have considered these transitions. Due to the decrease in HIV preventative curriculum and the increase in HIV infection from ages 18-24, it is important to further study the college population.

Problem Statement

Each day, 37% of the approximately 4,500 new HIV infections diagnosed daily are occurring among ages 15 to 24 (United Nations, 2016). The CDC (2018d) states that many students are not getting the sexual health education they need, and that sex education is not starting early enough. For example, almost 70% of young adults are participating in sexual intercourse by 18 years of age (Cavos-Rehg et al., 2009), the beginning of their college experience. Young adults are at high risk for STIs, including HIV, because of their participation in risky sexual behaviors (Brown & Venable, 2007). Young adulthood is also a time of experimentation, living away from parents, and the ability to interact with a diverse group of individuals, which they may have not been able to do before. The college hookup culture presents opportunities for young adults to engage in sexual activities. The statistics are evident: young adults aged 15-24 account for half of all STI infections in the United States (CDC, 2017). Young adults make up just over one quarter of the sexually active population, but account for half of the 20 million new STI diagnoses in the United States each year (CDC, 2017). In addition, young adults avoid talking about HIV with their sexual partners due to stigma, fear, homophobia, isolation, or lack of support, placing many students at higher risk for HIV infection (CDC, 2018c).

Specific to college-going young adults, the American College Health Association (2017) reported that 43.9% of male college students and 49.8% of female college students were engaging in vaginal-penile sex within the past 30 days. In addition to engaging in sexual intercourse, 47.7% of male college students and 41.9% of female college students reporting that they either did not use contraception, the question was not applicable, or they did know if they or their partner used contraceptives the last time they had sexual intercourse (ACHA, 2017). According to the CDC (2015), unprotected oral, vaginal-penile, and anal sexual activity are the leading causes of HIV transmission. These sexual experiences among college students commonly involve alcohol consumption and binge drinking, which is then associated with high levels of sexual risk taking (Downing-Matibag & Geisinger, 2009; Lambert, Kahn, & Apple, 2003; Paul & Hayes, 2002) or, in cases where students are too inebriated to give consent, involuntary risk exposure (Flack et al., 2007). According to the Task Force of the National Advisory Council on Alcohol Abuse and Alcoholism (2002), in addition to having sex while under the influence of alcohol, sexual risk taking among college students involves having unprotected sex with multiple different partners. Consequently, those who are engaging in risky sexual behavior might experience STIs including HIV infection (Flack et al., 2007).

Several studies suggest that college students have access to HIV-related information on college campuses. This information has enabled college students to understand how HIV is transmitted, resulting in higher levels of HIV knowledge. Yet, HIV knowledge may result in one's misguided confidence that they will never contract HIV, or place too much trust in friends and sexual partners (Smith, Menn, Dorsett, & Wilson, 2012). Suggesting that knowledge alone does not predict safe sexual practices

(Anastasi, Sawyer, & Pinciario, 1999; Gupta & Weiss, 1993; Lewis, Malow, & Ireland, 1997; Opt & Loffredo, 2004). Understanding the factors that may be influencing students to participate in risky sexual behavior is essential to controlling the spread of the HIV virus between college students.

To better understand the causes for safer sexual practices in college students, the present study analyzes students' knowledge of HIV, their engagement in risky sexual activity, as well as their attitudes and perceptions of HIV. The theoretical framework of the health belief model (HBM) aided in the exploration of college students' rationales for sexual risk taking and perceptions of HIV infection.

Theoretical Rationale

For over six decades the health belief model (HBM) has been one of the most widely used psychosocial approaches explaining health-related behavior (Rosenstock, Stretcher, & Becker, 1994). During the early 1950s the U.S. Public Health Service was primarily oriented toward the prevention of disease instead of treatment of disease (Rosenstock, 1960). The health belief model (HBM) was developed in the 1950s by social psychologists Godfrey Hochbaum, Stephen Kegels, and Irwin Rosenstock in the U.S. Public Health Service (Hochbaum, Rosenstock, & Kegels, 1952). The model aimed to explain the lack of participation in preventative health programs (Hochbaum, 1958; Rosenstock, 1960) and screening tests for early detection of asymptomatic diseases (Rosenstock, 1960). The HBM is a conceptual framework for understanding why individuals engage or do not engage in a wide variety of health-related actions (Janz & Becker, 1984). The model relates to psychological theories of decision making, which attempt to explain action in a choice situation (Maiman & Becker, 1974). Rosenstock has

attributed the HBM to Lewinian theory, where behavior depends on two variables: the value placed by an individual on a particular outcome, and the individual's estimate of the likelihood that a given action will result in that outcome (Maiman & Becker, 1974). Like the Lewinian theory, the HBM uses a strong component of individual perception in its analyses (Hochbaum et al., 1952). Other theories have also contributed to the development of the HBM, such as the social learning theory developed by Albert Bandura (Hochbaum et al., 1952). Both the social learning theory and the HBM believe that learning results from events or reinforcements that then reduce physiological drives that activate behavior (Rosenstock et al., 1988). Both are considered value-expectancy theories where reinforcements and consequences of behavior are believed to operate by influencing expectations regarding the situation (Rosenstock et al., 1988).

The HBM attempts to predict health-related behavior in terms of certain belief patterns and has been applied to all types of health behaviors, including those connected with the transmission of HIV/AIDS (Hochbaum et al., 1952). The model states that the perception of a personal health behavior threat is itself influenced by one's health values, concerns about health, vulnerability to a health threat, and beliefs about the consequences of the health issue (Hochbaum et al., 1952). The basic components of the HBM depend upon two variables: a) the desire to avoid illness, or if ill, seek treatment, and b) the belief that a specific health action will prevent illness (Janz & Becker, 1984).

The original constructs developed in the health belief model related to personal beliefs about behavior change were known as perceived susceptibility, perceived seriousness, perceived threat, perceived benefits, and perceived barriers (Rosenstock, 1974), as outlined in Figure 1.4. The construct known as *perceived susceptibility* states

that individuals vary widely in their feelings of personal vulnerability to a condition (Janz & Becker, 1984), meaning that an individual perceives themselves as vulnerable to contracting an illness or condition (Janz & Becker, 1984). For instance, one might deny that one is susceptible to any type of disease or illness, one may admit that there is a possibility to be susceptible, or one may feel as though one is in complete danger of contracting the condition (Rosenstock, 1974).

Perceived seriousness, also known as *perceived severity*, consists of feelings concerning the seriousness of contracting the disease or illness, which can vary from person to person (Janz & Becker, 1984). This construct evaluates medical and clinical consequences such as death, disability, pain, as well as social consequences such as conditions at work, family life, and social relationships (Janz & Becker, 1984). For example, a person may not believe that HIV is medically serious, but nevertheless believe that acquiring it would be serious if it created important psychological and economic tensions within the individual's family.

Once an individual has identified that they are susceptible to a disease or illness and that it could seriously affect their health and quality of life a *perceived threat* has been identified (Becker, Drachman, & Kirscht., 1974). Once a threat has been identified an individual starts to look at the *perceived benefits* of taking action.

Perceived benefits are an individual's beliefs about whether the behavior change impact will be positive or negative (Janz & Becker, 1984). The acceptance of one's susceptibility to a disease and the belief that the disease is serious leads the individual to perceive a health threat, yet these do together do not define a particular course of action as that is determined by the individual (Rosenstock, 1974). Thus, a "threatened"

individual would not be expected to accept the recommended health action unless it was perceived as feasible and effective (Janz & Becker, 1984). For example, a college student may recognize that participating in risky sexual behavior can put them at risk for contracting HIV and the outcome HIV infection is serious. However, their actions and behaviors after that recognition would depend on how beneficial they believed the various alternatives to be (Rosenstock, 1974). An individual may believe that a given action will be effective in reducing the threat of disease, but at the same time see that action as inconvenient, expensive, unpleasant, painful, or even upsetting, all of which may deter them taking action (Rosenstock, 1974). These deterrents to taking health action are defined as *perceived barriers*.

Perceived barriers are known as obstacles that may prohibit someone from making the proper behavioral changes to avoid illness and may outweigh the positive benefits of taking action (Rosenstock, 1974). These combined constructs of susceptibility, seriousness, the force to act, the perception of benefits, and few barriers would be the preferred path of action (Rosenstock, 1974). However, to trigger the decision-making process, the construct known as *cue to action* looks at one's internal triggers such as symptoms, external triggers such as mass media communications, and interpersonal interactions, such as reminder postcards from healthcare providers (Janz & Becker, 1984). Lastly, the roles of demographic, socio-psychological, and structural variables serve to condition both individual perceptions and the perceived benefits and preventative actions (Rosenstock, 1974).

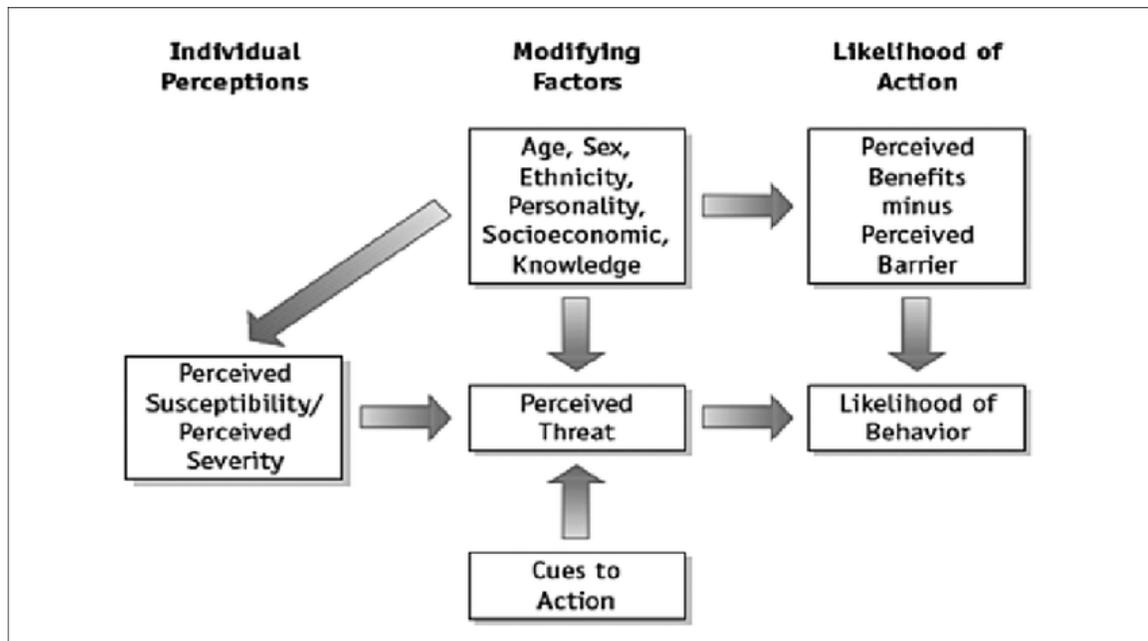


Figure 1.1. The Health Belief Model. Reprinted from Stretcher, V., & Rosenstock I.M. (1997). The Health Belief Model. In Glanz K., Lewis F.M., & Rimer B.K., (Eds.). *Health Behavior and Health Education: Theory, Research and Practice*. San Francisco: Jossey-Bass.

As seen in Figure 1.1, there are three underlying themes that emerge from the health belief model: individual perceptions, modifying factors, and the likelihood to take action. “Individual perceptions” address the individual perceptions and attitudes regarding an illness or disease through the two constructs of *perceived susceptibility* and *perceived seriousness*. “Modifying factors” includes demographic information from the individual such as their age, sex, ethnicity, and race. Among these modifying factors are socio-psychological variables are related to one’s personality, social class, and peer pressures and structural variables such as knowledge of disease and whether the individual has had any prior contact with the disease (Rosenstock, 1974). All these modifying factors directly impact the *perceived threat* (Rosenstock, 1974). Cues to action

are consistent with variables that can reinforce or enable one to take action regarding the behavior change. For example, things like education, knowledge of symptoms, and media could all be cues to action. The last major theme of the health belief model is the “likelihood to take action.” This theme directly impacts *perceived benefits* and *perceived barriers* by outlining these constructs and the other major constructs of the model in the hope that an individual will take the recommended preventative action (Rosenstock, 1974).

Statement of Purpose

The purpose of this study was to investigate college students’ knowledge, behaviors, and attitudes regarding HIV. In addition, the concepts and constructs from the health belief model and research questions guided the proposed research.

Research Questions

The following research questions were examined:

1. What is the knowledge level of college students regarding HIV/AIDS?
2. What risky sexual behaviors are college students participating in that put them at risk for HIV?
3. If college students have knowledge about the relationship between risky sex and HIV, why do they still participate in the risky behavior?

Potential Significance of the Study

This research will help to enhance current knowledge regarding HIV prevention methods for the target population of college students. More specifically, this study will help health educators and college officials better understand what is influencing students to engage in risky sexual behavior that puts them at risk for HIV infection. More

importantly, this research can aid in minimizing risk of infection on college campuses and potentially increase awareness of personal risk of contracting HIV in the college-student population. This research is significant for college students because it can increase awareness of HIV and is a major step in limiting the disease as well as reducing the stigma associated with HIV. Positive framing in the public discourse can guide educators in a new direction by identifying different themes elicited from students about their knowledge or even risky sexual behavior that could put students at risk for HIV. In addition, colleges and universities must be aware that a significant portion of their students belong to the at-risk population of HIV (18-24) (Hendricks et al., 2018).

Administrators and educators are constantly developing strategies to educate students about HIV and the importance for testing (Johnston et al., 2017). The findings and themes from this study can aid in students making better-informed decisions as well as new insights on how to create educational tools or strategies to contain the spread of HIV infection. Since sex education is lacking in high schools, it presents an opportunity for colleges and universities to intervene and provide the necessary education for students regarding HIV (Calloway, White, & Corbin, 2014). Ultimately, understanding college students' lived experiences, including their knowledge levels, behaviors, and attitudes about HIV/AIDS, from one of the highest-prevalence regions in the United States helps contribute to a better understanding of prevention methods, programming, and even policy for future students and institutions.

Definitions of Terms

AIDS stands for acquired immunodeficiency syndrome caused by HIV and is the last stage of the virus.

Attitudes refer to the degree to which a person has a favorable or unfavorable evaluation of the behavior of interest. It entails consideration of the outcomes of performing the behavior (LaMorte, 2016).

College Student is defined as any full-time traditional undergraduate student between the ages of 18 and 24 (National Center for Education Statistics, 2018).

Cues to Action are known as triggers to the decision- making process, including both internal triggers (e.g., symptoms) and external (e.g., mass media communications, social networks, friends).

Demographic information describes an individual's age, gender, ethnicity, and race.

Health belief model is defined as the perception of a personal health behavior threat and is itself influenced by one's health values, concern about health, vulnerability to a health threat, and beliefs about the consequences of the health issue (Hochbaum et al., 1952).

HIV is a virus that attacks the immune system, destroying an individual's white blood cells (CDC, 2018a).

Incidence is defined as the number of new cases of disease or illness in a population (CDC, 2012).

Perceived Barriers are defined as the physical and psychological obstacles that may hinder someone from taking action towards positive behavior change (Janz & Becker, 1984).

Perceived Benefits are defined as one's idea of how likely it is that their behavior change will result in positive outcomes, such as increase in quality of life and absence of disease (Janz & Becker, 1984).

Perceived Seriousness or Perceived Severity are defined as how serious one believes a disease or illness will be to their health and quality of life (Janz & Becker, 1984).

Perceived Susceptibility is the belief that in contracting a specific disease, one is in danger (Rosenstock, 1974).

Perceived Threat is identified if an individual believes they are susceptible to a health condition and if they believe the health condition to be serious or severe.

Prevalence is defined as the proportion of individuals who have a disease or illness over a specified point in time (CDC, 2012).

Rate is the measure of the frequency at which an event occurs in a population at a specific time.

Risky Sexual Behavior is defined as any behavior that puts one at risk for sexually transmitted diseases or illnesses as well as unintended pregnancies.

Socio-Psychological Variables are related to one's personality, social class, and peer pressures.

Structural Variables are knowledge of the disease and whether the individual has had any prior contact with the disease (Rosenstock, 1974).

Chapter Summary

HIV/AIDS is a problem worldwide. The disease is a particularly consistent problem within the United States among those aged 13-24, representing many young

adults that attend college. It is important to investigate college students' knowledge, behavior, and attitudes to understand how to prevent or decrease infection rates which have not seen a proportionate decline in the last decade among this population.

The next chapter analyzes the literature related to college students' risky sexual behaviors, HIV infection rates, knowledge, attitudes, and perceptions of college students regarding HIV/AIDS. Chapter 2 will also focus on a review of literature of the health belief model and its use in previous research on HIV/AIDS.

Chapter 3 will discuss the methodology for the current study, including research context, recruitment of participants, selection of the instrument, and data analysis procedures. Chapter 4 will then discuss major significant findings related to the hypotheses and research questions of this study. Lastly, Chapter 5 will discuss the implications to the findings, limitations of the study, and recommendations for future research regarding HIV/AIDS in college students.

Chapter 2: Review of the Literature

Introduction and Purpose

This chapter will review relevant literature regarding HIV/AIDS amongst college students. The review will begin with an overview of risky sexual behaviors of college students through an analysis of sexual behaviors, condom usage, multiple sexual partners, alcohol use, and drug use. Next, an analysis of prevalence rates of HIV/AIDS among college students will be discussed. The review will go on to examine the knowledge, behaviors, and attitudes of college students regarding HIV/AIDS. Finally, a review of the health belief model will be used to identify intentions and predictions of behavior among college students' decisions to participate in risky sexual behaviors.

Risky Sexual Behaviors of College Students

Risky sexual behaviors or high-risk behaviors are commonly referred to as behavior that can increase one's risk of contracting STIs, HIV/AIDS, or unintended pregnancies (Scholly, Katz, Gascoigne, & Holck, 2005). Except for colds and flu, STIs, including HIV, are the most common infections in the United States (Weinstock, Berman, & Cates, 2004). In 2016, STI rates hit an all-time high with 1.59 million cases of chlamydia, 468,514 cases of gonorrhea, 27,814 cases of syphilis, and 39,782 new cases of HIV (CDC, 2016). However, HIV is the only infection of the four that is incurable (WHO, 2018). The CDC (2017) estimates that ages 15-24 make up one-fourth of the sexually active population, but account for half of all new STIs in the United States each year. Anyone who is sexually active is at risk (CDC, 2016), but some behaviors can

increase risk such as unprotected sex (sex without a condom), large numbers of sexual partners, judgment-inhibiting alcohol consumption, and drug use (Paul, Mcmanus, & Hayes, 2000).

Hookup culture. On college campuses students are participating in uncommitted sexual encounters involving multiple sexual partnerships with nonromantic partners (Garcia et al., 2012), resulting in high rates of STIs. These sexual encounters are known as “hookups” that range from kissing, fondling, to penile-vaginal intercourse between partners who have no relational commitment (Flack et al., 2007). Hookups are also known as casual relationships where you participate in sexual activity outside of a committed relationship (Bisson & Levine, 2009; Grello, Welsh, & Harper, 2006; Hughes, Morrison, & Asada, 2005; Puentes, Knox, & Zusman, 2008). The “hookup” culture is looked at as a way for college students to explore and experiment with their newfound freedom (Harris, 2013). Many college students are choosing “hooking up” over the traditional dating, which some claim is time consuming and ties them down to one person (Downing-Matibag & Geisinger, 2009). College students would rather have casual sexual relationships, which in turn would save money and time for other activities (Downing-Matibag & Geisinger, 2009). These “hookups” often involve alcohol consumption and binge drinking, which are associated with high levels of sexual risk taking (Lambert et al., 2003; Paul & Hayes, 2002). This culture is consistent with having sex while under the influence of alcohol or drugs and having unprotected sex with multiple partners (NIAA, 2002). These “hookups” occur in a variety of college settings. One study of students’ perceptions of hookups reported that 67% occur at parties, 57% at dormitories or fraternity houses, 10% at bars and clubs, 4% in cars, and 35% at any unspecified

available place (Paul & Hayes, 2002). In addition to college campus locations, spring breaks and holidays are purposely planned to experiment or engage in uncommitted sexual activity and other high-risk behaviors (Josiam, Hobson, Dietrich, & Smeaton, 1998).

Sexual behaviors. A national study done by the American College Health Assessment (ACHA) (2017) surveyed 63,497 college students from 92 United States institutions with the purpose of assisting college health service providers, health educators, counselors, and administrators in collecting data about students' habits, illness, behaviors, and perceptions of the most prevalent health topics. The ACHA's descriptive survey discovered that 43.9% of male college students and 49.8% of female college students had engaged in vaginal-penile sex within the past 30 days (ACHA, 2017). Results also concluded that 8.2% of male college students and 4.3% of female college students were engaging in anal sex within the past 30 days (ACHA, 2017). Further, 45.1% of male college students and 44.9% of female college students reported they engaged in oral sex (mouth to penis or mouth to vagina) in the past 30 days (ACHA, 2017).

Condom usage. The American College Health Assessment (ACHA) (2017) reported that 52% of male college students and 46.2% of female college students "mostly" or "always" used a condom or other protective barrier during their penile-vaginal sexual intercourse within the last 30 days. ACHA (2017) found 47.7% of male college students and 41.9% of female college students reporting that they either did not use contraception, the question was not applicable, or they did not know if they or their partner used contraceptives during the last time they had sexual intercourse. The

population of students who did report that they “mostly” or “always” used a condom or other protective barrier during their past sexual intercourse went on to identify that the protective barrier method used was “withdrawal,” with 27.6 % of males and 32.2% of females reporting this method was used (ACHA, 2017). The use of the “withdrawal” method is not a valid contraceptive, nor does it prevent HIV infection.

A cross-sectional study conducted by Adefuye et al. (2009), sampling 390 commuter-college students, examined the prevalence and perceptions of HIV high-risk behaviors. Key findings from this study found evidence of inconsistent condom use, particularly not using condoms during students’ last sexual intercourse. Seventy-five percent of students 30 or older, 61% of those aged 20-29, and 48.5% of students below the age of 20 reported that they did not use a condom during their last sexual intercourse (Adefuye et al., 2009). The key findings reported by this study corroborate that there is a prevalence of unsafe sexual practices happening among college-aged students. Lack of condom use or the sporadic use of condoms is a known factor in HIV infection.

In addition, a sample of 184 college students were asked “How often do you have unprotected sex?” with results finding 50% of these students stated they never have unprotected sex and 25% claiming that they always have unprotected sex (Lance, 2001). The study did find a statistically significant gender difference in the participation in unprotected sex. Lance (2001) took into consideration the differences in sexual responsibility between males and females and found that 55% of females indicated they have never had unprotected sex in comparison to 33% of males in the study.

There is a great deal of quantitative research documenting the incidence of risky sexual behavior among college students. However, there is a lack of current qualitative

literature directed at identifying the reasons for which college students engage in risky sexual behavior and the conditions in which it occurs (Williams et al., 1992). A 1992 qualitative study sampled 308 college students and almost unanimously found that students do not like condoms and believe that they interfere with their sexual pleasure and gratification (Williams et al., 1992). Particularly, one participant described his distaste for condoms by stating “I think condoms really suck . . . when I finally thought about getting AIDS, I began to sometimes use them. I don’t like them though” (Williams et al., 1992). Overall, participants from this study explained that condoms decrease the sensation or make sex “not feel as good” (Williams et al., 1992). Participants felt that condoms have an undesirable social context, stating that it is uncomfortable to ask a sexual partner to use a condom because that implies you distrust them or think they are promiscuous (Williams et al., 1992).

A meta-analysis was conducted by Sheeran and Taylor (1999) on 23 psychosocial predictors of college students’ intentions to use condoms. Data from 67 independent sources were included in this analysis. The inclusion criteria used for this study had at least one predictor variable, a measure of intention to use condoms, and a bivariate statistical relationship (between a predictor variable and intentions to use condoms). The authors found that demographic and personality variables had small correlations with intentions to use condoms. Gender had a small positive correlation with behavioral intentions, indicating that women were more likely to intend to use condoms than were men (Sheeran & Taylor, 1999). In addition, the perceived effectiveness of condoms preventing HIV/AIDS had a small correlation with student’s intention to use them ($r=.11$), although perceived benefits of condom use combined with student’s perceptions

of effectiveness of condoms resulted in a medium effect size (Sheeran & Taylor, 1999). Perceived barriers to using condoms had a small to negative correlation with intention ($r=-.19$), indicating that the fewer barriers to condom use, the stronger the student's intentions to use condoms (Sheeran & Taylor, 1999).

Researchers also examined relationships between multiple sexual partners, condom use, alcohol use, and one's vulnerability to HIV/AIDS (Desiderato & Crawford, 1995). The cross-sectional survey was administered to 427 college students and results show that 66% of the college students surveyed reported being sexually active (Desiderato & Crawford, 1995). Of the students surveyed, 33% reported having one or more sexual partners and 75% reported inconsistent condom use as well as being more likely to use alcohol prior to their sexual encounters. Of these sexually active students, 27% stated they were less likely to use condoms when they had consumed alcohol prior to having a sexual encounter (Desiderato & Crawford, 1995).

Multiple sexual partnerships. Having multiple sexual partners paired with inconsistent condom use is a recognized HIV risk (Anderson & May, 1991; Seidman, Mosher, Aral, 1992). In addition to the ACHA data on condoms, students reported the number of sexual partners they have had. Thirteen percent of male college students and 10% of female college students reported having four or more sexual partners within the last 12 months (ACHA, 2017). Previous research done by Adefuye et al. (2009) also found male college students aged 20-29 (48%) reported having two or more female partners within the past 3 months. Of the female participants who reported male sexual partnerships, there were significant differences in the proportion who reported having two or more partners in the previous 3 months. Females aged 30 and older were significantly

less likely than their female counterparts aged 20-29 to report having multiple male sexual partners. Overall, 40.1% of the participants reported having multiple sexual partnerships within the past 3 months (Adefuye et al., 2009).

While there is a lack of current research that focuses on HIV in the college student population, a study conducted by Baldwin and Baldwin (1988) can help us understand the ongoing phenomenon known as the hookup culture. A random sample of college students from a university in southern California ($n=1426$) revealed that college students are engaging in a limited number of activities that would protect them from contracting HIV. Specifically, the average onset for sexual intercourse was 17 years of age with an average of two sexual partners per year. With the duration until graduation at about 4-5 years, students are looking at accumulating 10 to 12 sexual partners (Baldwin & Baldwin, 1988). Nineteen percent of students reported that within the last 3 months, students engaged in sexual intercourse with a complete stranger (Baldwin & Baldwin, 1988). Other studies expand on these findings by focusing on the conditions in which college students participate in risky sexual behaviors, such as under the influence of alcohol and recreational drugs.

Alcohol consumption. One root cause of sexual risk taking on college campuses is alcohol consumption (Cooper, 2002). Several studies have explored the hypothesis that the use of alcohol or drugs is directly related to HIV infection. Desiderato and Crawford (1995) found that alcohol consumption both in frequency and quantity is significantly correlated with the number of sexual partners participants had over an 11-week period. Participants who reported engaging in multiple sexual partnerships also reported frequent heavy alcohol consumption, such as five or more drinks preceding one sexual encounter.

Like other studies, the authors also found gender differences between male and female college students. Male college students (31.4%) were more likely to have five or more alcoholic beverages prior to sexual activity than females (18.7%) (Desiderato & Crawford, 1995).

Twenty years after Desiderato and Crawford's 1995 study, more recent studies found similar results regarding alcohol consumption and college students. The ACHA (2017) reported that 66.7% of college students are consuming alcohol on college campuses. Female students (21.1%) and male students (22.3%) reported having unprotected sex while drinking alcohol within the past 12 months (ACHA, 2017). Students also reported that they did something they later regretted under the influence of alcohol (males 35.8%, females 34.3%) (ACHA, 2017). When students were asked if they forgot where they were and what they did when drinking alcohol in the past 12 months, 29.6% of males and 29% of females reported that they did, in fact, forget (ACHA, 2017). Additionally, ACHA data report that, in the previous 12 months, 1.2% of male students and 2.9% of females experienced someone having sex with them without their consent while they were under the influence of alcohol (ACHA, 2017). Reports went on to show that 0.4% of males and 0.2% of females admitted that they were the perpetrators in having sex with someone without their consent and under the influence of alcohol in the past 12 months (ACHA, 2017). The data from the ACHA supports that college students are engaging in not only risky sexual behaviors, but behaviors such as alcohol and drug use are lowering their inhibitions and ability to make cognitively sound decisions.

As mentioned above, a study conducted by Williams et al. (1992) aimed at gaining a better understanding of college students' unsafe sexual behavior, including

alcohol consumption. The researchers employed a focus group of 308 college students, 146 men and 162 women. The focus group discussion provided an opportunity for students to explain in narrative format their sexual experiences and for researchers to gain a better understanding of unsafe practices. Students explained that they participated in risky sexual behavior because of alcohol impairment (Williams et al., 1992). One participant stated, “I guess there are episodes where you get really, really drunk, and things happen, and you forget about the consequences” (Williams et al., 1992). Alcohol intoxication and sex are an unsafe combination that can lead to STIs, including HIV (Leigh & Stall, 1993).

Drug use. Another judgment-inhibiting risk factor associated with risky sexual behavior is drug use. The ACHA (2017) reported that 20.2% of male college students and 21.2% of females reported using marijuana. In addition to marijuana use, 12.5% of college students reporting using prescription drugs that were not prescribed to them in the past 12 months (e.g., antidepressants, erectile dysfunction drugs, pain killers, sedatives, and stimulants) (ACHA, 2017).

Data suggest that risky sexual behaviors are highest among students who are using illicit drugs such as marijuana, cocaine, prescription drugs (e.g., sedatives, opioids, stimulants) (Lowry et al., 1994). Lowry et al. (1994) examined whether the use of alcohol, cigarettes, marijuana, cocaine, and other illicit drugs are related to sexual behaviors that increase one’s risk for HIV infection. The research relied on a sample of 11,631 college students throughout the United States. Lowry et al.(1994) found that students who reported engaging in injection drug use such as cocaine, and other illicit drugs, were more likely to engage in the riskiest of sexual behaviors (Lowry et al., 1994).

For example, students who reported using drugs also stated that they were engaging in sexual intercourse with four or more different partners and not using condoms with those partners (Lowry et al., 1994).

Similar to Lowry et al.'s study (1994), a cross-sectional, nationally representative study done by Cavazos-Rehg et al. (2011) looked at associations between initiation and intensity of substance abuse and number of sexual partners. The national sample consisted of 13,580 college students and researchers found that the number of sexual partners steadily increased as substance abuse intensified for both males and females. Results showed that as the intensity of alcohol, cigarette, and marijuana use increased so did the number of sexual partners among participants (Cavos-Rehg et al., 2011). Overall, there is a relationship between the severity of substance use and multiple sexual partners.

Another study found results congruent with the findings of Cavazos-Rehg et al. (2011) and Lowry et al. (1994). Leigh and Stall (1993) examined evidence for and against the hypothesis that a correlative relationship exists between alcohol and/or drug use and high-risk sexual behavior. Researchers reviewed studies that fell into three broad categories, global association studies ($n=47$), situational association studies ($n=20$), and event analyses studies ($n=17$). Researchers found a clear positive relationship between substance abuse and high-risk sexual behaviors (Leigh & Stall, 1993).

Kalichman, Heckman, and Kelly (1996) conducted a study similar to Lowry et al. (1994) but only used a target population of homosexual male college students. Results showed that students participated in what is known as "sensation seeking." A sample of 99 self-identified homosexually active men reported that they participate in drug use and alcohol use before participating in sexual activities in pursuit of novel, exciting, and

optimal levels of arousal (Kalichman et al., 1996). Consistent with the findings from Leigh and Stall (1993), substance use before sex is correlated with sexual risk.

Kalichman et al. (1996) also tested predictor variables with sexual risk and found that drug use before sex ($r=.26, p<0.01$), sexual sensation seeking ($r=.27, p<0.01$), and non-sexual experience seeking ($r=.28, p<0.01$) significantly correlated with the frequency of unprotected anal intercourse. Research attests that there is a link to substance use and high-risk sex.

HIV/AIDS Amongst College Students

Quantitative research exists that documents both prevalence and incidence rates of college students' risky sexual behaviors. Yet, there is a lack of current research on college students and their infection rates for HIV/AIDS. A study done by Gayle et al. (1990) aimed to estimate the magnitude of the HIV epidemic among college students. A blinded HIV-seroprevalence survey was done at 19 universities within the United States. HIV-antibody testing was performed on 16,863 blood samples retrieved from the universities' local health centers. At each campus, 250 to 1,000 blood samples were collected and tested for HIV. Of the 16,863 specimens, 30 (0.2%) tested positive for HIV infection at 9 out of 19 universities. All infections were among students over the age of 18, a total of 19 students were over the age of 24 (Gayle et al., 1990). These 1990 findings suggest that seroprevalence of HIV infection increases with age, from 0.08% among students ages 18-24 to 1.0% among those 40 or older. The seroprevalence for men was higher (0.5%) than for women (0.02%) (Gayle et al., 1990).

Similar to Gayle et al.'s study (1990), HIV infection rates were also observed within college students from North Carolina. Hightow et al. (2005) reported 84 male

college students attending 37 different North Carolina institutions and five surrounding states were newly diagnosed with HIV. Cases of HIV were rapidly increasing among North Carolina college students, specifically among men aged 18-30 in 2005 (Hightow et al., 2005). College males who were HIV positive were more likely than non-college males to meet sex partners at bars or dance clubs or on college campuses. Infected individuals also reported that the use of the drug “ecstasy” was more likely and more commonly used than other drugs. Overall, the rates of new HIV infection in North Carolina for college males increased from 15 per 100,000 persons in 2001 to 79 per 100,000 persons in 2002 and 2003.

In addition to these studies, the ACHA (2017) reported that 0.2% of college students were diagnosed or treated by a health professional for HIV infection. Like other studies, this number is low; however, there is evidence that infection rates are still remaining stable and may be underreported. Indeed, it is important to understand college students’ risky sexual behaviors, but also their HIV testing behaviors.

HIV/AIDS testing. An ongoing longitudinal study, conducted at a large public university, surveying 1,253 incoming first-year college students found that nearly half of the sample (n=455, 47.5%) had been tested for HIV at least once in their lifetimes (Caldeira et al., 2012). Results from this study show that HIV testing is significantly correlated to gender, race/ethnicity, and sexual activity. For example, men were half as likely as women to have been tested for HIV and African Americans and Hispanics were twice as likely as Asians to be tested for HIV. The researchers also found that participants engaging in high-risk sexual behaviors (multiple sexual partners, unprotected sex, unprotected sex under the influence of alcohol or drugs) were more likely to be tested for

HIV. Participants were surveyed 5 years later, and while 76.9% were still sexually active, only 13.6% had been tested for HIV in the past 6 months (Calderia et al., 2012).

Another study that aimed to understand the HIV-testing behaviors of college students was done by Anastasi et al. (1999). A convenience sample of 484 college students, ranging in age from 17 to 61 from a large public East Coast university, participated in the study. The participants were also students who visited the student health center to obtain an HIV test. When participants were asked what had influenced them to obtain the HIV test, responses varied and included being influenced by a friend/peer (27.1%), by the school/college (25.1%), or by a sexual partner (16.1%) (Anastasi et al., 1999). Students were also asked to identify why they needed an HIV test, with the most common response “I just want to know if I’m infected” (69.6%). The second most common response was “I had unprotected intercourse with someone whose HIV status I am unsure about” (51.0%) (Anastasi et al., 1999). Of the participants, men were significantly more likely than women to report that they sought testing because their partner asked them to have the test (Anastasi et al., 1999). These results based on gender differences align with those of Caldeira et al. (2012), in which men were half as likely as women to have been tested for HIV.

Knowledge of HIV/AIDS in College Students

Individual perceptions. Results from a descriptive study aimed to determine undergraduate college students’ knowledge, perceptions, and behaviors related to HIV/AIDS from a large urban, mostly Hispanic institution in south Texas. Results show that there is a significant difference in knowledge amongst age groups regarding HIV/AIDS (Polacek, Hicks, & Oswalt, 2007). College students from this study ($n=443$)

were asked to rate their own level of knowledge regarding HIV/AIDS. Most participants considered themselves to be “knowledgeable” as opposed to “very knowledgeable” or “somewhat knowledgeable” about HIV/AIDS (Polacek et al., 2007). There was a significant difference between age groups, with the younger college students more frequently considering themselves to be somewhat knowledgeable (Polacek et al., 2007).

A review of literature on HIV/AIDS risk in heterosexual college students found that most college students self-report that they are knowledgeable about HIV transmission routes and how to protect themselves. Knowledge, however, may not prevent them from participating in risky HIV-related behaviors (Lewis et al., 1997). These researchers reviewed a decade of literature within the United States and found that college students have consistently shown adequate-to-high levels of knowledge about HIV transmission routes and behaviors that reduce the risk of infection. Findings from the review suggest that having sufficient HIV/AIDS knowledge does not always translate to condom use or other preventative behaviors. Despite having knowledge regarding HIV, students continue to have misperceptions about the risk of transmission from casual contact and the importance of safe sex practices (Lewis et al., 1997).

In comparison, Lance (2001) found 46% of college students perceive that they have high knowledge levels regarding HIV/AIDS. Students who perceived themselves as having high HIV/AIDS knowledge generally provided a high percentage of correct answers to survey items addressing HIV/AIDS prevention methods and general HIV/AIDS information (Lance, 2001). Particularly, students were found to be highly knowledgeable about how to prevent HIV by answering correctly questions regarding condom use and HIV prevention (Lance, 2001). Despite having clear knowledge about

HIV/AIDS, 25% of students from the same study reported that they never use condoms during sexual intercourse (Lance, 2001). The disparity in the findings between Lance's study (2001) and Lewis et al.'s study (1997) may be attributed to the years between when the studies were conducted, it was an era of intensive HIV education efforts, and the great knowledge shown in Lance's later study may attest that these efforts were fruitful, insofar as conferring knowledge on students. However, as the findings demonstrate, even greater knowledge does not reliably translate to safer sexual practices.

General knowledge. To understand predictors for HIV infection rates it is not only important to look at college students' risky sexual behaviors but also their general knowledge of the virus. Opt and Loffredo (2004) expanded on the studies mentioned above (Anastasi et al., 1999; Lance, 2001; Lewis et al., 1997) by addressing college student's knowledge and perceptions about HIV/AIDS. Opt and Loffredo (2004) surveyed 315 undergraduate college students attending a southern university. Participants were able to correctly answer questions concerning HIV treatments available, the lack of a cure, condom use as a preventative measure, oral sex transmission, anal sex transmission, and there being no vaccine against HIV/AIDS (Opt & Loffredo, 2004). However, the students reported less certainty about statements regarding transmission by kissing and showed less knowledge about the relationship between STIs and AIDS (Opt & Loffredo, 2004).

As reported by Polacek et al. (2007), 97% ($n=429$) of participants reported that they knew how to prevent HIV transmission; however, 13% ($n=58$) believed that diaphragms prevented HIV transmission, 6% ($n=27$) believed that hand washing prevented HIV, and 4% ($n=18$) believed birth control pills were a prevention method for

HIV. Most participants (93%) identified abstinence as an appropriate way to prevent HIV infection (Polacek et al., 2007).

Access to knowledge. Students were surveyed on where they received their knowledge about HIV/AIDS. Sixty-four percent of college students reported receiving information from pamphlets (Opt & Loffredo, 2004). Other students reported that they received their information from a college event about HIV/AIDS (60.6%), high-school courses (68.6%), as well as TV and news shows (64.8%) (Opt & Loffredo, 2005).

Researchers Brener and Gowda (2001) examined where college students were receiving their health information through a two-cluster sample design. College students (n=4,609) from 136 United States institutions were represented in the study. Forty-two percent of students reported getting their knowledge about HIV/AIDS in the college classroom and 52% of students reported receiving information about avoiding HIV/AIDS infection from a non-classroom source (Brener & Gowda, 2001). One-third of participants (33%) reported that they received information about HIV/AIDS from pamphlets, brochures, or newsletters and other commonly reported methods such as informal discussions with friends (19.2%). Students also reported gaining access to knowledge from the student health centers on campus (17.6%) or the college newspaper (13.6%). Participants identified information about alcohol, drugs, and HIV/AIDS to be the most commonly discussed health and wellness topics on their college campuses.

A study utilizing a quasi-experimental survey design to examine the effects of an HIV/AIDS course on undergraduate students' HIV knowledge found that students had greater post-test HIV knowledge and perceived susceptibility to HIV than the control group (Marsiglia et al., 2013). Baseline knowledge and attitudes positively predicted the

post-test values. However, the course did not relate to changing behavior. Relative to attitude and knowledge, behavior is arguably more difficult to change, especially when changes in knowledge and attitudes are required before the behavior itself can change (Marsiglia et al., 2013).

Lack of knowledge. Evidence from quantitative studies suggests that college students are knowledgeable about HIV/AIDS, however, there are also several studies that address college students' lack of knowledge related to HIV/AIDS. For example, a quantitative study examining HIV/AIDS knowledge among university students in four countries ($n=2,570$) found that United States college students had significantly lower HIV/AIDS knowledge than South African and Nigerian students (Abiona et al., 2014). Results also identified that males and females varied in HIV/AIDS knowledge. Chi-square tests identified that across all four countries, more males possess accurate knowledge compared to female students (51.7% vs 44.2%, $p<.001$) (Abiona et al., 2014). However, significantly more women than men knew that multiple partners increased HIV risk ($p<.05$), while more men than women knew that condoms could prevent HIV ($p<.001$) (Abiona et al., 2014).

A qualitative descriptive study of college students from a large Midwestern university explored college students' rationales for sexual risk taking during hooking up (Downing-Matibag & Geisinger, 2009). This study utilized the health belief model concepts to conduct semi-structured interviews with 71 college students on their hookup experiences. The results demonstrated why students' assessment of their own susceptibility and their peers' susceptibility was often incorrect (Downing-Matibag & Geisinger, 2009). The study explored and demonstrated how the health belief model can

be applied through qualitative research to identify factors that contribute to sexual risk taking. Part I of the interview questions consisted of questions that assessed students' perceptions of sex and dating norms on campus, and what they thought their peers and friends believed about the pros, cons, and acceptability of hooking up (Downing-Matibag & Geisinger, 2009). Part II of the interview consisted of questions related to events that occurred during the students' most recent hookup, and Part III assessed their evaluations of the hookup experience as a whole. Part IV of the interview process assessed students' perceptions of sexual risk-taking in relation to STIs. Students were asked questions related to their perceived risks and the precautions they took against STIs during their most recent hookup (Downing-Matibag & Geisinger, 2009). Microanalytic content analysis was used to identify key factors associated with students' use of protective barriers against STIs during the hookup, followed by a global content analysis to link patterns that emerged from the interviews to the key constructs of the health belief model (Downing-Matibag & Geisinger, 2009). Results from this study found that students were unaware of their own vulnerability to STIs, with about 50% of students not concerned with contracting an STI during a hookup. Two common themes were identified as to why students did not view STIs to be a perceived threat: they are placing too much trust in their partners with respect to STIs and they are placing too much trust in their community, especially with respect to HIV/AIDS (Downing-Matibag & Geisinger, 2009). Students believe that the low prevalence of HIV/AIDS in their Midwestern state warranted them not being concerned with the possibility of contracting it. Additionally, students were misinformed about the role oral sex has in STIs (Downing-Matibag & Geisinger, 2009).

The interview questions and themes derived from this study have informed the interview protocol for the current study as described in Chapter 3.

A longitudinal study analyzing the changes in sexual behavior among colleges students ($n=630$) over a 20 year period found that condoms are still not utilized sufficiently (Netting & Burnett, 2004). The problem, according to Netting and Burnett (2004), is not lack of knowledge regarding HIV/AIDS but is rather the lack of knowledge regarding their partner's HIV status or even their own status (Netting & Burnett, 2004). Another factor contributing to this assumption of a lack of knowledge could be that college students believe they are very knowledgeable about the threat of HIV/AIDS, which in turn makes them feel less threatened by the virus (Polacek et al., 2007). However, college hookup culture and sexual behaviors are putting students at risk for HIV infection. Students continue to hold misperceptions about the risk of transmission from casual contact and the importance of safer sex practices (Lewis et al., 1997).

Perceptions of College Students Regarding HIV/AIDS

Despite research, education, and programming on HIV/AIDS, there are still significant misinformation and myths among college students. Kingori et al. (2017) found that many United States college students have low perceived susceptibility for acquiring HIV infection and 15-25% of students have negative perceptions of HIV-positive individuals. Descriptive cross-sectional pilot study recruited a pool of 200 college students from a Midwestern university. Similar to the methodology in this study, described in Chapter 3, Kingori et al. (2017) recruited individuals from campus and offered a gift card for participation in the study. In addition, the study used two criteria to select their participants: (a) 18 years of age or older; and (b) currently registered at the

university. Survey questions were derived from a 14-item HIV-stigma instrument and the HIV-KQ 18 knowledge instrument. In regard to stigma, 27% of students stated they would be uncomfortable going to a doctor if he/she was known to be living with AIDS (Kingori et al., 2017). Furthermore, 4% of participants responded correctly to HIV transmission knowledge items. HIV-transmission knowledge scores were significantly higher for participants who were single but sexually active and those who resided outside university residential dorms ($p < 0.05$). There was a significant negative correlation between composite HIV knowledge scores and stigma scores $r = -0.18$ ($p < 0.05$). The survey questions from the HIV-KQ 18 knowledge instrument were adopted to inform the interview protocol of this study.

Perceived individual risk. Regarding individual risk, Polacek et al. (2007) collected 443 surveys on college students' knowledge, attitudes, and behaviors about HIV/AIDS from a large Southern university. Survey questions on perceived threat of HIV/AIDS asked students to report if they are very threatened, threatened, somewhat threatened, or not threatened at all by HIV/AIDS. Responses concluded that students do not feel threatened by HIV/AIDS, although it varied by age: ages 18-20 (46.8%), ages 21-25 (32.3%), ages 26-49 (59%). College students between the ages of 18 to 20 have the lowest perceived risk for HIV/AIDS (Polacek et al., 2007).

Smith et al. (2013) assessed college students' perceived risk for contracting HIV by surveying 106 college students who attended an HIV/AIDS awareness event. Dependent variables used in this study were dichotomized values for perceived HIV risk ranging from no/slight risk compared to moderate/extreme risk (Smith et al., 2013). Participants who reported having oral or vaginal sex were 24 times more likely to

perceive themselves to be at moderate risk or extreme risk for contracting HIV when compared to their counterparts who reported engaging in no sexual activity (Smith et al., 2013). Participants (20.8%) reported being at moderate/extreme risk for contracting HIV. In this sample, female college students were more likely than males to place more importance on HIV protective behaviors ($t=2.67$, $p=0.01$) (Smith et al., 2013).

Another study mentioned above showed students had a generally low perceived risk for HIV/AIDS with 54% of participants ($n=384$) 30 and older and 57.9% of ages 20 and under, reporting that they have no chance of being infected with HIV (Adefuye et al, 2009). In addition, only 46% of participants who reported inconsistent condom use perceived themselves to have a moderate to good chance of being infected with HIV on a scale of no chance, moderate chance, good chance, already infected, or don't know/no response. Furthermore, participants who stated using marijuana, alcohol, or had multiple partners were significantly more likely to report perceiving themselves to have a moderate to good chance of being infected with HIV than those who did not state they used.

Similarly, a quantitative descriptive study surveyed 650 college students from a Midwestern university aimed to identify their attitudes toward people living with HIV, their HIV knowledge, and their sexual behaviors (Inungu, Mumford, Younis, & Langford, 2009). A large portion of participants (86.8%) reported that they thought they had a small chance or no chance at all of contracting HIV/AIDS (Inungu et al., 2009). The most commonly cited reasons for why students did not believe they were at risk was that they had never injected or abused drugs (55.3%), they had only one partner (48.8%), or because they trusted their partner (41.1%) (Inungu et al., 2009).

Downing-Matibag and Geisinger (2009) explored the “hookup culture” among college students and found that many students are unaware of their vulnerability to HIV and other STIs. Only about 50% of these students were concerned with contracting HIV/AIDS or an STI. The authors identify two common reasons students underestimated their vulnerability to HIV. First, they place too much trust in their partners with respect to HIV. Second, they place too much trust in their community, with respect to HIV, in that they believe that there is a low prevalence of HIV in their state thus making students not as concerned about contracting HIV (Downing-Matibag & Geisinger, 2009). The idea of having high partner trust was a commonly occurring theme amongst college students, with 74% of students having some level of acquaintance with their partner prior to the hookup. These findings led students to feel safe and less likely to believe that their partner was “unclean” or was infected with HIV or other STIs. In addition, students are trusting the campus community and students in terms of HIV/AIDS. Much of the community-based trust is because of the students’ perception that there was a lower rate of HIV in their state than any other region in the country (Downing-Matibag & Geisinger, 2009).

Perceptions of riskiness. Williams et al. (1992) found that students judge the riskiness of a partner based on superficial traits rather than characteristics related to HIV status. The qualitative data strongly indicated that individuals that students “know” and “like” (including relationship partners who have not been tested for HIV) are perceived as not being at risk for HIV. Participants then stated that the only time they would consider using condoms with a partner was if they simply did not know the person (Williams et al., 1992).

Racial and ethnic differences related to HIV risk. African American adults are disproportionately affected by HIV/AIDS and are often unaware of their own personal risk of contracting HIV (Sutton et al., 2011). A study conducted by Sutton et al. (2011) examined HIV/AIDS knowledge of students at historically black colleges and universities (HBCUs) to inform HIV prevention efforts at those institutions. African American undergraduate HBCU students (n=1,051) completed online surveys assessing HIV/AIDS knowledge and behaviors. Results showed that the majority of students had average or high HIV knowledge based on the survey questions. Students also identified that they perceived themselves to be at low risk for HIV. However, more than 50% of students reported having two or more sexual partners in the past 12 months and were not consistently using condoms with these partners (Sutton et al., 2011). Additionally, students reported attending testing services on campus, however, only 56% of students had ever been tested for HIV. Showing a substantial disparity that exists between students' risk perception and sexual risk behaviors at HBCUs.

A descriptive exploratory design with survey methodology was used to analyze knowledge, attitudes, and behaviors of African American college freshman students and HIV. A convenience sample of 222 African American freshman students was used. Results showed that the majority of students were knowledgeable about HIV prevention and transmission ($M = 9.36$ on a maximum of 10, $SD = 0.951$) (Rose, 2008). However, students' high level of HIV knowledge and positive perceptions regarding sexual health did not prevent them from engaging in risky sexual behaviors (Rose, 2008).

However, Smith et al. (2013) found that participants who were African American were over nine times more likely to perceive themselves to be at moderate/extreme risk for contracting HIV.

Attitudes of College Students Regarding HIV/AIDS

Cultural norms, lack of education, and misperceptions regarding HIV/AIDS influence college students' beliefs and attitudes towards the disease. Since the early 1990s, college students' attitudes about AIDS and people with HIV/AIDS has become more tolerant and perceived knowledge about the disease has increased (Bruce & Walker, 2001). However, a study done by Inungu et al. (2009) indicated that a high percentage of students would not want to tell family members or friends if they were infected with HIV (Inungu et al., 2009). Students also reported (13.4%) that they were unsure if they would help take care of a family member who became sick with HIV/AIDS.

Similarly, Tung et al. (2008) indicated that 24% of participants ($n=99$) were unwilling to do volunteer work with HIV/AIDS patients, and 23% of respondents agreed that people with HIV/AIDS should stay at home or in the hospital. Students also reported (6.8%) that people with HIV should be kept out of school or that they would even end a friendship or relationship with a family member if they found out they were HIV positive (Tung et al., 2008).

In addition to studies focusing on students' attitudes towards people with HIV, several studies examine students' attitudes regarding themselves and HIV. A study of 42 African American college students from a large university and their attitudinal domains about HIV/AIDS found that participants would not want to know if they had HIV (Taylor & Jones, 2007). For example, one student stated, "Right now I am just dealing with

trying to stay in school and keep my place . . . I just don't have time to focus on another problem" (Taylor & Jones, 2007). Participants also identified that they believe only homosexuals are at risk for HIV infection, with 8 out of 42 participants indicating "gays" are the most likely population for HIV infection (Taylor & Jones, 2007).

It is also important to address subjective norms (peers' thoughts about one's behavior) and their influence on students' behavioral choices, such as friends and family. Rose (2008) assessed African American college freshman students' attitudes related to HIV with a descriptive exploratory design and a convenience sample of 222 college students. More than half (51.8%) of participants reported peer pressure, that their friends influenced them "somewhat" to "a lot" about decisions related to HIV risk reduction (Rose, 2008). The participants seemed to identify their peers and friends as a means for transmitting social norms.

From previous research, we can conclude that college students are participating in risky sexual behavior, sporadic condom usage, and have moderate knowledge of HIV paired with a low perceived risk regarding HIV/AIDS.

The Health Belief Model and HIV

The health belief model is an intrapersonal model that has specific constructs related to one's knowledge of illness or disease (Jans, Champion, & Strecher, 2002). The health belief model can help predict an individual's response to preventative care. The HBM is a cognitive model that is used to understand health risk behavior (Conner & Norman, 1996; National Cancer Institute, 2005). This model is useful for predicting health-related behaviors such as risky sexual activity related to HIV/AIDS (Dobe, 1994; Lux & Petosa, 1994; Petosa & Wessigner, 1990).

The qualitative study conducted by Downing-Matibag and Geisinger (2009), described above, used the HBM to inform understanding of hooking up and sexual risk-taking among college students. Lofland, Snow, Anderson, and Lofland's (2005) approach to qualitative research was employed while also applying the theoretical framework of the HBM to a thematic analysis of interview data. The HBM states that for people to take preventative actions, they must believe that they are susceptible to an adverse health outcome, the cost of incurring the adverse health outcome would be severe, the benefits of protection would outweigh the costs, and only then will they take necessary action to protect themselves from the adverse health outcome (Brown, DiClemente, & Reynolds, 1991).

Each of these constructs were represented within the study, for example, the construct of perceived susceptibility to adverse outcomes revealed that students were unaware of their own vulnerability to HIV and STIs, students had misplaced trust in their sexual partners in relation to HIV, misplaced trust in their communities in relation to HIV, and a lack of knowledge regarding transmission routes for HIV (Downing-Matibag & Geisinger, 2009). The second component of the HBM states that for a person to take preventative measures, they must believe that the consequences of contracting that illness would be severe. Indeed, previous studies have demonstrated that students believe that contracting an STI would be the worst possible outcome of a hookup (Boone & Lefkowitz, 2004). The third component of the HBM proposes that if students are going to engage in preventative behavior, they need to believe the benefits are greater than the costs (Downing-Matibag & Geisinger, 2009). This concept was problematic for many students interviewed because, although students believed that condoms would effectively

prevent against HIV and other STIs, they feared that using condoms would make their partner not want to have sex with them, or compromise their pleasure (Downing-Matibag & Geisinger, 2009). The fourth component of the HBM is the individual's perception that they can perform the necessary behaviors to avoid the adverse outcome, otherwise known as self-efficacy (Rosenstock et al., 1988). A critical issue in the Downing-Matibag and Geisinger (2009) study was that the failure of students to use protection for penile-vaginal and anal sexual intercourse was due to their expressed high levels of perceived self-efficacy in terms of their knowledge about and ability to use protection. However, students demonstrated a lack of efficacy in terms of preparedness for the type of unexpected sexual intercourse that occurred during their hookup, stating they did not have condoms. Lastly, students were unwilling to discuss the risk of STIs and condom use with their partners. Many students expressed a lack of efficacy in communication when they assumed or hoped their partner would tell them if they had an STI (Downing-Matibag & Geisinger, 2009).

Discussing the hookup culture with college students may yield insight into their reasons for failing to protect themselves against HIV and other STIs (Downing-Matibag & Geisinger, 2009). This study's phenomenological perspective gives insight into how the cognitive core of the HBM can be contextualized by recognizing culturally informed meanings that students bring to their hookup experiences (Downing-Matibag & Geisinger, 2009).

In addition, Yep (1993) examined the HBM's predictive ability regarding HIV prevention among 141 Asian American college students. Findings suggested that both perceived susceptibility and perceived benefits failed to predict HIV preventative

behaviors among these college students. However, perceived severity was found to be a significant predictor of student's selection of intimate partners both by reducing their number of sexual partners as well as a generalized overall positive change in their sexual behavior (Yep, 1993).

Chapter Summary

Risky sexual behavior that can lead to HIV infection or other STIs is an important phenomenon to further investigate among college students. Understanding students' sexual practices and their implications for sexual risk prevention is essential in protecting and promoting the well-being of future generations on college campuses (Downing-Matibag & Geisinger, 2009).

While there is a great deal of quantitative research documenting the incidence of risky sexual behavior among college students, much less literature exists identifying the reasons for which college students participate in unsafe sex and the conditions in which it occurs (Williams et al., 1992). Fisher and Fisher (1992) state that such research can be best performed and understood by using qualitative methods. Chapter 3 will provide the research methodology for this study. Chapter 4 will discuss the qualitative findings regarding students lived experiences in relation to HIV, and Chapter 5 will provide the implications for this study.

Chapter 3: Research Design Methodology

Introduction

This chapter describes the rationale for an interpretative phenomenological analysis (IPA) of college students regarding their knowledge level of HIV, engagement in risky sexual behaviors, and their perceptions of HIV. The methodology is outlined and aligns with the research context, participants, instruments used in data collection, and the data analysis procedures. The research problem and research questions are positioned within the overall context of the study.

Problem statement. HIV remains a major public health challenge and a persistent risk to college students. One-third of all new HIV infections occur among people under the age of 30 (Prejean et al., 2008). The annual number of new HIV infections has changed little since the late 1990s (Prejean et al., 2008). On college campuses hookups have become a prominent behavior that includes unprotected sex, use of judgement-inhibiting alcohol, and higher numbers of sexual partners (Paul et al., 2010). According to Lewis et al. (1997), college students tend to believe they have minimal personal risk of contracting HIV. The purpose of this study was to better understand college students' knowledge, attitudes, and behavior regarding HIV/AIDS to create a campus environment where students practice safer sex.

Research questions. The intent of IPA research questions is exploratory rather than explanatory (Larkin & Thompson, 2012). To explore college students' experiences and perceptions in relation to HIV the following research questions were examined:

1. What is the knowledge level of college students regarding HIV/AIDS?
2. What risky sexual behaviors are college students participating in that put them at risk for HIV?
3. If college students have knowledge about the relationship between risky sex and HIV, why do they still participate in the risky behavior?

Rationale for study methodology. Based on these research questions, a qualitative methodology using interpretative phenomenological analysis (IPA) was conducted to explore college students' knowledge and HIV behavior. This method of analysis is described further below. Qualitative research methods, such as face-to-face semi-structured interviews, were used to collect data on college students' lived experiences and perceptions of HIV. Qualitative research aims to understand a phenomenon, exploring attitudes, motivations, and perceptions of individuals or groups (Subramoney, 2015) and has the potential to understand social realities through the interpretation of texts (Flick, 2014). Qualitative research generates words rather than numbers for data analysis (Bricki & Green, 2007), providing rich narrative descriptions to understand complex problems (Creswell, 2007; Patton, 2005). Very few qualitative studies related to HIV in college students have been conducted (Buhi & Goodson, 2007; Marston, & King, 2006) that provide opportunity for in-depth understanding by focusing on why college students are participating in risky sexual behaviors that put them at risk for HIV.

Descriptive versus interpretative phenomenological analysis. There are many different types of phenomenology, and many researchers use descriptive or interpretative phenomenology in their research approaches. The descriptive research approach tends to

investigate poorly understood aspects or experiences (Matu & Van Der Wal, 2015). Descriptive phenomenology requires researchers to seek the content of the consciousness, meaning that the researcher must go into the process devoid of any preconceptions and ignore all existing knowledge about the phenomenon so they can grasp the essential elements (Giorgi, 2008; Streubert & Carpenter, 2011; Van Manen, 2011). In contrast, IPA is used to examine contextual features of an experience concerning influences such as culture, gender, or the well-being of the people or groups experiencing the phenomenon. IPA allows the researchers to arrive at a deeper understanding of the experience, so that new knowledge is derived to address the needs of the individual, group, or community (Matu & Van Der Wal, 2015). IPA focuses on gaining a deeper understanding of an experience (Van der Zalm & Bergum, 2000; Van Manen, 2011). IPA research results in a detailed interpretation of the meanings and structures of a phenomenon as it is experienced first-hand. The focus of a descriptive study and an IPA one is very different. A descriptive study looks to explore a phenomenon as free as possible from assumptions and describes the experience faithfully so that others are able to “see” and “feel” it, without mentioning any of the participants’ social or cultural contexts (Dowling 2007; Reiners, 2012; Van Manen, 1997). However, IPA research achieves more of a deeper understanding of the experience, by concentrating on hidden meanings within the experience such as the various contexts of the participants (Spiegelberg, 1975; Streubert & Carpenter, 2011). Additionally, IPA research does not require bracketing, that is, separating out one’s preconceptions and allowing phenomena to speak for itself (Pietkiewicz & Smith, 2012). Rather, these preconceptions and so-called biases are integrated and become part of the research findings, considered valuable

guides that make research more meaningful (Humble & Cross, 2010; Lopez & Willis, 2004). Indeed, the researcher's own knowledge of the phenomena under study helped undergird the entirety of the study, strengthening the IPA-based aims and methods of the inquiry. Further, participants explained their social and cultural contexts that explained why they choose to participate in the experience and phenomena in question.

Interpretative phenomenological analysis (IPA). This study used IPA, an approach to qualitative analysis with a psychological interest in how individuals make sense of their experiences (Larkin & Thompson, 2012). IPA is derived from the fundamental principles of phenomenology, hermeneutics, and idiography (Pietkiewicz & Smith, 2012). Studies employing IPA focus on how participants perceive and talk about objects and events, rather than describing the phenomena according to scientific criteria or systems (Pietkiewicz & Smith, 2012) or collecting quantifiable data.

The primary aim of IPA is to explore in detail how participants make sense of their personal and social world and the meaning behind events and experiences (Smith & Osborn, 2007). IPA requires the researcher to collect detailed, reflective first-person accounts from their research participants in an area of interest (Larkin & Thompson, 2012). The dynamic process allows researchers to play an active role, which can influence the extent to which the researcher gains access to a participant's experiences, and how they make sense of the participant's world through interpretive analysis (Smith & Osborn, 2007). The IPA approach can yield detailed descriptions of college students' personal experiences and perceptions related to HIV, as opposed to producing an objective statement of an event itself (Smith & Osborn, 2007). Examining the personal experiences of college students regarding their engagement of risky sexual behavior and

perceptions of HIV can help the participant make sense of their own world and provide an opportunity for education on safer sex practices. The overall outcome of an IPA study is to include the elements of “giving voice” and “making sense” (Larkin, Watts, & Clifton., 2006). Giving voice is capturing and reflecting on claims and concerns of the research participants (Larkin et al., 2006). Making sense is offering an interpretation of this material, which is grounded in the participants’ accounts, but may use psychological concepts to move beyond them (Larkin et al., 2006). Allowing multiple participants who experience similar events to tell their stories without any distortions (Alase, 2017), which is beneficial when addressing a sensitive topic such as HIV.

Research Context

The research study was conducted at a 4-year accredited university in New York State, a state where the incidence rates are higher for HIV as described in Chapter 1. The total enrollment at this institution is 8,004 students with 7,150 of those students registered as undergraduates. Students are primarily residents of New York State (95.3%) and only 2% are international. There has been an increase in diversity since 2010 within the student body, with 25.8% of the student body identifying as culturally diverse and 24.1% of students from underrepresented groups. According to the ACHA (2009), students from this institution report that they are in good, very good, or excellent health (94.1%). However, a small proportion of college students reported being diagnosed with HIV within the last 12 months (0.3%). In addition, students at this institution are participating in sexual activity with 51.1% of students having at least one sexual partner in the last 12 months. Of those students who are sexually active, 31.3% stated they did not use a condom during their last sexual intercourse.

The rural community in which the university resides consists of a population of 17,880 residents with a median household income of \$37,450 and a poverty rate of 28.5% (United States Census Bureau, 2016). The county in which the university resides is the eighth-poorest county in New York State. The city faces ongoing challenges with drug use, where most teens begin using marijuana and drinking alcohol at about 13 years old (Wolf, 2017). Heroin is sold in the community for as little as \$10 a hit, and the going rate for hydrocodone is \$1 for 1 mg, creating a high-risk environment for the students attending the university (Wolf, 2017). Additionally, the county has the highest obesity rate (22.6%) of the six counties in the area.

The surrounding health facilities in the community do not offer free HIV/STD testing; however, they do accept all major insurances and provide a sliding fee scale discount program for eligible patients. The city and university both offer pre-exposure prophylaxis (PrEP), which is a medication for individuals who are at very high risk for HIV. Individuals can take PrEP daily to lower their chances of getting infected with HIV (CDC, 2018g). PrEP can stop HIV from spreading throughout the body and is highly effective, preventing HIV transmission from sex by 90% (CDC, 2018g).

The university campus does have a health facility where services are supported by the mandatory health fee, a fee paid as part of the student's college bill. The 2018 health fee billed per semester covered the health services center, counseling services center, and lifestyles center events related to health and wellness education. All students on the university campus are required to have health insurance. Failure to show proof of health insurance results in a charge for the college-sanctioned accident and sickness policy. The charge can be waived if students show proof of adequate insurance.

The study used a purposeful sampling process that is consistent with IPA studies. IPA produces in-depth examination of certain phenomena and aims to find a closely defined group of individuals in which the research questions will have personal significance and relevance (Smith & Osborn, 2003). This study also used a purposeful sample, based on delimited criteria for participation. For example, college students invited to participate in this study were selected by their knowledge of HIV and their engagement of sexual practices.

Research Participants

Participants selected for this study were undergraduate students enrolled at the 4-year New York State institution. According to the National Center for Education Statistics (2018), “college-age” is defined as being between the ages of 18 and 24, so for this study, participants selected confirmed they were undergraduate students between the ages of 18-24. Participants could live on or off-campus and could be considered either full-time undergraduate students or part-time undergraduate students to participate in this study.

Recruitment of participants. Upon approval from the Institutional Review Board (IRB) at St. John Fisher College and the New York State Institution where the study took place, recruitment of participants begun. Identification of potential research participants took place in two phases. Phase 1 included recruitment through posting flyers in and around campus. Flyers posted on campus invited students to participate in the research study focused on college students’ sexual health and offered a \$15 gift card to those who were selected to participate and complete the interview process. Phase 2 included recruitment in various introductory health promotion and wellness courses and

general education courses after permission was granted by the faculty member of record. The researcher did not recruit from classes where she was the instructor. A recruitment script was used when recruiting students in the classroom for the study (see Appendix A). Students who were interested in participating were asked to contact the principal researcher via telephone or email to set up a meeting.

Selection of participants. According to Hycner (1999), the phenomenon dictates the method and the type of participants. IPA studies generally require small sample sizes, focusing on quality rather than the quantity (Larkin & Thompson, 2012). The number of participants varies based on the aims, level, context, time, and resources of the researcher (Smith, Flowers, & Larkin, 2009). There is no standard for how many participants should be included in an IPA study, indeed, studies have included one to 15 participants, although larger sample sizes are less common (Pietkiewicz & Smith, 2012). According to Turpin et al. (1997), clinical psychology doctoral programs state that having six to eight participants is deemed appropriate for an IPA study. According to Guest, Bunce, and Johnson (2006), saturation often occurs with 12 participants. Based on these methodological guidelines, a range of 1-15 participants was selected for the study. Purposeful sampling identifies information-rich cases (Palinkas et al., 2013) and is the most important kind of non-probability sampling (Welman & Kruger, 1999). Purposeful sampling involves selecting participants who are knowledgeable or experienced with the phenomenon under study based on the judgment of the researcher (Creswell & Plano Clark, 2011). After *Phase one* and *Phase two* of recruitment, interested participants attended a private meeting with the principal researcher to identify their HIV knowledge and engagement in risky sexual behavior through qualifying questions (Appendix B). The

only demographic information that was collected were participants' ages to confirm they were between the ages of 18-24. Individuals who met with the researcher signed the informed consent form before answering any of the qualifying questions or participating in the full interview. The first 15 participants who had knowledge of HIV and identified engagement in risky sexual behavior were selected to continue with the full semi-structured interview process. Participants who met the criteria and were selected for the study received compensation with a \$15 gift card. Every participant regardless of whether they answered all interview questions or only a few were eligible to receive a gift card. Compensation was not limited to only those who completed the full interview.

Participants' rights. The following study was in accordance with the St. John Fisher College and the New York State Institution's IRB and adhered to appropriate ethical guidelines. Participants were asked to fill out the standard informed consent form if they were willing to participate in the study. Deductive disclosure known as internal confidentiality (Tolich, 2004) was upheld by using pseudonyms to represent participants, making sure that the actual participants could not be identified. Pseudonyms were used during the completion of all forms, as well as interview sessions, and in typed transcripts to ensure the confidentiality and privacy of each participant. Additionally, if a participant inadvertently identified oneself or others during their interview, the researcher and transcription service removed all identifiers to ensure confidentiality and anonymity.

The study did have the possibility of risk beyond what is experienced in everyday life. The risk involved participants responding to questions that could reasonably place them at risk regarding their reputation or could have been stigmatizing due to the nature of questions. Participants were clearly informed of these risks. Participants could have

experienced stress, however, at any point during the interview process, if a participant was feeling uncomfortable, they were able to withdraw from the study or pass on a question. Participation in the study was completely voluntary. Participants were advised to contact the resources listed in the informed consent form if they had any concerns during or after the interview. Additionally, participants were not penalized if they wanted to withdraw from the study.

Instruments Used in Data Collection

IPA studies aim to elicit rich, detailed, first-person accounts of experiences related to the phenomenon of interest (Pietkiewicz & Smith, 2012). Interviews are the most common method for data collection in phenomenological research (Bevan, 2014). Particularly, semi-structured interviews are the most popular method to achieve the rich detailed experiences of participants in an IPA study (Pietkiewicz & Smith, 2012). Semi-structured interviews are a useful method to investigate issues in a more in-depth way and allow for sensitive topics such as HIV to be discussed comfortably rather than in a focus-group setting (McKenzie, Neiger, Thackeray, 2013). Semi-structured interviews allow both the researcher and participant to engage in dialogue in real time, providing the opportunity for flexibility and investigation of further questions (Pietkiewicz & Smith, 2012).

To remain consistent with IPA and qualitative methods, the semi-structured interview questions were submitted to a fellow health professional in the field for review and feedback. According to Roller (2015), it is necessary for qualitative researchers to consult experts or peers in the field when deciding how constructs should be measured. To analyze in detail how participants perceived or made sense of HIV and their sexual

activity, two audio recorders were used to document participants accounts as well as a notebook for field notes. Two audio recorders were used to ensure the interview data was collected without any technical difficulty or error. Many qualitative studies collect audio or video data and transcribed them for further analysis (Bailey, 2008). Using audio recorders is important because attempting to write everything down during the interview process can cause important nuances to be missed (Alase, 2017). To capture how things are said or the non-verbal cues that are used during the interview, a field notebook was used to take notes on the interactions with the participants.

Face-to-face interviews. Since the interviews took place face-to-face, it was not possible for the interviews to be anonymous; however, several measures were taken to protect the confidentiality of the participant and to minimize risk. The semi-structured interviews were conducted in a private office space with no windows so there was complete privacy. The interviews were performed on the university campus in New York State. Participants signed the informed consent form before they were asked qualifying questions and before they started the interview process. Since qualifying questions were required to ensure participants met the study criteria, consent was required for the qualifying questions. The consent form was reviewed again prior to the interview, if the participant met the criteria and agreed to participate in the study. The interview process took between 45 minutes to 1 hour.

In phenomenological research, participants are asked open-ended questions regarding their experiences and contexts that have influenced their experiences (Creswell, 2007). Flick (2014) stated that an interview guide should be flexible and allow the interviewee to express their feelings and perspectives on the phenomena of interest.

Open-ended interview questions were adopted from different instruments that have been tested and used to conduct college-based HIV/AIDS knowledge, attitudes, beliefs, and behavior surveys. Relevant questions were selected from the following instruments: national college health risk behavior survey codebook (NCHRBS, 1995), International AIDS Questionnaire-English Version (IAQ-E) (Davis, Sloan, MacMaster, & Hughes, 2006), HIV Knowledge Questionnaire (HIV-KQ-18) (Carey & Schroder, 2002) (see Appendix C). Additionally, questions derived from Downing-Matibag and Geisinger (2009) study were used to develop questions related to the health belief model constructs.

The national college health risk behavior survey codebook (NCHRBS, 1995) was an instrument used in 1995 on undergraduate college students to provide a synopsis of priority health risks and behaviors that contributed to leading causes of death, illness, social problems among young adults in the United States. Questions within this instrument range from tobacco use, dietary behaviors, inadequate physical activity, alcohol and other drug use, sexual behaviors that may result in HIV infection, or other sexually transmitted diseases, unintended pregnancies, and unintentional injuries such as motor vehicle accidents. The survey instrument consists of 96 questions that are in multiple choice format and yield descriptive frequency statistics. Specific questions such as, “Have you ever participated in sexual activity without a condom?” and “Have you ever participated in sexual activity under the influence of drugs or alcohol?” are questions derived from this survey instrument and were used as two of the qualifying questions for selection of the participants.

The International AIDS Questionnaire-English Version (IAQ-E) (Davis et al., 2006) is an instrument that measures four dimensions of HIV/AIDS awareness: factual

knowledge, prejudice, personal risk, and misconceptions about HIV transmission. The IAQ-C has been reviewed by researchers for face validity and each statement in the questionnaire is rated on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), so that a low score on each item indicates greater awareness. Statements from the questionnaire helped guide two of the qualifying questions for selecting participants such as, “Give an example of how to protect yourself against STIs and HIV/AIDS” and “How is HIV transmitted?” Additionally, questions from this instrument were used to create interview questions related to knowledge such as “Is there a vaccination for HIV/AIDS?” and “Do you think HIV/AIDS can be spread through coughing and sneezing?”

The HIV Knowledge Questionnaire (HIV-KQ-18) (Carey & Schroder, 2002) is a brief self-administered measure of an individual’s HIV-related knowledge. The instrument contains 18 forced-choice statements (i.e., true, false, don't know) related to, in particular, knowledge related to sexual transmission of STIs. A single summary score is yielded overall, with higher scores significant of greater HIV-related knowledge. Questions related to knowledge were adopted for the interview protocol of this study. For example, questions adopted were related to HIV testing, vaccinations, and myths regarding HIV.

Additionally, questions derived from Downing-Matibag and Geisinger’s (2009) study were used to develop the interview protocol related to the HBM constructs. Downing-Matibag and Geisinger (2009) developed interview questions that assessed students’ perceptions of sex and dating norms on campus, what their peers and friends believed about the accessibility of hookups, assessment of events that occurred during the students most recent hookup, assessment of student’s perceptions of sexual risk taking,

and their perceived risks during hookups. Specific interview questions were constructed for this study related to students' perceived susceptibility and severity related to HIV/AIDS. Interview questions related to communication and peer support were also created, based on the Downing-Matibag and Geisinger (2009) study. Table 3.1 connects 11 of the 22 interview questions with the constructs and concepts of the health belief model. Each question helped investigate college students' experiences and gave insight on how to change future behaviors.

Procedures for Data Collection and Analysis

The aim of IPA is to try and understand the content and complexity of participants' meanings rather than just measure their frequency (Smith & Osborn, 2007). An interpretative relationship with the transcript, which requires both text and process interpretation is crucial with IPA. The step-by-step approach to the analysis required three stages, transcription and reading of the data, developing emergent themes, and connecting of the themes.

Table 3.1

Interview Questions Related to the Health Belief Model

Variables	Health Belief Model Connection	Interview Questions
Knowledge	Modifying Factors: Knowledge	Is there a cure for HIV?
		What preventative measures can be taken to protect against HIV?
Behavior	Perceived Threat	What risky sexual behaviors have you participated in?
	Perceived Threat, Perceived Susceptibility, Perceived Barrier	Do you use condoms in your sexual activity?
	Perceived Threat	How often do you drink alcohol/ use drugs and participate in risky sexual activity?
	Perceived Susceptibility, Perceived Benefit, Perceived Barrier	Have you ever been tested for HIV?
Attitude	Perceived Susceptibility, Perceived Threat,	What are your thoughts and opinions about HIV?
	Perceived Susceptibility	Are you concerned with contracting HIV?
	Perceived Severity	If you were to contract HIV how severe do you think it would be?
	Perceived Benefits, Perceived Barriers	What are your thoughts and opinions about condom use during sexual activity?
	Cues to Action	Do you communicate with your partner about HIV?

Transcription and reading of the data. It is important that interview processes ensure that the transcriptions are verbatim accounts of what transpired during the interview (McCracken, 1988; Patton, 1990). To ensure verbatim accounts, data collected from the audio recordings were transcribed by a professional transcriber. The data that was collected via audio recording was deleted as soon as transcribed. Transcribed data was password protected on the researcher's home computer. All data was coded and transcribed using pseudonyms so that there was no connection to the participant.

The initial stage of analysis requires a close reading of the transcript notes several times as well as listening to the audio several times (Pietkiewicz & Smith, 2012). Close reading of the transcripts helps with immersing oneself in the data, recalling the atmosphere of the interview, and the setting in which it was conducted (Pietkiewicz & Smith, 2012). Each reading and listening to the recording may provide some new insights, where notes about observations and reflections can be made (Pietkiewicz & Smith, 2012).

Developing emerging themes. After reading the transcript and notes several times, detailed comprehensive notes were reflected on and transformed into emergent themes (Pietkiewicz & Smith, 2012). In the first stage, the text was divided into meaning units and a comment was assigned to each unit. Moving through the transcript similarities and differences were identified and commented on in the left margin (Smith & Osborn, 2007). Extractions of echoes, amplifications, and contradictions in what the participant was saying was noted. The transcripts were reread in the second stage to identify emerging theme titles, and the initial notes were then transformed into concise phrases

that aimed to capture the essential quality of what was extracted from the text (Smith & Osborn, 2007).

Connecting themes. The last stage involved connecting the emerging themes by grouping them together according to the similarities or differences and providing each cluster with a descriptive label (Pietkiewicz & Smith, 2012). Some themes were then dropped because they did not fit well with the structure or they had a weak evidential base (Pietkiewicz & Smith, 2012). A final list was then comprised of themes, subthemes, and relevant short extracts from the transcript, followed by the line number so it was easy to find within the transcript (Pietkiewicz & Smith, 2012). To ensure quality and rigor of the findings within this study, trustworthiness, credibility, transferability, dependability, and confirmability was addressed.

Trustworthiness. Trustworthiness consists of the following components: credibility, transferability, dependability, and confirmability. Ultimately, trustworthiness in a qualitative study asks, “Can the findings be trusted?” (Moser & Korstjens, 2018).

Credibility. Credibility is concerned with the aspect of truth-value, establishing whether the findings are representing plausible information drawn from the participant’s original personal accounts (Moser & Korstjens, 2018). Often triangulation and member checking are done to ensure that credibility is established. Triangulation can improve the findings because different perspectives from different individuals can reveal new data or truth (Schwandt, Lincoln, & Guba, 2007). For this study, credibility was established by member checking, the use of knowledge questionnaires during the selection of the participants, and an examination of previous research and studies surrounding this phenomenon.

Transferability. Transferability refers to the degree to which the results can be transferred to other contexts or settings (Moser & Korstjens, 2018). Transferability is often utilized by providing rich detailed descriptions of the participants and the research process. Transferability for this study was established through detailed description of the research context and the phenomenon for future research studies.

Dependability. Dependability involves participants' evaluations of the findings and an aspect of consistency (Moser & Korstjens, 2018). According to Creswell (2007), dependability is the ability to demonstrate that a study can be replicated by ensuring a well-documented logical process. A method for establishing dependability is an external audit (Shenton, 2004). An external audit consists of consulting an experienced qualitative researcher to confirm that the procedures were consistent and reliable (Shenton, 2004).

Confirmability. Lastly, confirmability secures the intersubjectivity of the data (Moser & Korstjens, 2018), meaning the interpretation of the data should not be based on your own preferences, but grounded in the data (Moser & Korstjens, 2018). Like dependability, a method to ensure confirmability in this study was by an audit trail so that the consultant could review the data analysis.

Chapter Summary

This chapter described the qualitative method of inquiry that was used for the IPA-based study of college students' knowledge and behaviors related to HIV. An overview of the IPA design was described and helped provide reflective first-person accounts from college students in understanding why unsafe sexual practices that put them at risk for HIV continue. The research context, participants, and instruments as well as the data analysis are described in detail. The next chapter presents an analysis of

qualitative data gathered through semi-structured interviews with 15 college students at a 4-year accredited university in New York State. Chapter 5 will connect the qualitative data to previous research and explore future research opportunities and recommendations for practice within higher education.

Chapter 4: Results

Introduction

The purpose of this qualitative interpretative phenomenological analysis (IPA) study was to investigate college students' knowledge, behaviors, and attitudes regarding HIV/AIDS. The study explored why students who have knowledge about HIV/AIDS are still participating in risky sexual behaviors and the factors that may be influencing them to do so. Research shows that students are not getting the comprehensive sexual health education they need, and that sex education is not starting early enough (CDC, 2018d). There is a lack of qualitative literature directed at identifying the reasons in which college students engage in risky sexual behavior and the conditions in which it occurs (Williams et al., 1992).

This chapter presents an analysis of qualitative data gathered through semi-structured interviews with 15 college students at a 4-year accredited university in New York State. A purposeful sampling method was used to help identify participants through qualifying criteria. The semi-structured interviews were transcribed, and data was coded into themes. From the data analysis six themes were uncovered.

Research Questions

This chapter presents findings from this study, based on the following three research questions:

1. What is the knowledge level of college students regarding HIV/AIDS?

2. What risky sexual behaviors are college students participating in that put them at risk for HIV?
3. If college students have knowledge about the relationship between risky sexual behavior and HIV, why do they still participate in the risky behavior?

The primary goal of IPA is to investigate and explore how individuals make sense of their experiences, including significant decisions (Larkin et al., 2006). The IPA approach provided detailed descriptions of college students' knowledge and attitudes regarding HIV/AIDS and students' engagement in risky sexual behavior that could put them at risk for HIV.

Research context. The context for this study included undergraduate college students between the ages of 18-24 from a 4-year accredited university in New York State. As described in Chapter 1, incidence rates of HIV infection are higher in New York State, making this study a crucial opportunity to identify new avenues for education and research.

Participant selection. Participants were interviewed in a private enclosed office on the university campus in New York State. Consent forms were reviewed, and participants were asked qualifying questions in order to meet the criteria set for the study: (a) between the ages of 18-24; (b) knowledge regarding HIV/AIDS; and (c) engagement in risky sexual behavior during their college career. A total of 15 ($n=10$ females) ($n=5$ males) participants met the criteria for this study and participated in the semi-structured interview process. The interviews were audio recorded and transcribed for data analysis. Field notes and analytic memos were made during the semi-structured interview process. Table 4.1 provides an overview of study participants and demographic information.

Table 4.1

Participant Demographics

Name (Pseudonym)	Gender	Relationship Status
P1: Jade	Female	In a relationship
P2: Melissa	Female	In a relationship
P3: Matt	Male	Not in a relationship
P4: Chris	Male	In a relationship
P5: Mackenzie	Female	Not in a relationship
P6: Josh	Male	In a relationship
P7: Leah	Female	In a relationship
P8: Taylor	Female	In a relationship
P9: Sarah	Female	In a relationship
P10: Brian	Male	Not in a relationship
P11: Nia	Female	Not in a relationship
P12: Rory	Female	Not in a relationship
P13: Darnell	Male	Not in a relationship
P 14: Ashley	Female	In a relationship
P15: Maggie	Female	In a relationship

Interview data. Data was collected for this study using two digital audio recorders, the second recorder was used as a backup. Upon the completion of the interviews, a professional transcriptionist transcribed the digital audio files verbatim and sorted them into 15 separate Word documents. Nvivo 12 for Mac was used to aid in the

analysis of the transcribed data. The software aided in arranging information and coding of quotes.

Data Analysis and Findings

This section describes the findings, which involved the investigator engaging in an interpretative relationship with the transcripts of each case or participant. Unique to IPA, the central aim is to try and understand the content and complexity of meanings rather than measure frequency (Smith, 2003). The analysis involved reading, rereading, initial noting, development of emergent themes, connections and similarities across cases, and patterns of transcribed data. Field notes were taken after the interviews to help provide rich context for analysis (Creswell, 2013; Lofland et al., 2005; Mulhall, 2003; Patton, 2005).

The findings are organized by categories, superordinate themes, and subordinate themes related to each research question. The aim was to capture the meanings of the participants and to learn about their social and mental worlds. The interview questions were separated into three categories: knowledge, behaviors, and attitudes. The superordinate themes below were identified from each of those categories and are also connected to specific concepts and constructs of the health belief model. Table 4.2 outlines six superordinate themes and six subordinate themes identified during the identification of patterns. The superordinate themes identified were: a) efficacy in knowledge, b) distorted understanding, c) absence of protective barriers, d) sexual communication, e) feeling untouchable, and f) partner trust. The subordinate themes were: a) self-expressed doubt, b) lack of prior sexual health education, c) social lubricant, d) lack of regular HIV testing, e) generations removed, and f) fear of pregnancy.

Table 4.2

Summary of Categories and Themes

Categories	Superordinate Themes	Subordinate Themes
Knowledge	Theme 1: Efficacy in knowledge	Self-expressed doubt
	Theme 2: Distorted understanding	Lack of prior sexual health education
Behavior	Theme 3: Absence of protective barriers	Social lubricant
	Theme 4: Sexual communication	Lack of regular HIV testing
Attitudes	Theme 5: Feeling untouchable	Generations removed
	Theme 6: Partner trust	Fear of pregnancy

Category 1: knowledge. The first category, knowledge, emerged as a broad category that was used to categorize interview questions related to participants knowledge level of HIV/AIDS. This category of knowledge is directly linked to the modifying factors concept within the health belief model. Knowledge is an important link under the modifying factors concept of the health belief model because it may facilitate

or hinder an individual in positive health behaviors. The two superordinate themes that emerged from the category of knowledge were: “efficacy in knowledge” and “distorted understanding.” The subordinate themes that emerged were: “self-expressed doubt” and “lack of prior sexual health education.”

Theme 1: efficacy in knowledge. This section examines superordinate Theme 1: efficacy in knowledge. This superordinate theme was identified from the interview questions related to knowledge. All of the study participants indicated in some way that they knew how HIV is transmitted. Participants most commonly responded that “bodily fluids” such as semen or vaginal secretions were modes of HIV transmission. Participants also stated that they knew how to prevent HIV/AIDS during sexual intercourse by stating “condoms,” “PrEP,” and “PEP,” “abstinence,” “regular testing,” and “communication with their partners.” As the participants examined their own knowledge of HIV/AIDS a definition of “safe sex” emerged from the study. Safe sex can be defined in many ways, yet several participants associated safe sex solely with wearing a condom. As participants continued to explore their knowledge regarding HIV/AIDS, a belief emerged from the interviews and influenced their assessment on the accuracy of their previous knowledge. Some participants spoke about being unsure or questioning whether there was a vaccine for HIV/AIDS, while other participants expressed self-confidence that there is not a vaccine for HIV/AIDS.

The subordinate theme of self-expressed doubt emerged from participants starting to question the accuracy of their previous HIV/AIDS knowledge. Their confidence seemed to diminish, and they became more unaware about the risks

associated with HIV/AIDS. When Josh was asked if there was a vaccine to prevent HIV, he began to question his previous knowledge regarding prevention.

I'm not super knowledgeable when it comes to various methods to protect yourself from HIV and AIDS. I don't know how PEP and PrEP is administered; it might be a shot of some sort. I don't think it's as simple as a pill. (Josh)

Like Josh both Melissa and Taylor questioned if there was a vaccine for HIV and expressed a lack of knowledge surrounding PrEP as well. Melissa stated "I honestly don't know about that one. I don't think there is a vaccine but I'm not too sure." Taylor also questioned the idea of a vaccine, "I don't know if PrEP is considered a vaccine, if not, I don't know."

Jade also expressed self-doubt and questioned her knowledge of an HIV vaccine. So, I'm not sure, I know there's a pill, I don't know if there's a vaccination. I don't know if it's the same thing, but there's a pill and it helps to prevent people who are high risk of contracting HIV. (Jade)

These participants expressed self-doubt and questioning about the information that they answered correctly in the beginning of the interview. Expressed feelings of doubt seemed to continue to exist throughout the interview when asked questions related to knowledge, risk factors, prevention methods, and protection of HIV/AIDS. The next section examines participants "distorted or lack of understanding" regarding HIV/AIDS.

Theme 2: distorted understanding. This section examines superordinate Theme 2: distorted understanding. This theme was identified from interview questions related to knowledge. There is a gap in what students believe they know about HIV/AIDS versus

what they are truly knowledgeable about. An analytic memo that was made during the coding process of this theme was “It’s like they are getting bits and pieces of the big picture.” For example, some participants spoke about their belief that HIV/AIDS can be spread through coughing and sneezing.

Melissa reflected on whether or not HIV/AIDS can be spread through coughing and sneezing, “I think that it can be in your saliva or something. I don’t know.” When Melissa was asked how HIV was transmitted, she reaffirmed her belief regarding saliva, “Through bodily fluids, so I guess it would happen through saliva, especially if you went into the person’s mouth, I guess.”

Matt agreed with Melissa and had the same misconception regarding HIV transmission.

Well, you’re talking more about biology, I don’t know. I know coughing and sneezing carries physical droplets when you cough and sneeze so that can transfer to somebody. It could contaminate or gets inside of a cut, then someone can transmit it. (Matt)

Matt reflected with a little self-doubt but also seems to have a lack of understanding regarding the process in which HIV can actually be transmitted, but then when asked specifically how HIV is transmitted, he responded solely with “sexual activity.”

For Mackenzie, the same distorted understanding exists when asked about HIV transmission through coughing and sneezing. There is also some self-doubt in her response.

I feel like technically, yes. Say someone has an open wound or just like, since it is bodily fluids, I don’t really completely know, but I feel like if I don’t know if

someone sneezes and their mucus and like, God forbid, get it in you somehow I think like maybe you could. Could you? (Mackenzie)

An analytic memo made during the coding of this section was noted, “It feels like participants are trying to regurgitate information they have heard from a variety of sources. In turn, they are not understanding the meaning behind what they are explaining.”

The notion of distorted understanding continued across several other knowledge-based questions. Particularly, when asked the number of sexual partners that can increase one’s chance of contracting HIV/AIDS, many participants seemed to think high numbers of partners could increase your chances, not thinking that just one partner could pose HIV infection. For Chris, he stated, “I would say it depends on the location and I would also say, I mean, a rough guess for me would be five. Five in a certain amount of time, like five in a few months is a lot.” When Chris was asked to explain why he chose the number five he explained, “In college, running into that many people and doing it that frequently with so many partners, you don’t think about their sexual history. Or you’re just unaware, unknowledgeable about anything that’s going on in their lives.”

Within the context of distorted understanding, all participants were asked how they came to learn the knowledge they did have regarding HIV/AIDS. Participants spoke about where they received their HIV information such as media, billboards, posters, individual research, YouTube, and very brief discussions in high school.

The subordinate theme emerged from participants describing their experiences of prior education regarding HIV/AIDS. For Jade, there was no prior sexual health education, “During high school, we didn’t really have talks about STDs and stuff, it was

more like, just exercise class you know, not like a health class.” When asked how Jade did come to learn information regarding HIV prevention, she stated, “I actually searched it up on my own because I saw they had, like in New York City, they were promoting it in all the trains, and I was like, what’s that, and I searched it up.” Jade’s experience with a lack of education is similar across cases. Matt also experienced learning information on his own, “Like media and all that kind of stuff. More like the news. I think I did see a poster or something like that, I think it said they had some way to cure HIV or something like that, I think.”

Chris’s experience is a little bit different, but similarly the educational experience was not in-depth:

I would say it was minor learning at home and a little bit more increased knowledge in elementary. I would say middle school, around the 7th, 8th grade time, we had sexual education classes that weren’t in-depth, but they provided enough knowledge to make you see. Then from parents it would be just conversations of, don’t have unprotected sex, essentially. (Chris)

For Leah and Nia, their experiences regarding education was similar to all cases, not in-depth and only talked about briefly. Leah stated, “I don’t think like, a full course but, well, actually I don’t think so, I think it was like very, very briefly talked about in high school.” Nia responded similarly, “Yeah, I took health in high school. HIV was just kind of to scare you and that was really it, but nothing super specific. It was just kind of what the curriculum said and that was it.”

Each participant’s experience with education regarding HIV/AIDS was quite similar in its lack of depth. Participants often had a hard time recalling where they even

gained the information they were explaining. For instance, Melissa seemed unable to recall where the information actually came from, “I don’t know, it’s just like in my mind somewhere.” These findings agree with previous research that states students are not getting the sexual health education they need, and that sex education is not starting early enough (CDC, 2018d). All students must take health education, which includes HIV/AIDS lessons every year as mandated by New York State law (NYC Department of Education, 2019). However, the sexual health curriculum is too brief, lacking depth, and is starting too late, after students have already engaged in risky sexual behavior.

Category 2: behavior. A second category of behavior was used to categorize interview questions regarding engagement in risky sexual behavior amongst participants. The two superordinate themes that emerged from the category of behavior were “absence of protective barriers” and “sexual communication.” The subordinate themes that emerged were “social lubricant” and “lack of regular HIV testing.” Both the superordinate and subordinate themes that emerged were directly linked to the health belief model’s construct of perceived barriers.

Theme 3: absence of protective barriers. This section examines superordinate Theme 3: absence of protective barriers. This theme was identified from interview questions related to risky sexual behavior. Participants discussed their engagement in risky sexual behaviors that could possibly cause them to contract HIV. Risky sexual behavior is defined as high-risk behaviors that can increase one’s risk of contracting STIs, HIV/AIDS, or unintended pregnancies through unprotected sex (e.g., not using a condom), having unprotected sex with multiple sexual partners, or unprotected sex under the influence of drugs or alcohol.

Jade who is in a relationship, expressed that she does participate in risky sexual behavior, “sex without condoms.” When asked how that experience happened, she stated:

I think like in my relationship in the beginning I was very big on using condoms and I wouldn't do anything if they didn't have anything. But then I like, loosened up and I was like, oh whatever, and it happened one day and then it happened again and then I feel like I accepted it, so then I feel like a guy is not going to be like yeah, we got to make sure we use condoms. I think in my case it was because I accepted it and I was like, okay, like fine whatever, because in the beginning I was very in control of it and then I kind of let loose. It's just so hard to go back once you've done it for so many times like without, it's kind of like, oh why, you know? (Jade)

Like Jade, Melissa is also in a relationship and states she has engaged in risky sexual behavior. She stated she has engaged in sex with “multiple partners without using condoms,” and unprotected sex under the influence of alcohol. When asked what her thoughts and opinions were about condom use Melissa said, “I think condoms are important if you don't really know the person. I think in more long-term relationships where you trust each other, I think it's more your decision if you want to use them or not.” Melissa also explored her current experiences of not using condoms, “I don't use condoms now at all.”

Maggie also explored her experiences with risky sexual behavior. She stated that she has “had sex without a condom and under the influence of alcohol.” When asked if she currently uses condoms in her sexual activity, she explained, “I don't at all really.” When asked what led to her decision to not use condoms, she explained, “I guess not

having them, even though it really is simple, and I have no excuse for it.” For Maggie who is in a relationship, not having condoms readily available or being prepared is a perceived barrier to safe sexual practices. Similarly, Ashley reiterated that condoms are not used in her sexual activity. “I have had sex without a condom, while intoxicated or not intoxicated, under the influence of drugs, not asking somebody about their testing background before having sex with them.” When asked how frequently she engages in these behaviors, she stated, “I mean without a condom, kind of maybe once a week or something, maybe half of the time, pull it on maybe halfway through.” Ashley also stated that she is in a relationship.

Rory, who is not in a relationship, explains her lived experience of a recent hookup where she did not use protection:

And then like last night I had unprotected sex and he didn't use a condom and he said he could control it. He said he could pull out and like hold it like pee and so I trusted him with that, and I don't think he did. I don't know how it's supposed to be so . . . (Rory)

Like Rory, Chris explores his risky sexual behaviors, “I've engaged in unprotected sex with multiple partners, and one time I did under the influence of alcohol.” When asked how frequently the unprotected sex occurs, he stated, “like probably half of the time.” He explored his reasoning for not using condoms, “It's usually someone I've been engaged in sexual activity with for like a while and I started to trust them.” Brian also explained his risky sexual activity was associated with “not using condoms and having unprotected sex.” When asked how frequently this behavior occurs,

he stated, “From this semester, I would say very frequently.” Chris also explained that he is currently in a relationship.

However, Sarah’s experiences with condom use are a little different and based on an event that happened in her life. When asked about her engagement in risky sexual behavior, Sarah stated, “I’ve had sex drunk and without a condom and my idea was also like oh, I’m on birth control, I wasn’t thinking about STIs.” When asked about how frequently she engages in this behavior, she stated, “It used to be more frequent, it’s definitely not as frequent now.” Sarah also explained that she does use condoms in her sexual activity now and is in a relationship. When asked what led to her decision of using condoms now, she explained her lived experience, “I had a pregnancy scare, I’ve had two.”

Within the context of not using condoms, a number of participants identified having unprotected sex under the influence of drugs or alcohol, presenting the theme of social lubricant. Participants detailed their experiences of how social lubricant was a perceived barrier to participating in safe sexual practices. As participants were detailing their risky sexual experiences it was clear that they did not view unprotected sex as “risky”.

The social lubricant subordinate theme emerged from participants’ recounts of engaging in risky sexual behavior such as not using a condom while under the influence of alcohol or drugs. Some participants also explored the idea that alcohol and/or drugs aided in their willingness to participate in such activities.

Jade stated above that she does not have sex with a condom and normally does not have sex under the influence of alcohol, but she describes a lived experience

regarding her engagement in risky sexual behavior that involved alcohol. Jade is currently in a relationship but explained an experience after a prior breakup:

I think it was just my whole mindset at the point in time. I had just broken up with my ex and I was like, I'm going to do something for me, I wasn't thinking that having sex with someone was doing something for me but I was like, I'm on vacation and like, why not have sex, it was kind of like a why not situation. I think also like, the fact that I was a little drunk, like that's not me because that's not usually what I do, I usually need to know you but at that time I didn't care, I was like, whatever. (Jade)

Melissa has stated that she is not concerned with contracting HIV/AIDS because she is in a relationship. However, Melissa does not use condoms in her sexual activity and described instances where she drinks alcohol and has unprotected sex.

I don't really drink alcohol too much but then when I'm with my boyfriend and we're drinking then that usually leads to having sex. I think the alcohol does like, increase it [sex]. I don't think if we were like, chilling out, we definitely wouldn't be having sex but then since being under the influence, I don't know, it's kind of hard [to not have sex under the influence of alcohol]. (Melissa)

Josh, who is not in a relationship, explores a lived experience about a night of drinking and smoking that led to a risky sexual encounter:

So, I'm still, and this is bad, and I get that, but I've already rationalized it to myself already. But like I went out had a night of like drinking, some smoking, I don't even remember inviting someone over. I woke up in the morning and my bed was in the arrangement I have it in for sex and I was like "shit, I had someone

over last night” and I went through my Snapchat to see who it was. I was very high, very drunk, and like, on my windowsill I saw open lube and an unused condom, and I was like oh no, oh no. So, they [his partner] remembered more than I did, and they were like, no, we definitely did not use a condom when we had sex. I was like, no, that’s not good and the other person was like yeah, I don’t know, it’s like whatever and I was like That’s even worse. Oh my God, no.”

(Josh)

Brian, who is not in a relationship, shares a lived experience of a night of drinking that also led to a possible risky sexual intercourse:

Last semester I had a scare: I went to a college for my friend’s 21st, ended up bringing a girl home from the bar. So, we talked, next thing you know I’m back at her place, I’m fairly certain I did use a condom that night or didn’t, it was so long ago I can’t remember, but yeah, like the next few days just stuff wasn’t right physically. I got really scared, I ended up calling my parents, I was crying, yeah it was just not a good situation. (Brian)

Darnell recalls a different experience after a night of drinking. When asked if he used a condom during his sexual experience, he stated, “No, I don’t think we did, I think we had trouble with it and then just threw it to the side or whatever. Then when asked if alcohol was the reason the condom was not used, he replied “Yeah.” Darnell also stated he is not in a relationship. Like Darnell, Leah also expressed that alcohol was a perceived barrier in why she had unprotected sex. Leah is in a relationship but explained that her unprotected sexual experience under the influence of alcohol was “in a past time-frame.”

Matt who is not in a relationship, describes how alcohol impaired him from having a conversation with his partners about testing. When asked if he asked partners about testing he explained, “Personally, no I haven’t. It was freshman year when I first had sex, I was intoxicated, and I was high for the first time together, so I don’t remember that very well.”

Mackenzie, who is also not in a relationship, explores the idea of being invincible when you are under the influence of alcohol, “Alcohol it like just it adds to that invincibility you think you have because like, when you’re under the influence of alcohol you just think you’re on top of the world until you crash.”

Participants recounted that many of their risky sexual experiences happened unprotected and under the influence of drugs or alcohol, creating a social lubricant that makes them feel invincible. Some participants also described how being under the influence of alcohol and/or drugs inhibited them from communicating about sexual history and testing procedures.

Theme 4: sexual communication. This section examines superordinate Theme 4: lack of sexual communication. There is a pattern between risky sexual behaviors and the lack of sexual communication between sexual partners. This theme emerged from interview questions related to attitudes about HIV and questions related to engagement in risky sexual behavior. The theme of sexual communication also connects to the health belief model construct of perceived barriers, but when sexual communication is used correctly it could aid in a cue to action which could elicit safe sexual practices.

Melissa, who is currently in a relationship, was asked if she communicated with her partner about HIV/AIDS and if her partner has ever been tested. She explained, “No,

we haven't talked about it, and I don't know if he has ever been tested." Previously Melissa had also stated that she currently does not use condoms in her sexual activity with her partner.

Like Melissa, Jade is also in a relationship and has not talked to her partner about whether they have ever been tested for HIV/AIDS. When asked why she has not had this conversation, she explained:

I think I haven't really had that many sexual partners so like I don't know. I feel like I trust them to tell me that, I guess. I mean definitely I should ask but it's something you don't think about, I don't know why, maybe I should. (Jade)

Previously Jade also stated that she currently does not use condoms in her sexual activity with her partner.

Nia, who is not in a relationship and participates in unprotected sex, explained that she does not communicate with her partners about HIV/AIDS or ask if they have been tested. When asked why she does not have this conversation, she explained, "I just don't think about it and then also, like as much as I hate to admit it, like being a straight woman you know, it's like you would assume that it won't happen to you." As previously stated, Matt who is also not in a relationship was unable to communicate with his sexual partner about testing and HIV/AIDS because of the social lubricant of alcohol. When Chris, who is in a relationship, was asked if he spoke with his partner about being tested for HIV he stated, "no."

Ashley, who is in a committed relationship, explains that she does communicate with her partner about HIV/AIDS and if he has been tested. "Yeah, I've asked before if he's been tested, not specifically for HIV but I've asked if he has been tested before and I

guess that would be a good idea to specify.” Ashley previously expressed that she does have sex without a condom and often under the influence of drugs and alcohol. Brian, who is not in a relationship, states he communicates with his partners about testing by asking “if they are safe, when was the last time they were tested, stuff like that, not necessarily for AIDS though.”

Rory, who is not in a relationship, states she does communicate with her partners about whether they have been tested for HIV/AIDS, “I know of bring it up gently, like when I donate blood, yeah I’m clean so I can donate blood and you should too. It’s like if they don’t have clean blood then they might not donate.” However, this is not an accurate way to know if you are HIV positive or even “clean” Rory describes.

Communicating with your partners about sexual history and testing methods is an important self-protective behavior. It ultimately can help one learn about a partner’s prior sexual history and can cue to action safer sexual behaviors such as abstaining from sex with high-risk partners or using a condom. Participants indicated that conversations about sexual history were not often happening, and if they were, they were not specifically addressing HIV. Additionally, an important part of sexual communication is also divulging one’s own testing history surrounding HIV/AIDS.

Within the context of sexual communication, participants described their own HIV testing history. Patterns emerged that seemed to be consistent with risky sexual behavior. Participants are engaging in risky sexual behavior with their relationship partners or their hookups and not getting tested after.

For Jade who is in a relationship and has unprotected sex, she explained that she does not get tested for HIV:

No, I have never been tested. I haven't been tested only because I never had that worry before now. I don't know, but I do know though that sometimes when you get tested, like the standard STD testing, it doesn't test you for herpes, it doesn't test you for HIV which I find so dumb, but they don't. They should just include all because someone could think that they're good, but they could have herpes or HIV, you know, so I don't . . . (Jade)

Matt also explained that he has not been tested for HIV, "No. I think I went to the doctor and they took my blood and everything and did a normal checkup and everything was fine." Matt has also stated that he participates in unprotected sex and has done so under the influence of alcohol. Nia, who is not in a relationship, and engages in risky sex with people from the smartphone application Tinder stated that she does not ask her partners if they have been tested and she herself has not been tested.

Melissa explores the idea of asking her partner to get tested with her because they have not been tested: "I don't think it would be awkward, I think it would be good to get tested because there have been other partners, like again the peace of mind knowing that for sure it's not going to be a risk." Melissa is currently in a relationship and has expressed that she and her partner participate in unprotected sex. As stated above, Rory who is not in a relationship, states she knows she is clean because she donates blood, but has not had an HIV test. Ashley, who is in a relationship and has participated in risky sexual behavior with her partner, did ask if her partner had been tested but not specifically for HIV. She also expressed that she had been tested but did not know if it was for HIV.

Furthermore, there were several participants who stated they had been tested once before but did not state if it was regular testing after they had participated in risky sexual behavior. If one participates in risky behavior being tested for HIV, it is advisable to get tested again. People who are at higher risk should get tested more often (HIV, 2018b). Getting tested once does not prevent you from contracting HIV. In addition to participants' engagement in risky sexual behavior and lack of sexual communication, a theme emerged where students expressed that they were untouchable or invincible to HIV/AIDS. Participants seemed to rationalize with themselves that even though they participate in risky sexual behavior, contracting HIV/AIDS would not happen to them.

Category 3: Attitudes. The broad category titled attitudes used to categorize interview questions related to participants' attitudes and perceptions regarding HIV/AIDS and why they continue to participate in risky sexual behavior. The two superordinate themes that emerged from the category of behavior was "feeling untouchable" and "partner trust." The subordinate themes that emerged were "generations removed" and "fear of pregnancy." These themes are linked to the health belief model constructs of perceived susceptibility, perceived severity, and perceived threat.

Theme 5: feeling untouchable. This section examines superordinate Theme 5: feeling untouchable. This theme was identified from interview questions related to attitudes. Participants expressed feeling invincible in regard to their perceived susceptibility to HIV/AIDS as well as the perceived severity of HIV/AIDS.

Jade recounts her beliefs on age and how it influences one not to be worried about contracting HIV:

A lot of people feel like HIV is a disease that's out in the world, but it can't catch me, you know, like I'm young. No one talks about college students and HIV so that's something that happens to older people. I don't know, I think that's what people think so I think in that time they're like, well, nothing is going to happen to me. Like that's such a severe thing, how's that going to happen to me, you know? So, I think then it's like they automatically rule it out as it's not going to happen to them. So why would I be thinking about it, so why would I ask, so that's something that's not going to happen, or try to protect myself from something that I know is not going to happen. (Jade)

Melissa believes HIV/AIDS is a serious issue, but not serious for her personally:

I do think that it's a serious issue, like, I hear it on the news occasionally. As far as like my personal opinions, I don't really know, I don't have too much contact with it I guess because no one I know has it so it's hard for me. Like, I don't really think about it on a daily basis, so I don't really have a solid opinion.

(Melissa)

Like Melissa, Josh, describes why he is sometimes susceptible to contracting HIV, but also why he is not susceptible to contracting HIV:

Sometimes I am, sometimes I'm not, I guess. I'm not as worried about it because I know it's an issue, because I have open conversations with my health care providers, with my friends, with trusted mentors, with my parents or things like that, because I'm staying on top of my own sexual health and wellness I'm less worried. But also, because it's like still a thing that exists and it's still around and

sometimes, I make unsafe choices in terms of like sexual actions and still that worries me sometimes. (Josh)

Mackenzie describes her feelings of being untouchable and how she is invincible during her college years making her not feel susceptible to HIV:

I just feel like specifically in like, our college years we just think we're invincible and I just feel like, oh it won't happen to me. It can happen to anyone else, just not me. I just feel like, I don't know, maybe it's the age, because we're just at that age where there is a hookup culture and everyone is just out here trying to do stuff, trying to pleasure themselves and not care about themselves health wise. (Mackenzie)

Similar to Mackenzie, Nia describes the same idea of feeling untouchable and the idea that "it won't happen to me:"

Yeah, I guess, I don't think about HIV every single day, but the fact that I am a sexually active person it is in the back of my mind as a possibility. I just don't think about it and then also as much as I hate to admit it, being a straight woman, you know, you would like to assume that it won't happen to you. I think people conceptually understand they can get HIV but sometimes they don't want to believe that. Yeah, especially if you're not getting tested regularly, it's easy to say like well, I've only had a few (sexual partners), it won't happen to me. (Nia)

Ashley believes that HIV is a serious issue, but also agrees it is something she has not been around a lot, so she pushes the thought of contracting HIV to the side and believes she is not susceptible to contracting HIV:

I think it is a serious issue, but for me, I haven't been surrounded by it a lot. It's kind of one of those things that like you can push aside and you don't think about it every day because everybody is surrounded by different issues so you see those that are most important. I do think it's important and I think it can be prevented so it's just one of those things that you have to talk yourself into as something to mitigate or prevent, whether it's just getting sick in general or getting good grades, like you kind of just go through the motions to do things. (Ashley)

When asked about HIV prevalence on college campuses, Taylor explores her idea that college campuses would have lower HIV prevalence and incidence rates:

I would assume less because college campuses often have access and are able to offer protection or offer care because we all have health insurance when we come into school. I don't personally know any statistics about what students have. (Taylor)

Taylor is also expressing a lack of knowledge which was a consistent pattern in Theme 2. The lack of knowledge is contributing to students' feelings of being untouchable and a lack of perceived susceptibility when it comes to contracting HIV.

This theme of feeling untouchable wove into the theme of being generations removed from the HIV epidemic. The participants' generation has seen how the field of HIV prevention has been transformed repeatedly, and new techniques and solutions have been implemented through behavioral, biomedical, and structural intervention strategies that have mitigated the dire outcomes for patients a generation before. In turn, it leads to college students feeling as if the epidemic is over and that HIV is no longer a deadly disease. Participants stated that they did not feel susceptible to the HIV virus because of

these themes and that they did not perceived HIV to be something that would be personally severe for them.

Within this context of feeling untouchable, participants expressed in some way that HIV was more of a serious issue before their generation was born or came of age, such as in the 1980s and 1990s. This idea shows that current college students feel as though they are generations removed from the HIV epidemic or that HIV is not currently relevant, which in turn has created this feeling of being untouchable.

For Josh, the feeling of being untouchable came from seeing Magic Johnson survive the disease. Josh explained, “There’s no way. HIV is supposed to kill you in a couple years. Magic Johnson has been walking around with it for a while.”

Chris explains feeling that HIV was a bigger issue in previous generations. He explains that HPV is more of the epidemic in his generation today and how the lack of education is affecting generations today:

I feel like with society nowadays if HIV education was more out there, because like in the 70s and 80s when it first came out and skyrocketed and everybody was concerned about it, it was like, out there. But now people are talking about HPV, they’re talking about chlamydia. I feel like education needs to resurface. (Chris)

Leah, too, identified a pattern regarding education. She explained her own lived experience of not knowing how serious HIV was until she came to college:

Honestly, I feel like I didn’t really know how serious HIV was until I got to college and started to get more into health and my interest in public health. I know like in high school thinking, I don’t know like HIV just didn’t really apply to me, it wasn’t something that I would have to worry about because they

emphasize like sharing needles and I'm like, well, okay I'm never going to do needle drugs or anything like that. (Leah)

Taylor believes HIV risk has gone down but only in the United States.

Yes, I think the HIV risk has gone down a lot but that's mostly in our country, it doesn't go down in other places in the world. There is still like a high number of people that have it, but I know in other countries, like particularly developing nations where it's still very high risk I think it mostly targets girls because of like sex trafficking or something but definitely I think it's serious. (Taylor)

Similar to Taylor, Rory expresses how HIV is not as serious in the United States as it once was, "It's not as serious as it once was where people would die in their 30s back in the 1970s but they're still dying at age 60 and you can live to be age 100." Brian also explains, "I know it was a big thing back in the 1980s, the whole epidemic that went on with that, but it's still around, not just gone."

Nia explores the idea that HIV is serious because there still is not cure. She explains her perceptions about how easy it is to forget about HIV today:

Oh yeah, I think especially because there isn't a cure, I mean like I said there's ways to help with the symptoms but there's no cure. That's serious, anything without a cure I think is very serious. I think it is very easy to forget about it because we don't have that huge AIDS epidemic anymore and it's easy to forget that that is still out there. (Nia)

Darnell believes HIV is a serious issue, however, he recounts an experience where he was told it would not kill him these days.

I think it's a serious issue. One time when like I was worried personally, someone said to calm me down, "oh, it's not going to kill you in the modern day because there's stuff to keep you well even if you have it." It is definitely serious. I was going to say it's not a death sentence anymore. I think a lot of people don't think it's that big of a deal anymore because they've seen a lot of success cases and that's what's being shown in the media. It's is like oh, you could be fine. A lot of people aren't really saying oh, I have HIV, so a lot of people don't see that they have it, so they don't think it's that severe, they're like, a lot of people think it's like a dead disease or whatever because they don't see it around. (Darnell)

As participants shared their perceptions and attitudes surrounding their perceived susceptibility to and perceived severity of HIV/AIDS, it became clear that their sense of being untouchable comes from the idea that HIV/AIDS is no longer a public health issue in society. The next section examines another factor related to why participants feel they are not susceptible to HIV.

Theme 6: partner trust. The section examines superordinate Theme 6: partner trust. There is a pattern between participants feeling untouchable and how they view their trust with their sexual partners as well as their relationship. Participants explored their lived experiences related to their sexual encounters and the factors that influence them to believe they would not be susceptible to contracting HIV/AIDS. This theme connects to the health belief model's constructs of perceived susceptibility and perceived benefits.

Melissa, when asked if she is concerned with contracting HIV, explained that she was not concerned because of her partner trust and being in a relationship:

I don't think so no. Because I've been with the same person for like, 4 years so I know like sexually it can't really happen or at least I hope not if he's also committed. I don't know, like I don't feel like people around me really have it, but I wouldn't know. (Melissa)

However, when asked if she communicates with her partner about HIV/AIDS and if they have ever been tested, she explained, "No, not really, we haven't talked about it and I don't know if he has ever been tested." When asked what her thoughts and opinions were about condom use, Melissa said, "I think condoms are important if you don't really know the person. I think in more long-term relationships where you trust each other, I think it's more your decision if you want to use them or not." Melissa also explored her current experiences of not using condoms, "I don't use condoms now at all." When asked why she stopped using condoms she explained, "I think it was after I started taking birth control pills that we stopped using condoms."

Similarly, Chris explains that he is not susceptible to HIV because he trusts his partner, "Not through sexual contact, ironically. I trust my sexual partner and I've had the same sexual partner through my entire sexual activity." Chris is in a relationship and has stated that he has "had sex without a condom probably for the past five years. Had sex under the influence of alcohol probably like three or four times." When asked what led to not using condoms in his sexual activity he stated:

Well, I spent the year with my partner, and I mean nothing happened, I made sure that I went and got tested for everything but HIV. I felt like that was uncommon nowadays to make sure you're not (HIV positive), and then the past five years

I've been with the same person and haven't stepped out on her and she hasn't stepped out on me. (Chris)

Chris went on to describe how important trust is in a relationship:

You have to trust your partner. A lot of students that I know on campus will often talk about their sexual activity and talk about how they don't use a condom and that's a concern just for anybody because now whatever you have is going out into the world. Whatever that person has is going out into the world and you just have to trust. I feel if you're not going to use a condom you should have a partner that you trust, and you should have a partner that has been with you at least a year prior. If I ever was in a situation where I didn't trust, I would make sure that I at least acknowledge that or act accordingly. (Chris)

For Mackenzie, her beliefs regarding partner trust and condoms resonate a little differently than Chris:

I feel like a lot of people may be specifically in relationships, they're like oh, like my boyfriend doesn't like wearing condoms because x, y, z, he doesn't like the feeling, whatever. I feel like people especially in relationships should take precaution in that because that's important. I feel like, to be quite honest, people in the hookup culture use condoms more than people that would be in relationships. Because they have that trust conceptually built so like oh, if anything happens, my significant other got me, like I would still be fine, and we'd be together. and you're not thinking that that's going to happen because you're with one person and you're not thinking about what they could be doing. (Mackenzie)

Mackenzie explores the idea that partner trust is not considered a protective barrier.

Mackenzie is currently not in a relationship and stated that when she was in a relationship she did communicate with her partner about being tested for HIV/AIDS. She also explained that she has had unprotected sex, but “not as much as like other people would, like not often.”

Similar to Chris, Leah also places trust in her partner and because of that she is not concerned with contracting HIV. When asked if she is concerned with contracting HIV:

Not currently just because of my relationship status I feel confident that it's monogamous and I have been tested and so has my partner and so I don't feel worried for that. But I would say there have been times when I wasn't in a monogamous relationship where that was kind of (Leah)

Leah is currently in a relationship and explained that she did have a conversation about HIV/AIDS before she became sexually active with her partner. Leah also expressed that she has gotten herself tested, “Yes, I did get myself tested. I did it last year because at the time, I wasn't in a relationship and I really needed to know, I really wanted to know. Yeah.” Leah has gotten tested once and it was before the new relationship, but not while being in her relationship.

Brian also explains that his sense of trust is contingent on how long you have been acquainted with the person:

If it's someone that I don't know then I'll wear it but if it's someone that I've known, and I know that they're not really out there or anything then I tend to not wear one. Yeah, like, if it's a new person or anything like that yes, or if I know

the person, like if I know that person might be very out there I'm going to wear one, but if I know the person and I know who they are then I'd be comfortable to not wear one. (Brian)

Brian is not in a relationship and has previously stated that he does communicate with his partners by simply asking them, "are they safe, when was the last time they were tested and stuff like that, not necessarily AIDS in general." Brian admits HIV/AIDS is not really a main focus in these conversations.

Darnell explores his idea of trust and then assuming when it is okay not to continue condom use:

Sometimes when it wasn't someone who I like, knew very well I would just ask, do you want to use a condom. It's usually someone I've been like, engaged in sexual activity for like a while and like, I started to trust them even though I'd never asked I would still just like all of a sudden assume like, you know what . . .

(Darnell)

Darnell is not in a relationship and had stated that he only uses condoms about half the time in his sexual experiences. He stated that he has been tested once before when he had multiple sexual partners because "I was genuinely concerned that I might have HIV." Darnell did not express whether his testing is still regular but did explain he continues to use condoms sporadically in his sexual encounters.

Maggie also explains her lived experience regarding when she chooses to not use condoms in her sexual activity:

I wouldn't say it was that big of a factor for me. I guess because if I build up to the point where I'm willing to engage in sexual activity with you, I feel like I trust

that type of understanding of the person you're with and what they think is okay.

(Maggie)

Maggie is in a relationship and has stated that she does not use condoms at all in her sexual activity. She stated that she was tested once for HIV/AIDS: "I have and it's because I found out that my significant other wasn't being the most faithful." She went on to explain "that was the first time that I had ever been tested." Maggie is now in a new relationship and participating in unprotected sex.

Having a high degree of partner trust was a commonly identified theme throughout the interview process. Participants viewed partner trust as a perceived benefit that ultimately make them less susceptible to HIV. Most participants identified their experiences while being in a relationship rather than random "hookups" or "one-night stands." Those who are in a relationship more often do not use condoms and explain their reasoning as "partner trust." Participants who are in relationships state that they have been tested once before their new relationship, however, getting tested once for HIV explains your status from past risky sexual behavior not the present risky sexual behavior. Those who are not in relationships mention not using condoms at first with the sexual partner, but then once that trust is built, they will assume it's acceptable to no longer use condoms. In addition to partner trust, participants identified their reasoning for continuing to participate in unprotected sex as because they are covered by birth control when it comes to pregnancy.

Within the context of partner trust, many participants spoke on the fear of pregnancy versus contracting HIV. Fear of pregnancy was identified from the interview questions regarding attitudes. Most commonly, this theme arose from conversations about

why participants were not using condoms in their sexual activity. The idea of pregnancy was identified as a perceived threat over the deadly HIV virus. The theme emerged as a factor related to why participants are continually participating in risky sexual behavior.

Jade, who is in a relationship, explores an idea that pregnancy is the number one perceived threat in our culture:

I feel like in like in our culture the number one thought is not even getting STDs but becoming pregnant. So that's what you're more afraid of at that point. So, it's not even like oh, let me get tested, it's like oh, let me go to plan B, you know, like that's where your head is at. (Jade)

Mackenzie, who is not in a relationship, agrees with Jade and explains why pregnancy is more feared and threatening:

I feel like every time someone is like, talking about sex, they're like, I don't want to get pregnant, but no one says like oh, I don't want to catch HIV, or I don't want to get HIV. I guess it's just like a child is an actual something you can see and physically have. It's just like oh, herpes it goes away when I'm not stressed or something, and HIV will just be there to stay or whatever. (Mackenzie)

Leah, who is in a relationship, explains her perceptions regarding pregnancy and how pregnancy is more important to her than contracting HIV:

I used to think it wasn't that big of a deal because I used to have the opinion that if you're in a relationship and you're on birth control, for me it's always been more about protection against pregnancy than anything else. I think it's because at our age right now the idea of having a child or getting pregnant changes the scope of your entire life so drastically, much more than something like gonorrhea,

chlamydia, or HIV. Gonorrhea and chlamydia can be cured. HIV and AIDS, I think probably seems like oh, that doesn't apply to me. Right now, it's more pregnancy than STDs because I feel confident that that's not an issue, but for me right now it's about pregnancy. (Leah)

Leah lacks an understanding about the risk of HIV and how HIV would also change the scope of one's life drastically and could be deadly:

Taylor explains her thoughts on her peers and how they perceive the use of condoms in relationships:

I have heard a lot of people say like oh, I'm on birth control, so I don't need them and that's concerning because there's still a whole other use for them. I know some people, like lots of people that I know still use them for both STI protection and pregnancy, but I guess once they have the trust with a person often times, they'll lead into oh, let's just worry about pregnancy and stuff. I think people care more about pregnancy, like we have TV shows about teen pregnancy all over and since high school they are talking about don't have babies and it's pushed on us, don't get chlamydia or don't get HIV. So just like society. (Taylor)

Sarah, who is in a relationship, explains an experience of having unprotected sex under the influence of alcohol and her thoughts after the fact: "Yeah, I had sex drunk, I also had sex without a condom and my idea was like oh, I'm on birth control. It wasn't necessarily STIs."

Lastly, Nia who is not in a relationship, explores the idea of what it would be like if she found out she was pregnant in college:

The main concern is getting pregnant. I think it's just because it's like, so easy to have happen whether you're on birth control or not, but I think the idea of like the Pill might not be so effective. You're always going to think that well, I'm not going to be that 1%, you know. Something like abortion, like the idea of like, well I'm in college but I have to get an abortion could be like a really heavy thing to think about when you're 18 to 22 years old. Like you're very young, but I think it's also like the expectation of your partner. I've had guys who just don't want to use condoms. (Nia)

Each participant recounted experiences and beliefs regarding their susceptibility to HIV and how severe HIV is. Participants identified that HIV is not a perceived threat to their health in part due to feeling untouchable and the benefit they believe they have in trusting their partner. Participants view pregnancy was a perceived threat to their health rather than HIV. The fear of pregnancy surfaced during the interviews when discussing thoughts and opinions regarding condom use.

Summary of Results

The purpose of the interpretative phenomenological study was to explore the knowledge, attitudes, and behaviors of college students regarding HIV/AIDS. Specifically, these categories were used to understand what factors are influencing college students to continue to participate in risky sexual behavior. This chapter presents the results and data analysis from study participants as well as theme links to the health belief model constructs.

The results from the data analysis yielded six superordinate themes and six subordinate themes. The superordinate themes were: a) efficacy in knowledge, b)

distorted understanding, c) absence of protective barriers, d) sexual communication, e) feeling untouchable, and f) partner trust. The subordinate themes were: a) self-expressed doubt, b) lack of prior sexual health education, c) social lubricant, d) lack of regular HIV testing, e) generations removed, and f) fear of pregnancy. The themes that arose under the category of knowledge were directly related to the modifying factors concept of the health belief model. Knowledge of a health related behavior or condition can impact one's decision to partake in the risky sexual behavior or not partake in that behavior. The themes that emerged from the category of behavior were linked to constructs of perceived barriers and cues to action from the health belief model. The absence of protective barriers or not using condoms in one's sexual activity is a direct barrier to safe sexual practices. The lack of sexual communication is also a barrier to safe sexual practices, however, if participants are having conversations about their sexual history and HIV testing then it would be a cue to action that could aid in better decision making when it comes to practicing safe sex. The themes that emerged from the category of attitudes were linked to the health belief models constructs of perceived susceptibility, perceived severity, perceived threat, and perceived benefits. Participants did not believe they were susceptible to contracting HIV because they felt they were untouchable and that they were generations removed from the AIDS epidemic. Participants viewed partner trust as a valuable benefit that would aid in prevention of HIV. Furthermore, participants viewed pregnancy as a perceived threat over HIV.

The final chapter will summarize the study, reiterate its significance for administrators in higher education and health educators, discuss limitations of the study, and provide recommendations for future research. Additionally, the final chapter will

provide implications of the findings, and make recommendations for the future of HIV education on college campuses.

Chapter 5: Discussion

Introduction

HIV/AIDS is a preventable disease that has no cure. Many students are not getting the sexual health education they need, or it is not starting early enough (CDC, 2018d). Almost 70% of young adults are participating in sexual intercourse at 18 years of age, the beginning of their college experience (Cavos-Rehg et al., 2009). The college experience is a time for experimentation and sexual exploration. Students are living away from their parents, and interacting with a diverse group of individuals, presenting plenty of opportunities for students to engage in risky behavior. The statistics are evident; young adults aged 15-24 account for half of all STI infections in the United States (CDC, 2017). Young adults make up just over one quarter of the sexually active population, but account for half of the 20 million new STIs that occur in the United States each year (CDC, 2017). Previous research has shown that college students are knowledgeable about HIV transmission routes and protection methods, but knowledge rarely deters them from engaging in risky sexual behaviors or safer practices such as condom use (Anastasi et al., 1999; Lewis et al., 1997).

The purpose of the interpretative phenomenological analysis study was to examine college students' knowledge levels regarding HIV/AIDS, their engagement in risky sexual behavior, and analyze the factors that contribute to student's continued engagement in risky sexual behavior. The goal is to offer a contribution to the literature surrounding college students and HIV/AIDS. There are very few studies that look at

American college students and HIV/AIDS. Little research has focused on HIV/AIDS in the college student population, even though they have the highest STI rates of any population. This study adds to the literature by describing the lived experiences of college students in the domains of their knowledge, attitudes, and risky sexual activities that put them at the forefront for risk of HIV infection. Additionally, the health belief model was used as a framework to understand and predict participants belief patterns connected to the transmission of HIV/AIDS.

Semi-structured face-to-face interview questions addressed the guiding research questions:

1. What is the knowledge level of college students regarding HIV/AIDS?
2. What risky sexual behaviors are college students participating in that put them at risk for HIV?
3. If college students have knowledge about the relationship between risky sex and HIV, why do they still participate in the risky behavior?

The first phase of the research process involved identifying 15 college students from a 4-year accredited university in New York State, between the ages of 18-24, who identified having participated in risky sexual behavior and had knowledge regarding HIV/AIDS. The second phase of the research included a series of face-to-face semi-structured interviews with the 15 participants who were selected based on meeting the qualifying criteria of: a) being between the ages of 18-24, b) having no knowledge of HIV/AIDS, and c) engaging in risky sexual behavior while in college. Data analysis consisted of transcription, reading and re-reading, initial noting, developing emerging themes, and the identification of connections and patterns. The following six

superordinate themes emerged reasoning for why they continually put themselves at risk for HIV infection: a) efficacy in knowledge, b) distorted understanding, c) absence of protective barriers, d) sexual communication, e) feeling untouchable, and f) partner trust. Six subordinate themes emerged from the superordinate themes: a) self-expressed doubt, b) lack of prior sexual health education, c) social lubricant, d) lack of regular HIV testing, e) generations removed, and f) and fear of pregnancy. These themes encompass the factors that influence students to not protect themselves against HIV and continue to put themselves at risk for HIV and other STIs.

The final chapter of this dissertation connects the themes identified to the literature on HIV/AIDS and college students, as well as the connections to the health belief model. This chapter will propose implications of the findings and provide recommendations for health educators and college officials on new venues for education and curriculum. This chapter will also detail the limitations of the study and recommendations for future research.

Implications of Findings

In this study, 15 undergraduate college students were asked to share their knowledge, attitudes, and behaviors regarding HIV/AIDS. Six themes emerged from the participants' lived experiences regarding knowledge of HIV, attitudes about HIV, and risky sexual behavior. These themes provided the framework for answering the research questions.

Research questions. This section presents findings as they pertain to the study. The 19 interview questions explored three research questions. Table 5.1 illustrates the association between research questions, the health belief model, and themes. The themes

and connections to the health belief model provided the framework for answering the research questions.

Table 5.1

Research Questions, The Health Belief Model, and Themes

Research Questions	Health Belief Model Connections	Description
What is the knowledge level of college students regarding HIV/AIDS?	Modifying Factors	<ul style="list-style-type: none"> • Efficacy in knowledge • Self-expressed doubt • Distorted understanding • Lack of prior sexual health education
What risky sexual behaviors are college students participating in that put them at risk for HIV?	Perceived Barriers and Cues to Action	<ul style="list-style-type: none"> • Absence of protective barriers • Social lubricant • Sexual communication • Lack of regular HIV testing
If college students have knowledge about the relationship between risky sex and HIV, why do they still participate in the risky behavior?	Perceived Susceptibility, Perceived Seriousness, Perceived Threat, and Perceived Benefits	<ul style="list-style-type: none"> • Feeling untouchable • Generations removed • Partner trust • Fear of pregnancy

Research question 1. This section presents results as they pertain to Research Question 1: What is the knowledge level of college students regarding HIV/AIDS? Participants started the interview process with efficacy in their HIV/AIDS knowledge. They were confident in their responses related to how HIV is transmitted and how to protect themselves against HIV. The first finding emerged as a shared experience by all participants when asked about HIV prevention and HIV transmission routes. All of the participants displayed accurate understanding when it came to basic HIV knowledge questions. Similar to previous research described in Chapter 2, Lewis et al. (2007) found that most college students self-report that they are knowledgeable about HIV transmission routes and how to protect themselves. Lance (2001) also found that college students perceive that they have high knowledge levels regarding HIV/AIDS which generally resulted in students answering correctly to questions regarding HIV prevention and general HIV information. This study found that all 15 participants were confident that their responses were accurate regarding general HIV information and prevention methods, resulting in the superordinate theme of efficacy in knowledge.

As the knowledge interview questions veered away from basic information regarding HIV prevention, to questions requiring true accurate understanding of HIV participants started to show self-expressed doubt in their responses. Participants started to question or be unsure of themselves when asked about concepts that required more than just a regurgitated response. The self-doubt led participants to recall fallacies or have a distorted understanding often talked about in the literature as “myths,” where students believe a false social phenomena or belief. For instance, in the present study Melissa

agreed HIV can be transmitted through coughing and sneezing because HIV is transmitted through bodily fluids and saliva is a bodily fluid. There is a lack of understanding about which bodily fluids HIV is transmitted through. Consistent with Opt and Loffredo (2004), students can correctly answer questions concerning condom use as preventative measure for HIV and sexual transmission routes but report less certainty when it comes to whether there is vaccine against HIV or whether coughing and sneezing can spread HIV. Polacek et al. (2007) also found that students believed in myths, such as diaphragms and handwashing as a means to prevent the transmission of HIV/AIDS. Several connections were made from Polacek et al.'s. (2007) study and the current study. Six participants from the current study believed that HIV/AIDS could be transmitted through coughing and sneezing. Research shows that multiple sexual partnerships unprotected can increase one's chances of contracting and STI or HIV, however, some participants were also unaware that having unprotected sex with just one sexual partner can increase the chance of contracting HIV.

The superordinate theme of distorted understanding led to several shared experiences related to a lack of prior sexual health education. It was reported above that 21 U.S. states mandate sex education and HIV education and New York State is part of the mandate (NCSL, 2015), however, 10 out of the 15 participants interviewed stated in some way that they have had a lack of sexual health education, HIV education, or stated they did not have any at all, which in turn has resulted in a lack of understanding regarding the risks of HIV/AIDS. The lack of education is a direct link to the distorted understanding and self-expressed doubt that participants experienced during this study. Students had efficacy in their basic knowledge because they had found the information

on their own, seen news stories about HIV, saw a billboard, or watched something on YouTube. Since students were self-taught, they perceived the information to be accurate and were confident they were knowledgeable. In contrast to previous research conducted by Opt and Loffredo (2004), participants from the current study did not state that their information came from a college event or pamphlets from the health center. Participants' accounts of where they received their information were consistent with the findings of Brener and Gowda (2001) in which students stated they received information regarding HIV/AIDS from a non-classroom source. This study has uncovered that there are some students who do have a lack of understanding and education surrounding HIV/AIDS. Lack of education could be a possible factor in why risky sexual behavior is still prevalent within college students.

Even though participants had efficacy in their knowledge level, they were not completely knowledgeable about HIV/AIDS and the critical information that can help prevent and protect them from the deadly disease. Knowledge is a key modifying factor of the health belief model because it facilitates or hinders an individual in positive health behaviors. At the beginning of the current study participants felt knowledgeable about HIV/AIDS which in-turn made them feel that HIV was not a perceived threat. Even though participants had self-expressed doubt they still viewed HIV/AIDS as something that was non-threatening. The findings may suggest that individuals are not getting the proper sexual health education that they need, and it is not happening early enough. The source of information participants used regarding HIV transmission is impacting their knowledge level, attitudes, and behaviors surrounding HIV/AIDS.

Research question 2. This section presents results as it pertains to Research Question 2: What risky sexual behaviors are college students participating in that put them at risk for HIV? The CDC (2015) defines risky sexual behavior as a behavior that can increase one's risk of contracting STIs, HIV/AIDS, unintended pregnancies through unprotected sex (not using a condom), having unprotected sex with multiple sexual partners, or unprotected sex under the influence of drugs and/or alcohol. This definition was used to define risky sexual behavior to each of the 15 participants during their semi-structured interview. Participants responded about their engagement in risky sexual behaviors based off of the CDC's definition that was defined to them by the researcher during their interview. Participants used the definition to answer what risky sexual behaviors they have engaged in. They used the definition almost like a check list, going through each behavior listed in the definition and explaining if they had participated in that behavior. Participants did not explain the engagement of any other risky sexual behaviors they may have engaged in because it was not part of the definition. Participants could have engaged in other behaviors that they thought to be risky but did not discuss them because it was not part of the CDC's definition that was used in the study.

This study did not go into detail about participants' specific sexual activities, just simply what made the lived experience considered "risky sexual behavior." Due to the fact that this study solely looked at students lived experiences, this Research Question cannot comprehensively define the types of sexual behaviors or practices in college students. This study was able to conclude some risky sexual behaviors students have participated in during college and some activities they are currently participating in, but there are limitations to answering this Research Question due to the qualitative

interpretative phenomenological analysis method that was used. The themes that were discovered from the interview questions related to engagement in risky sexual behavior showed that all participants have engaged or are engaging in unprotected sexual intercourse while in a relationship or while single. These themes were also linked to the health belief model's construct of perceived barriers. Participants stated they have engaged in unprotected sex, making the lack of condom use a perceived barrier to safe sex.

Another theme found within this study was absence of protective barriers, primarily the use of condoms. All participants explored their lived experiences and identified that condom usage is sporadic and normally not used at all. This practice of not using condoms is similar to a study done by Adefuye et al. (2009), in which 61% of college students aged 20-29 and 48.5% of students below the age of 20, reported that they did not use a condom during the last time they had sexual intercourse. The ACHA (2017) also found that 47.7% of male college students and 41.9% of female college students reported that they either did not use contraception, the question was not applicable, or they did not know if they or their partner used contraceptives during the last time they had sexual intercourse. Participants from the current study also explained that they have not used condoms in past sexual experiences or were currently not using condoms in their sexual experiences because they are in a relationship and have partner trust. Single participants who were not using condoms also explained that they trusted their sexual partner. If college students do not view unprotected sex as a risky sexual behavior or have a different definition of what risky sexual behaviors are then it could be impacting the rates we see from the ACHA. It is important for researchers to understand college

students' definition of risky sexual behavior in order to understand the frequency and rates of this behavior on college campuses.

In addition, Lance (2001) found that 25% of his study's sample stated they always have unprotected sex. There is a great deal of quantitative research documenting the incidence of risky sexual behavior among college students. However, there is a lack of current qualitative literature directed at identifying the reasons in which college students engage in risky sexual behavior and the condition which it occurs (Williams et al., 1992). A study done by Williams et al. (1992) around the time of the HIV epidemic found that college students do not like condoms and believe that they interfere with their sexual pleasure and gratification. This finding is different from what was discovered in the study described here. This study found that college students used condoms to prevent pregnancy because they believed they had no perceived threat of contracting HIV. Even then, most students who are in a relationship felt that condoms were not needed because they viewed partner trust as a perceived benefit that would prevent them from contracting HIV. Participants stated they felt pregnancy was a perceived threat, but they felt protected against pregnancy because of the use of birth control.

Participants also explored their lived experiences regarding the use of social lubricants such as alcohol and drugs in their sexual activities. Participants found alcohol and drug use to be a perceived barrier that most often led or aided in their willingness to participate in behavior that they felt they would otherwise choose not to engage in. Cooper (2002) stated that one of the root causes of sexual risk taking on college campuses is alcohol consumption. Several other studies described in Chapter 2 explored the idea that the use of drugs and alcohol are directly related to HIV infection (Desiderato

& Crawford, 1995). According to Desiderato and Crawford (1995), alcohol is significantly correlated with the number of sexual partners participants had over an 11-week time frame. However, the current study found that alcohol influenced individuals who are in a relationship as well as those who are not in a relationship to have sex without a condom. The social lubricants of alcohol and drug use were considered to be barriers that led participants to engage in risky sexual behavior that they otherwise did not believe they would have engaged in. However, participants from this study are not using condoms even when they are not under the influence of alcohol and/or drugs. Lowry et al. (1994) found that students who were using drugs were engaging in sexual activity with four or more partners and not using a condom. The present study found that students are using drugs and engaging in sex without a condom, but they did not experience multiple sexual partnerships. However, the results of this study indicated that with or without alcohol and drug use participants were still engaging in unprotected sex.

Furthermore, the notion of sexual communication emerged from the participants' lived experiences regarding their risky sexual behavior. There is a lack of qualitative literature discussing college students' sexual communication regarding HIV and HIV testing. The current study found that college students are talking briefly about STI testing and history, but not specifically addressing HIV. Additionally, students are assuming that an HIV test is included in an STI test reiterating the distorted understanding and lack of education themes. A general STI test does not include testing for HIV as an HIV test is most commonly administered through blood testing and requires a different procedure. Participants explained that they often were communicating about other STIs such as chlamydia and gonorrhea, but not specifically HIV. Most participants from the present

study went on to explain that they have not discussed their sexual history or testing procedures with their sexual partners at all. Lack of sexual communication is a noted barrier to safe sexual practices among individuals.

Previous research by Calderia et al. (2012) uncovered that college students who were engaging in high risk sexual behaviors (e.g., multiple sexual partners, unprotected sex, alcohol use, drug use) were more likely to be tested for HIV. Another study that aimed to understand the HIV testing behaviors of college students found that students were influenced to get an HIV test by a friend/peer (27.1%), by the school/college (25.1%), or by a sexual partner (16.1%) (Anastasi et al., 1999). Students also identified why they needed an HIV test and the most common response was “I just want to know if I’m infected” (69.6%). Additionally, this study found that men were significantly more likely than women to report that they sought testing because their partner asked them to have the test (Anastasi et al., 1999). In the current study, it was clear that both males and females who stated they had been tested had elected to do so either because they had unprotected sex and wanted to know if they were infected or because they wanted to get tested with their partner mutually. However, most participants from the current study mentioned that they had been tested, but they also showed some signs of confusion when it came to whether an HIV test is included with a regular STI test.

Additionally, sexual communication was sporadic amongst participants or lacked specification when it came to test for HIV/AIDS or general discussions about HIV/AIDS. Most participants identified that they had been tested once before, but never expressed they pursued regular testing after every risky sexual experience. Testing should be done

after every risky sexual encounter even when in a relationship, because trust ultimately does not protect one against HIV.

It is important to note that participants from the present study did not consider unprotected sex “risky,” and most participants were in a relationship so they felt that not using a condom would not be considered “risky” because they were not having multiple sexual partnerships. They did not seem to view unprotected sex under the influence of drugs or alcohol as risky because they had trust in their partners. Participants from this study seemed to have varying ideas of what defines risky sexual behavior.

This qualitative research study focused on participants first person accounts rather than quantifying the frequency of risky sexual behavior, however, future research should aim to understand what college students’ definition of risky sexual behavior is, and what how frequently they are participating in that type of behavior during their college careers.

Research question 3. This section presents results as they pertain to Research Question 3: If college students have knowledge about the relationship between risky sex and HIV, why do they still participate in the risky behavior? The themes discovered from the interview questions related to participants attitudes showed that there are certain factors impacting participants continual engagement in risky sexual behavior. The themes that emerged from this category were consistent with the health belief model constructs of perceived susceptibility, perceived seriousness, perceived threat, and perceived benefits.

Throughout the interview process there was an expression of feeling untouchable where participants expressed disbelief that they would ever be susceptible to HIV/AIDS and that the prognosis for HIV/AIDS was no longer that severe or serious. Participants

recounted how HIV, to them, was a disease out in the world but was not something of personal concern to them because of their ages and because they did not know anyone with HIV. Participants went on to share their lived experiences of participating in risky sexual behavior yet not contracting HIV so it came to embrace the idea that it would not happen to them because it had not so far. The feeling of being untouchable is evident in the literature, particularly a previous study that found that generally college students have a low perceived risk of HIV/AIDS and report that they have no chance of being infected with HIV (Adefuye et al., 2009). Downing-Matibag and Geisinger (2009) explored the “hookup culture” among college students and found that many students are unaware of their vulnerability to HIV and other sexually transmitted infections (STIs). Only about 50% of these students were concerned with contracting HIV/AIDS or an STI.

Within the context of feeling untouchable, seven participants expressed that HIV was a serious issue for earlier generations but that it is no longer an issue. Participants expressed that they are generations removed from the HIV epidemic which seemed to have created the feeling of being untouchable. Participants explained that HIV could never happen to them because it is no longer a major public health concern or “common” today. Perhaps the feeling of being untouchable also comes from a lack of education on HIV and the implications of being infected, in addition HIV is no longer viewed as a perceived threat. Bruce and Walker (2001) stated that college students’ perceived knowledge about AIDS has increased since the early 1990s, yet the current study found that there is a lack of education and knowledge surrounding the topic because of the medical advances that lead students to believe they are no longer at risk. Overall,

participants stated that they felt that they were not susceptible to HIV and did not perceive HIV to be a serious threat to their health.

Participants evinced a strong focus on partner trust. Partner trust negatively impacted participants' uses of protective barriers to HIV/AIDS. Participants viewed partner trust as a perceived benefit that would ultimately protect them from contracting HIV. Participants explored their lived experiences and shared meaning behind why they continuously participate in risky sexual behavior even though they understand HIV is a deadly disease with no cure. Participants explained that their reasoning for engaging in risky sexual behavior was because they were in a relationship and trusted their partner. The idea of high partner trust was also found in Downing-Matibag and Geisinger's (2009) study, but that study focused on trust built between acquaintances rather than those who are in a relationship. Participants in the current study went on to explain that the sense of trust is what predicts their use of condoms or not. Consistent with Williams et al. (1992), study participants in both studies identified that the only time they would consider using condoms with a partner was if they simply did not know or trust the person. However, most of the literature explores the idea of multiple sexual partners or acquaintances, such as one-night stands and risky sexual behavior, but there is a lack of literature that explores students who are in relationships and the continuous risky sexual behavior that puts students at the forefront of HIV risk. Currently, the literature is framed by a multiple-sexual partner lens that does not educate those who are in relationships about safe sex. The idea of trusting a partner because the relationship is ostensibly monogamous is not a way to prevent HIV, especially when participants thought HIV and STI tests were the same and administered at the same time.

Within the context of partner trust, many participants spoke on the fear of pregnancy as a perceived threat versus contracting HIV. The subordinate theme arose from participants' lived experiences about why they were not using condoms in their sexual activities. Thirteen out of 15 participants identified a pattern of fear regarding pregnancy versus HIV. Participants explored their lived experiences of education that focused on not getting pregnant and the idea that pregnancy is something that is more visual and more of a threat to the students than HIV. All the participants in the current study admitted to not using condoms in their sexual activity with the most common reasoning owing to trust in their partner, or that the worry of pregnancy was subsided due to the use of hormonal birth control. Prior research has suggested that students are not using condoms because they reduce physical sensation and satisfaction. The current study found that the participants do not use condoms because they trust their sexual partner in a relationship. Participants viewed condoms as barrier to their sexual experiences and used partner trust as a benefit to rationalize their unprotected sex. Participants explained that due to their partner trust, they were not worried with contracting HIV, but were more worried about the idea of having a child at such a young, vibrant time in their lives. Most students compared the idea of having a child right now to the end of their life. Students were not threatened with the fact that HIV could end their life, they viewed pregnancy as the main perceived threat to their health.

The feeling of being untouchable as well as generations removed from the AIDS epidemic, partnered with placing too much trust in their relationship, has led students to believe that they are not susceptible to contracting HIV, even though they understand the risk involved with contracting the disease. Since participants feel so far removed from

HIV, they perceived the acquisition of HIV as having a less severe impact than pregnancy. Unfortunately, the fear of pregnancy results in only the use of birth control, leaving participants at risk for HIV infection because they continually do not use condoms, do not discuss their sexual history, and do not get tested regularly for HIV.

The Health Belief Model in Context

The current study used the HBM as a theoretical framework to understand the sexual health risk behavior associated with HIV/AIDS. Numerous studies have examined the HBM to predict whether young adults will use protection against STIs during sexual or oral intercourse (Brown et al., 1991; Laraque et al., 1997; Lin et al., 2005; Steers et al., 1996). In order for college students to take preventative measures against HIV, they must believe that they are susceptible to HIV, understand that HIV would be severe, recognize that the benefits of protection outweigh the costs, and believe they can take the necessary actions to protect themselves from HIV (Brown et al., 1991). Specifically, this study aimed at understanding the relationship between knowledge of HIV and the continual engagement in risky sexual behavior knowing the risks associated with HIV. Each of the HBM constructs were analyzed with the data findings.

Perceived susceptibility. Most of the participants found themselves to be personally not susceptible to HIV. Participants were unaware of their own vulnerability to HIV. The most common reason that students underestimate their vulnerability to HIV: distorted understanding, generations removed, partner trust, and fear of pregnancy. Many participants lacked the understanding and education needed to make sound conclusions about HIV. The lack of education and knowledge surrounding HIV, both in society and in the school systems, has negatively impacted college students' sexual health decisions.

Participants from the current study are generations removed from the AIDS epidemic, and due to medical advances and the use of PrEP and PEP, students see HIV/AIDS as easily treatable. Most commonly, participants feel safe and protected by their partners, creating a sense of partner trust that prevents HIV. Those who are in a relationship feel as though they would never be able to contract HIV sexually, but what is of major concern is pregnancy. Condoms are not being used because the most important goal is to prevent pregnancy. Instead of using condoms, participants identified using birth control pills.

Perceived severity/seriousness. The second component of the HBM states, that for a person to take preventative measures, they must believe that HIV would be severe. Surprisingly, participants stated that HIV itself is severe, but felt that personally HIV was something that would not happen to them. In contrast to the Downing-Matibag and Geisinger (2009) study where participants stated they were concerned with contracting an STI, the current study found that participants feared pregnancy more than any STI or even HIV. Participants did not have clear understanding about the risks associated with HIV based off of superordinate theme 2 distorted understanding and subordinate theme 2 lack of sexual health education. Participants had also stated that they felt pregnancy to be more serious and severe personally than HIV.

Perceived threat. Once an individual has identified that they are susceptible to a disease or illness and that it could seriously affect their health and quality of life a perceived threat has been identified (Becker, Drachman, & Kirscht., 1974). Results from this study found that participants do not view HIV/AIDS as a perceived threat to their health. Participants clearly stated that pregnancy was more of a perceived threat to their health and life than the deadly incurable HIV virus. Ideally, once a threat has been

identified through the constructs of the health belief model an individual would start to look at the perceived benefits of taking action. However, since participants did not view HIV as a perceived threat, they tried to rationalize what they believed to be a perceived benefit that protects from HIV, which for them was considered partner trust.

Perceived benefits minus the barrier. For participants to take preventative action against HIV, they need to believe that the benefits are greater than the costs. Participants did not believe that HIV was a threat to their health, did not believe they were at risk for HIV or that it would be personally serious for them. Although participants understood that condoms were a protective barrier against HIV, most students reasoned that they have “partner trust” that protects them from HIV. Participants seemed to look at the perceived barriers versus benefits portion of the health belief model differently. Expressing that condoms really were a barrier for them in regard to safe sex because, either they weren’t using them because they were in a relationship and trusted their partner or they were more worried about pregnancy versus STIs and HIV. They explained that even though they were not using a condom in their sexual activities, partner trust was their perceived benefit because they believed they would not be susceptible because of the trust they had with their sexual partner.

Self-efficacy. Participants “expressed self-doubt” when it came to certain concepts related to HIV. Participants did demonstrate knowledge about how one could protect themselves against HIV with condoms but were overly confident in their partner to use condoms in their sexual activities. Participants also believe they were untouchable and not susceptible when it came to personally contracting HIV. Participants had confidence in their abilities but were clouded by partner trust as a valuable benefit and

protective barrier against HIV. If participants are properly educated on the risks and statistics of HIV on college campuses, the self-efficacy that they do have could be translated into safe sexual practices that will ultimately prevent HIV transmission.

The findings present an opportunity for health educators and college administrators to target college students in the areas of perceived susceptibility and severity. Participants did not perceive a threat to their own health because they believed they were not susceptible to HIV and that an HIV infection would not be personally severe to them. Educators need to provide a curriculum for individuals who are in a relationship rather than the traditional education that is geared towards someone who is sexually promiscuous. The idea of partner trust is deterring college students from making healthy and safe sexual choices. If college students are not able to recognize a threat to their own health, they will most likely not take preventative action. As health educators and college administrators, there must be an attempt to make students aware about health risks especially if students are coming to campus with a lack of thorough sexual health education.

Limitations

The primary goal of this research was to generate a better understanding of college students' knowledge and attitudes related to HIV and their engagement in risky sexual behaviors. The IPA study provided the opportunity to uncover the lived experiences of college students. However the study did have some limitations.

Data was collected from a 4-year accredited university in New York State which is located in a small rural community. A purposeful sample of 15 undergraduate students between the ages of 18-24 who shared knowledge of HIV and engagement in risky sexual

behavior were selected. The narrow context and participant criteria could potentially limit the transferability of the study to other colleges, universities, or settings.

IPA aims to elicit rich, detailed, first-person accounts of experiences related to the phenomenon of interest (Pietkiewicz & Smith, 2012). At times, participants answered questions as if they were another individual instead of answering for themselves and their own experiences. Additionally, participants expressed self-doubt on questions that they had previously answered correctly. There was a possibility of bias due to the self-reported nature of the semi-structured face-to-face interviews and the nature of the questions. The bias might include moral stigmas about the topic or even bias due to their reputation as a student on the campus. To minimize bias, participants were given the option to skip questions or opt out of the study at any time.

The present study also did not go into detail about participants' frequency or types of sexual behaviors. They were asked to simply identify what risky sexual behaviors they have or are engaging in during their college experience. The study defined risky sexual behavior for the participants before the interview process. Participants then only used the activities listed from the definition when answering personally about the risky sexual behaviors they have participated in. Most participants answered with unprotected sex, not detailing whether the activity was oral sex, anal sex, or penile-vaginal sex. There could have been several other behaviors that participants view as risky that they did not detail in the interview process. The definition of risky sexual behavior is considered somewhat of a limitation due to the fact that participants did not view certain acts as "risky." Participants did not provide details regarding their sexual behaviors regarding their partners. For example, those who were in relationship gave general responses to

questions, so it was difficult for the researcher to understand if the experience they were expressing was with their current partner or a past sexual partner. When asked about HIV testing, participants were not asked whether they had been tested after an unprotected experience or had just been tested in their lifetime. More clarification and directed interview questions could eliminate these ambiguities.

Recommendations

This study explored the relationships between knowledge, attitudes, and college students' engagement in risky sexual activity. Continued qualitative studies that look at college students' lived experiences and the factors that contribute to their participation in risky sexual behaviors can help administrators and health educators provide better education and venues for discussion. Provided below are recommendations for K-12 curriculum, college students, student affairs and wellness organizations, and new HIV curriculum.

Recommendations for K-12 education. Colleges are often looked at as the crucible for risky sexual behavior, but colleges are actually inheriting students who are already engaging in the risky sexual behavior at the high school level. The sexual health education and HIV education pedagogy in high schools is minimal due, in part to the opt-out option for parents, despite it being mandated by 21 states (NCSL, 2015). Yet, 35 states, including the District of Columbia, allow parents to opt out of HIV education on behalf of their children and four U.S. states require parental consent before a child can receive any sexual education (NCSL, 2015). Having knowledge about HIV is imperative when students are then in a situation where they need to make a sexual health decision.

Participants from the present study often recalled learning information about HIV from YouTube, billboards, personal research, or from peers. The information aided in their own efficacy of knowledge, but they still were miseducated and uninformed about HIV. When asked about their HIV education at the K-12 level, most described it as being very brief or teen pregnancy being the most stressed topic. Without adequate knowledge or awareness, students are coming into a culture where they are able to experiment and explore, yet they do not have the proper education to protect themselves or their partners.

It is important that K-12 administrators stress that sexual health education is needed by all students regardless of age. By opting a child out of HIV education, parents are missing an important educational opportunity to keep their children safe and healthy. Educators need to present relevant sexual health information, prevention methods, testing procedures, sexual communication strategies with partners, and HIV transmission routes. HIV still exists and many individuals are dying from complications. Students need to be aware that HIV is something that they are susceptible to if they are participating in risky sexual behaviors. Sexual health education needs to be inclusive and not just from a risk-focus lens. To be sure, students need to understand the risks but also proper ways to stay healthy if they do want to participate in sexual activities.

Recommendations for college students. College students as a group, experience heightened risk factors that can lead to HIV infection, such as unprotected sex and engaging in risky sexual behavior under the influence of alcohol or drugs. Previous research attests that the hookup culture is not diminishing on college campuses, applications like Tinder are not going away, so it is ever more important for college students to learn more about positive discourse and sexual communication. The present

study found that college students do have self-efficacy when it comes to prevention methods, yet, there are other barriers that keep them from practicing preventative behaviors. If students were able to channel that confidence into sexual communication with their partners, they would be practicing an effective method of prevention in regard to HIV.

Sexual consent communication among college students has become more noticeable in peer-reviewed literature and mainstream media (Muehlenhard et al., 2016) because of federal mandates on sexual violence (DeSantis, 2007). Sexual communication regarding HIV should be seen in the same light, students should be having conversations around sexual health in general with their partners like they now do with consent. Making sure the partner agrees to participating in the sexual experience, but also making sure the partner has been tested for HIV and other STIs before engaging in any sexual encounter without a condom. For college students, indicating their sexual or romantic interest with someone can be difficult and students may feel it would lead to embarrassment, rejection, or shame, making one reluctant to engage in any conversation related to prior sexual relationships, testing, or the use of a condom. Sheeran, Abraham, and Orbell (1999) found that the strongest predictor of condom use was sexual communication amongst partners and having self-efficacy. Since participants in the current study showed a lack of sexual communication, it is important for students to engage in positive discourse with their partners as a means of prevention. The participants from the present study showed that partner trust was a key factor in not using condoms, however, most participants were not engaging in any sexual communication with their “trusted” partner about prior

testing, relationships, or HIV and STIs. Having these important conversations with partners could lead to safer sexual encounters.

In order to aid in behavior change, the health belief model should be applied. Students must first recognize that they are at risk or could be at risk for HIV infection due to their risky sexual behavior. Students must then understand the severity of HIV and what that would look like for them if they were to contract HIV. Once students acknowledge that they are susceptible and HIV is severe, they have then identified a threat to their health. Students should then gain more information about HIV and what living with HIV/AIDS really entails. Students should then think about the benefits of getting an HIV test or the benefits of using a condom in their sexual experiences. Students should outline what barriers have kept them from getting an HIV test or using a condom. Most likely the benefits of getting an HIV test or using condoms will outweigh the barriers. The implementation of health belief model can influence students to look at their current behaviors differently and ultimately aid in behavior change.

Recommendations for student affairs and wellness organizations. Like many participants in the present study, there are widespread misperceptions about HIV risk amongst college students which serve as a great barrier in HIV prevention methods. However, there are many ways that colleges can intervene and promote HIV education, awareness, and prevention strategies on their campuses.

The development and implementation of HIV inclusive policies can help signal campus priorities and provide a framework for decision-makers, community members, and other important stakeholders. Having a framework of reference can aid in understanding HIV and the risk to college students, as well as the support for the

interventions. Central College in Iowa has developed and implemented an HIV policy statement, expressing that the campus will provide education, information, and counseling concerning cases, effects, transmissibility and treatment of HIV and AIDS; they will safeguard the personal rights of individuals with HIV and AIDS; they will promote a safe environment for all members of the college community; and they will comply with the requirements of applicable deferral and state laws relating to HIV (Human Rights Campaign, 2019). Similarly, Syracuse University in Central New York also has an HIV/AIDS policy statement that encompasses similar values and states that the university is committed to the goal of educating students, faculty, and employees about HIV/AIDS-related conditions (Syracuse University, 2013). Yet, smaller campuses like that of the present study do not have policy statements focused on HIV/AIDS and should consider incorporating them in the future.

Developing HIV programming and initiatives on campuses are imperative not only during student orientations, family orientations, welcome week activities, and so on (Human Rights Campaign, 2018), but also throughout a student's college career. As students enter the college hookup culture, they are thrust into sexual exploration, experimentation, and a culture that incorporates alcohol and drug use. Yet, they are not equipped with the proper tools to navigate the new culture. Participants want college organizations and administrators to do more on campus. Josh stated:

We must do more than just give out condoms, we have to do more than just show scary pictures of what syphilis looks like after 30 years of being untreated. I think a large part of what we need to do doesn't even concern sex, it concerns normalizing these conversations surrounding sex. (Josh)

Chris explains that if we are going to have conversations about HIV, they need to be relevant to college students today:

We, as a campus, I believe we need to make sexual health more relevant; I feel like that's a constant struggle in the field of health, making things relevant to the current population, there's a communication gap, you know what I'm saying?
(Chris)

Many college campuses have used peer educators to deliver sexual health because college students are more comfortable talking with peers their own age. The University of Michigan has a Sexperteam of college students who educate the campus community about sexual health and relationships (Human Rights, 2018). Like the University of Michigan, the university in New York State where the present study was conducted has a group of students called the Sexperts who also educate the campus community. However, the topic of HIV/AIDS is not often a topic of conversation, and most students are not thoroughly educated on HIV/AIDS enough to be able to disseminate HIV knowledge among peers. Whether institutions hire or train student employees to educate the campus community, the conversation must involve education on HIV/AIDS prevention. Wellness organizations on campuses can use students and hired faculty to organize and plan a campus sexual health awareness week, which is now become a popular phenomenon. These events make sexual health conversations relevant and let students know it is okay to talk about sexuality, sexual health, HIV, and STIs. When there is a lack of conversation on college campuses about sexuality and sexual health is when there is often a corresponding increase in STIs in a community

Wellness organizations on college campuses have an opportunity to use social media as a platform to relay educational messages about HIV/AIDS. Popular social networking sites like Facebook, Twitter, Instagram, and Snapchat can aid in gathering support and promoting HIV awareness events on campus. College students already spend a significant amount of time using social media, so leveraging a tool that already exists can be a great way to reach a large group of people and bring HIV awareness. These messages must make sure that the college community knows they are not immune to HIV/AIDS and publicize the existence of HIV/AIDS on college campuses.

Additionally, administration and wellness organizations on campus have the opportunity to collaborate with the larger campus community to promote a healthy, welcoming environment for all students. As acceptance of LGBTQ people increases, there is a growing number of services offered for LGBTQ concerns, and while HIV is not exclusive to the LGBTQ community, the population is disproportionately affected by HIV. LGBTQ resources centers could ensure that campuswide services are inclusive and have HIV-related initiatives in place (Human Rights, 2018). Partnering with organizations such as the National Minority AIDS Council, and the Latino Commission on AIDS can help college campuses ensure that their sexual health education is culturally competent and inclusive for the student population. Working with mental health and counseling services on campus as well as engaging the health professionals that are working as faculty and staff can aid in developing strategies for sexual health education research and initiatives. Collaboration between wellness organizations and residence life and housing is imperative for HIV awareness and education. Programming can be implemented and tested in the residence halls and can help develop frameworks for

campus initiatives. Lastly, education for Greek life can also be an effective channel for wellness organizations to deliver peer-led sexual health education or faculty-led sexual health education (Human Rights, 2018).

Recommendations for college HIV curriculum. Themes that emerged from participants lived experiences showed that there is still a lack of knowledge and education surrounding the topic of HIV/AIDS for college students. Students are unclear about the importance of protecting themselves against HIV in the college setting.

Participants from this study explored their own ideas and attitudes about what needs to be done in regard to HIV education on their own campus. Participants stated that there needs to be an opportunity for students to take courses related to sexual health and they should be mandatory. Most participants stated that they never had a health course that went “in-depth” about HIV or other sexual health information. Part of the conversation surrounding HIV needs to be targeted to not only the most at-risk individuals who are part of the hookup culture, but also the individuals who are in relationships. Traditional HIV-prevention curricula focus on students who are hooking up, having one-night-stands and unprotected sex with multiple partners, but many of the students who are participating in risky sexual behavior are the students who are in relationships with one partner. Many participants from the present study who are in relationships shared their lived experiences about having unprotected sex with their partners, not asking about their sexual history, and not getting tested for HIV. They believe because they are in a relationship that HIV won’t apply to them, yet that is not the case.

Additionally, the curricula needs to incorporate the severity of HIV versus teen pregnancy. Many participants from the current study expressed teen pregnancy to be more of a concern than HIV because pregnancy would change their life more drastically, unaware of the deadly impact of HIV. Also, discussions surrounding HIV and its lag time between infection and diagnosis must be discussed to show how the college population is most at risk statistically. For example, one participant stated:

I think statistics and seeing numbers would help. Some people have no clue how many kids are on campus that have HIV. Yeah, definitely being aware of how many people around you might have HIV because to me it seems so distant because I don't have any friends that have HIV or at least talk about it. (Ashley)

Students today do not think HIV is relevant to them, which in turn makes them feel invulnerable to the disease. The hookup culture is a phenomenon and takes place throughout a student's academic career, and students need to be provided with sexual risk-prevention courses and classes.

Currently, there are no sexual health courses available on the university campus where the study took place that incorporates education about HIV/AIDS. The only available course is human sexuality, which only touches upon HIV. Further, this course is also restricted for majors and minors of specified departments, so it is not available for all students. The implementation of a sexual health risk-prevention course could offer students not only an opportunity for a general education elective, but the proper tools to protect themselves against HIV.

Future research. There are many opportunities for future research on the topic of college students and HIV/AIDS. The present study recognized that college students are

participating in risky sexual behavior and are not getting the proper education needed to protect themselves against HIV. Therefore, the lack of knowledge, lack of regular HIV testing, lack of sexual communication, and increased partner trust are contributing factors to why college students are continuously putting themselves at risk for STI and HIV infection.

Future research should be aimed at college students' definition of risky sexual behavior. The CDC (2015) defines risky sexual behavior as having sex while under the influence of alcohol or drugs without using a condom, having unprotected sex (without using a condom), and having unprotected sex with multiple sexual partners. From the present study, it was clear that participants did not perceive not using a condom as "risky," especially if they were in a relationship and on birth control. Future research should look at what students are defining as "risky sex" and how their definition impacts the behaviors they are participating in. Reevaluating the definition of risky sexual behavior from the student's perspective could help make educational initiatives more relevant to students as well. Researchers could also look at the differences and/or similarities of students' definition of risky sexual behavior correlated with whether they are in a relationship or not. Additionally, researching college students' definition of risky sexual behavior paired with quantitative data of their risky sexual behaviors such as a mixed-method design could really provide more understanding and education for the larger college campus communities.

Furthermore, the present study did not take into account gender differences regarding knowledge, attitudes, and behaviors. A previous study by Caldeira et al. (2012) looked at gender differences and found that HIV testing was more prevalent in women

than men and also found that men were more likely than women to exhibit alcohol or drug dependency. In regard to sexual communication, Desiderato and Crawford (1995) found that men who had prior sexual partners did not inform their current partners and did not inform their current partners that they did not use condoms in those prior sexual experiences. Further research on male versus female perceptions regarding HIV/AIDS and the factors that influence them to participate in risky sexual behavior should be looked at more deeply. A better understanding of gender differences could contribute to implementing gender specific intervention programs that strengthen students' problem solving skills and sexual decision making (Smith, 1997).

In addition to researching gender differences surrounding HIV/AIDS, it is important to ensure that LGBTQ voices are represented in sexual health education and programming. Sexual health education often centers the experiences of heterosexual and cisgender students, often neglecting the needs and concerns of LGBTQ students (Human Rights, 2019). A previous study found that LGBT college students reported having multiple sexual partners (six or more) during their lifetimes, which is considerably higher than the average college student (Lindley, Nicholson, Kerby, & Lu, 2003). Furthermore, less than half (44.6%) of LGBT college students in this study had reported that they had been tested for HIV during their lifetime (Lindley et al., 2003). However, with regard to HIV/STIs among lesbian, bisexual, and/or transgender populations fewer research studies have been conducted, but of the studies that have been conducted all of these populations are considered to be more at risk than the general college population (Lindley et al., 2003). In order to better reach LGBTQ students, college leaders and campus wellness organizations must consider integrating their sexual health education into existing

LGBTQ programs and events. Further research should be aimed at LGBTQ students' knowledge level of HIV/AIDS, their attitudes of HIV/AIDS, and what are they currently participating in that could possibly put them at risk for HIV infection.

The present study had specific criteria for participation (i.e., between the ages of 18-24, having knowledge of HIV/AIDS, engagement in risky sexual behavior while in college). Future research could refine the criteria to look at students by relationship status. Are students who are in a relationship riskier than those who are not in a relationship and vice versa? Particularly, research on students who are part of the hookup culture and having sexual encounters with relative strangers, classmates, online acquaintances, and even long-time friends could yield insight into the complexities of human health and well-being (Downing-Matibag & Geisinger, 2009). Understanding the rules and practices of the hookup culture and students' implications for sexual risk prevention plays an important role in how we educate future generations (Downing-Matibag & Geisinger, 2009). Additionally, the present study's qualifying criteria could be refined to look at class standing, particularly freshmen. The majority of the participants from the present study were upperclassmen, and by looking at incoming freshmen and identifying what activities they have already been participating in could help identify new programming during orientation weeks on the college campuses.

College health officials and public leadership should be promoting evidence-based interventions, ensuring access to comprehensive sex education, availability of condoms and HIV education, and availability of drug treatment programs to minimize the risk of HIV transmission (Lubinski et al., 2009). In order to successfully achieve these goals, further research should explore the implementation of HIV inclusive policies on

college and university campuses. In addition to research on policy, further study should aim to look at technology as an educational tool for HIV/AIDS. E-health refers to the use of information and communication technologies (ICTs) that deliver health services and information (AVERT, 2018b). E-health interventions are already in use within the global HIV response and are viewed as a key factor in ending AIDS as a public health threat (AVERT, 2018b). The use of mobile technology is helping individuals affected by HIV in remote areas access information about HIV prevention and adhere to treatment protocols (AVERT, 2018b). For college students who are connected to social media and technology on a daily basis, the use of mobile technology could facilitate HIV interventions and HIV awareness and more HIV testing. Research on current mobile technologies like WhatsApp, an application that helps people communicate with trained professionals and health care providers, could be beneficial and lead to implementation at the college level.

Conclusion

Young adults are at high risk for sexually transmitted infections (STIs), including HIV, because of their participation in risky sexual behaviors (Brown & Vanable, 2007). The WHO (2019) is committed to ending AIDS by 2030, but it is not an easy virus to defeat. Nearly a million individuals die each year because they are unaware they carry HIV and do not receive treatment (WHO, 2019). Most HIV infections are seen in places where certain higher-risk groups remain unaware that they have HIV. As the world's population of young people grows, incidence rates rise in absolute numbers of new infections (WHO, 2019). According to Lewis et al. (1997), college students tend to believe they have minimal personal risk of contracting HIV. Thus, making it essential

that continued research aims to analyze the factors that influence college students to participant in risky sexual behavior to help control the spread of HIV. There is a plethora of quantitative research that documents both the prevalence and incidence rates of college students' risky sexual behaviors, yet there is a lack of literature that looks specifically at college students from a qualitative lens and specifically at their risk for HIV infection.

College students are a generation removed from the HIV/AIDS epidemic and feel as though they are untouchable. Certain risk behaviors put college students at higher risk for HIV, including low HIV testing rates, substance abuse, low rates of condom use, and multiple sexual partners (CDC, 2018c). The average onset for sexual intercourse is 17 years of age, with the average number of sexual partners two individuals per year. With the time until graduation about 4-5 years, students are looking at encountering 10 to 12 sexual partners (Baldwin & Baldwin, 1988). The ACHA (2017) found that 43.9% of male college students and 49.8% of female college students had engaged in vaginal-penile sex within the past 30 days, and 41.9% were not using a condom. Desiderato and Crawford (1995) found that alcohol consumption, both in frequency and quantity, is significantly correlated with the number of sexual partners participants had over an 11-week time frame, resulting in students aged 20-24 having the highest sexually transmitted infection rates of any other population (CDC, 2018d).

The present study found that students lack the proper knowledge and believe that partner trust is a valuable prevention method for HIV. College students are generations removed from the AIDS epidemic which in turn creates a sense of feeling untouchable. College students are depending on their partners and a sense of trust to protect them from HIV. They believe pregnancy to be of personal higher risk than HIV infection and have a

lack of understanding when it comes to the severity of HIV and their own susceptibility to HIV infection. Participants are trusting their partners but not having conversations about their sexual history or getting tested regularly even if they are in a relationship. It only takes one infected individual to transmit HIV, and if partners are not using protection, not talking about their sexual history, and not getting tested regularly they are at high risk for HIV infection.

However, participants stated that they want to be engaged in conversations surrounding sexual health and want the opportunity to take educational sexual health risk prevention courses. Similar to the recommendations from this study, the WHO (2019) states it is important to listen to the voices of young adults and include them in program design and implementation of services to make sure they are acceptable and effective. HIV is a preventable disease that still has no cure, and as health educators and executive leaders we are tasked with educating populations most at risk by making issues salient to their concerns. Leadership can take a variety of forms and it has been acknowledged that strong leadership is crucial in mounting an effective response at the community, national, and global levels (Szekeres, Coates, & Ehrhardt, 2008). The development of leadership structures is critical in strengthening social justice and ensuring the protection of at-risk and vulnerable groups in all aspects of HIV/AIDS.

College students are at high risk for HIV infection, based on their risky sexual behaviors and the factors that influence their decisions to engage in risky sexual behavior. We can learn a lot from continued qualitative research surrounding their lived experiences and how to best educate the population on HIV prevention and protection methods. Establishing positive public discourse and courses that aid in clarification and

prevention methods for all students is key to reducing HIV infection on college campuses. HIV is a deadly, yet preventable disease and even though we are a generation removed from the notorious epidemic of the 80s and 90s, HIV still haunts us today. We must continue to educate incoming college students and upperclassmen about ways to protect themselves and their partners.

References

- Abiona, T., Balogun, J., Yohannes, E., Adefuye, A., Yakut, Y., Amosun, S., & Frantz, J. (2014). HIV/AIDS knowledge, perception of knowledge and sources of information among university students in USA, Turkey, South Africa and Nigeria. *Health Education Journal*, 73(6), 755-767.
- Adefuye, A. S., Abiona, T. C., Balogun, J. A., & Lukobo-Durrell, M. (2009). HIV sexual risk behaviors and perception of risk among college students: Implications for planning interventions. *BMC Public Health*, 9(1). doi:10.1186/1471-2458-9-281
- AIDSVu. (2018). *Local data: New York State*. Retrieved from <https://aidsvu.org/state/new-york/>
- Alase, A. (2017). The interpretative phenomenological analysis (IPA): A guide to a good qualitative research approach. *International Journal of Education & Literacy Studies*, 5(2), 9-19. doi:10.7575/aiac.ijels.v.5n.2p.9
- American College Health Association. *American college health association-national college health assessment II: Reference group executive summary spring 2009*. Hanover, MD: American College Health Association, 2011.
- American College Health Association. *American college health association-national college health assessment II: Reference group executive summary spring 2017*. Hanover, MD: American College Health Association.
- Anastasi, M., Sawyer, R. G., & Pinciario, P. J. (1999). A descriptive analysis of students seeking HIV antibody testing at a university health service. *Journal of American College Health*, 48, 13-20. doi: 10.1080/07448489909595667
- Anderson, R. M., & May, R. M. (1991). *Infectious diseases of humans*. New York, NY: Oxford Science Publications.
- Armstrong, E. A., Hamilton, L., & England, P. (2010). *Is hooking up bad for young women?* Contexts. Retrieved from <http://contexts.org/articles/is-hooking-up-bad-for-young-women/>
- AVERT. (2017). *Origin of HIV & AIDS*. Retrieved from <https://www.avert.org/professionals/history-hiv-aids/origin>

- AVERT. (2018a). *HIV/AIDS in the United States of America (USA)*. Retrieved from <https://www.avert.org/professionals/hiv-around-world/western-central-europe-north-america/usa>
- AVERT. (2018b). *Technology, E-health, and HIV programming*. Retrieved from <https://www.avert.org/technology-e-health-and-hiv-programming>
- Bailey, J. (2008). First steps in qualitative data analysis: Transcribing. *Family Practice*, 25, 127-131.
- Baldwin, J. D., & Baldwin, J. I. (1988). Factors affecting AIDS related sexual risk taking behavior among college students. *The Journal of Sex Research*, 25(2), 181-196.
- Becker, M., Drachman, R., & Kirscht, J. (1974). A new approach to explaining sick-role behavior in low-income populations. *American Journal of Public Health*, 64(3), 205-216.
- Bevan, M. (2014). A method of phenomenological interviewing. *Qualitative health research*, 24, 136-144. doi:10.1177/1049732313519710.
- Bisson, M. A., & Levine, T. R. (2009). Negotiating a friends with benefits relationship. *Archives of Sexual Behavior*, 38, 66–73.
- Boone, T.L., & Lefkowitz, E.S. (2004). Safer sex and the health belief model: Considering the contributions of peer norms and socialization factors. *Journal of Psychology & Human Sexuality*, 16 (1), 51-68.
- Bradshaw, C., Kahn, A.S., & Saville, B.K. (2010). To hook up or date: Which gender benefits? *Sex Roles*, 62, 661-669. doi:10.1007/s11199-010-9765-7.
- Brener, N. D., & Gowda, V. R. (2001). U.S. college students' reports of receiving health information on college campuses. *Journal of American College Health*, 49(5), 223-226.
- Bricki, N., & Green, J. (2007) *A guide to using qualitative research methodology*. London, London School of Hygiene and Tropical Medicine.
- Brown, J. L., & Venable, P. A. (2007). Alcohol use, partner type, and risky sexual behavior among college students: Findings from an event-level study. *Addictive Behaviors*, 32, 2940–2952. [PubMed: 17611038]
- Brown, L. K., DiClemente, R. J., Reynolds, L.A. (1991). HIV prevention for adolescents: Utility of the health belief model. *AIDS Education and Prevention*, 3, 50–59.

- Buhi, E., & Goodson, P. (2007). Predictors of adolescent sexual behavior and intention: A theory-guided systematic review. *Journal of Adolescent Health, 40*, 4-21.
- Caldeira, K. M., Singer, B. J., O'Grady, K. E., Vincent, K. B., & Arria, A. M. (2012). HIV testing in recent college students: prevalence and correlates. *AIDS Education and Prevention, 24*(4), 363-376.
- Calloway, D.S., Long White, D.N., & Corbin, D.E. (2014) Reducing the risk of HIV/AIDS in African American college students: An exploratory investigation of the efficacy of a peer educator approach. *Health Promot Pract, 15*, 181-188.
- Carey, M. P., & Schroder, K. E. (2002) Development and psychometric evaluation of the brief HIV knowledge questionnaire (HIV-KQ-18). *AIDS Ed Prev, 14*, 174-84.
- Cavazos-Rehg, P. A., Krauss, M. J., Spitznagel, E. L., Schootman, M., Cottler, L. B., & Bierut, L. J. (2011). Number of sexual partners and associations with initiation and intensity of substance use. *AIDS and Behavior, 15*(4), 869-874.
- CDC. (2012). *Principles of epidemiology in public health practice, (3rd ed.)*. An introduction to applied epidemiology and biostatistics. Retrieved from <https://www.cdc.gov/ophss/csels/dsepd/ss1978/lesson3/section2.html>
- CDC. (2015). *High risk behaviors*. Retrieved from <https://www.cdc.gov/hiv/risk/estimates/riskbehaviors.html>
- CDC. (2016). *HIV Surveillance Report (Vol. 28)*. Retrieved from <https://www.cdc.gov/hiv/library/reports/hiv-surveillance.html>
- CDC. (2017). STDs in adolescents and young adults. Retrieved from <https://www.cdc.gov/std/stats16/adolescents.htm>
- CDC. (2018a). *About HIV/AIDS*. Retrieved from <https://www.cdc.gov/hiv/basics/whatishiv.html>
- CDC. (2018b). *HIV transmission*. Retrieved from <https://www.cdc.gov/hiv/basics/transmission.html>
- CDC. (2018c). *HIV among youth*. Retrieved from <https://www.cdc.gov/hiv/group/age/youth/index.html>
- CDC. (2018d). *Sexual risk behaviors: HIV, STD, teen pregnancy prevention*. Retrieved from <https://www.cdc.gov/healthyyouth/sexualbehaviors/>
- CDC. (2018e). *Basic Statistics*. Retrieved from <https://www.cdc.gov/hiv/basics/statistics.html>

- CDC. (2018f). *HIV in the United States by geography*. Retrieved from <https://www.cdc.gov/hiv/statistics/overview/geographicdistribution.html>
- CDC. (2018g). PrEP, HIV the basics. Retrieved from <https://www.cdc.gov/hiv/basics/prep.html>
- Clarke, C. (2009). An introduction to a useful approach for occupational therapy research. *British Journal of Occupational Therapy*, 72, 37-39.
- Conner, M. & Norman, P. (1996). *Predicting health behavior: Search and practice with social cognition Models*. Open University Press: Ballmore: Buckingham.
- Cooper, M. L. (2002). Alcohol use and risky sexual behavior among college students and youth: Evaluating the evidence. *Journal of Studies on Alcohol*, 63, 101–117.
- Creswell, J. W. (2007). *Qualitative inquiry and research design* (2nd ed.). Thousand Oaks, CA: Sage.
- Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed method research*. (2nd ed.). Thousand Oaks, CA.
- Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). Thousand Oaks, CA: Sage.
- Curran, J. W., & Jaffe., H. W. (2011). AIDS: the early years and CDC’s response. *Morbidity and mortality weekly report*, 60(4): 64-69.
- Davis, C., Sloan, M., MacMaster, S., & Hughes L. (2007). The international AIDS questionnaire-English version (IAQ-E): Assessing the validity and reliability. *J HIV AIDS Prev Child Youth*, 7, 29–42.
- DeSantis, A. D. (2007). *Inside Greek U*. Lexington: University of Kentucky Press.
- Desiderato, L. L., & Crawford, H. J. (1995). Risky sexual behavior in college students: Relationships between number of sexual partners, disclosure of previous risky behavior, and alcohol use. *J. Youth Adolesc*, 24, 55-68.
- Dobe, C. K. (1994). Predictors of college student’s HIV–related sexual behaviors within the framework of the health belief model. *Dissertation Abstract International* , 54(12–B), 6459.
- Dowling, M. (2007). From Husserl to Van Manen: A review of different phenomenological approaches. *International Journal of Nursing Studies*, 44(1), 131- 142. 16412442 10.1016/j.ijnurstu.2005.11.026

- Downing-Matibag, T. M. & Geisinger, B. (2009). Hooking up and sexual risk taking among college students: A health belief model perspective. *Qualitative Health Research, 19*(9), 1196-1209. doi:10.1177/1049732309344206
- Fisher, J. D., & Fisher, W. A. (1992). Changing AIDS-risk behavior. *Psychological Bulletin, 111*,455-474.
- Flack, W. F., Daubman, K. A, Caron, M. L, Asadorian, J. A., D'Aureli, N. R., Gigliotti, S. N., & Stine, E. R. (2007). Risk factors and consequences of unwanted sex among university students: Hooking up, alcohol, and stress response. *Journal of Interpersonal Violence, 22*, 139–157. doi: 10.1177/0886260506295354.
- Flick, U. (2014). *An introduction to qualitative research* (5th ed.). Thousand Oaks, CA: Sage.
- Garcia, J. R., Reiber, C., Massey, S. G., & Merriwether, A. M. (2012). Sexual hookup culture: A review. *Review of General Psychology, 16*, 161-176. doi:10.1037/a0027911
- Garofalo, R., Hotton, A. L., Kuhns, L. M., Gratzner, B., & Mustanski, B. (2016). Incidence of HIV infection and sexually transmitted infections and related risk factors among very young men who have sex with men. *J Acquir Immune Defic Syndr, 72*, 79–86.
- Gayle, H.D., Keeling, R. P., Garcia-Tunon, M., Kilbourne, B. W., Narkunas, J. P., . . . Ingram, F. R. (1990). Prevalence of the human immunodeficiency virus among university students. *New England Journal of Medicine, 323*, 1538-1541. doi:10.1056/NEJM199011293232206
- Giorgi, A. (2008). Concerning a serious misunderstanding of the essence of the phenomenological method in psychology. *Journal of Phenomenological Psychology, 39*(1), 33- 58. 10.1163/156916208X311610
- Grello, C. M., Welsh, D. P., & Harper, M. S. (2006). No strings attached: The nature of casual sex in college students. *Journal of Sex Research, 43*, 255–267.
- Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods, 18*(1), 24. doi: 10.1177/1525822X05279903
- Gupta, G. R., & Weiss, E. (1993). Women's lives and sex: Implications for AIDS prevention. *Culture, Medicine and Psychiatry, 17*, 399-412.
- Guttmacher Institute. (2018). *Sex and HIV education*. Retrieved from <https://www.guttmacher.org/state-policy/explore/sex-and-hiv-education>

- Hall, H. I., Song, R., Szwarcwald, C. L., & Green, T. (2015). Brief report: time from infection with the human immunodeficiency virus to diagnosis, United States. *J Acquir Immune Defic Syndr*, *69*:248–51.
- Harris, J. M. (2013). *Sexual pleasure and enhancement: implications for college sexuality education*. (Unpublished Master's Thesis). University of Arkansas. Fayetteville, Arkansas.
- Hendricks, L., Brooks, T., Tague, A., & Ray, A. (2018). HIV among today's college students. *HIV AIDS Res J*, *1*(1).
- Hightow, L. B., Macdonald, P. D., Pilcher, C. D., Kaplan, A. H., Foust, E., Nguyen, T. Q., & Leone, P. A. (2005). The unexpected movement of the HIV epidemic in the southeastern United States. *Journal of Acquired Immune Deficiency Syndromes*, *38*(5), 531-537. doi:10.1097/01.qai.0000155037.10628.cb
- HIV. (2018a). The global HIV/AIDS epidemic. Retrieved from <https://www.hiv.gov/federal-response/pepfar-global-aids/global-hiv-aids-overview>
- HIV. (2018b). Who should get tested? Retrieved from <https://www.hiv.gov/hiv-basics/hiv-testing/learn-about-hiv-testing/who-should-get-tested>
- Hochbaum, G., Rosenstock, I., Kegels, S. (1952). *Health belief model*. United States Public Health Service. Retrieved from http://www.infosihat.gov.my/infosihat/artikelHP/bahanrujukan/HE_DAN_TEORI/DOC/Health%20Belief%20Model.doc.
- Hockbaum, G. M. (1958). Public participation in medical screening programs: A socio psychological study. *Public Health Service Publication*, No. 572. Washington, US: Government Printing Office.
- Hughes, M., Morrison, K., & Asada, K. J. K. (2005). What's love got to do with it? Exploring the impact of maintenance rules, love attitudes, and network support on friends with benefits relationships. *Western Journal of Communication*, *69*, 49–66.
- Human Rights Campaign. (2019). HIV 101: *A guide to HIV prevention, treatment and care on college and university campuses*. Retrieved from <https://www.hrc.org/resources/hiv-101-a-guide-to-hiv-prevention-treatment-and-care-on-college-and-univers>
- Humble, F., Cross, W. (2010). Being different: a phenomenological exploration of a group of veteran psychiatric nurses. *International Journal of Mental Health Nursing*, *19*(2), 128- 136. 20367650 10.1111/j.1447-0349.2009.00651.x

- Husserl, E. (1998). *Ideas pertaining to a pure phenomenology and to a phenomenological philosophy*. Dordrecht: Kluwer.
- Hycner, R. H. (1999). In Bryman, A., Burgess, R. G. (Eds.). Some guidelines for the phenomenological analysis of interview data (Vol. 3, pp. 143–164). London: Sage.
- Inungu, J., Mumford, V., Younis, M., & Langford, S. (2009). HIV knowledge, attitudes, and practice among college students in the United States. *Journal of Health and Human Services Administration, 32*, 259-277.
- Janz, N., & Becker, M. (1984). The health belief model: A decade later. *Health Education Quarterly, 11*(1), 1-47. doi: 10.1177/109019818401100101
- Janz, N. K., Champion, V. L., & Strecher, V. J. (2002). The health belief model. In K. Glanz, B.K. Rimer, & F.M. Lewis (Eds.), *Health Behavior and Health Education: Theory, Research, and Practice 3rd Edition* (pp.45-66). Jossey-Bass. San Francisco, CA.
- Johnston, L. D., O'Malley, P. M., Bachman, J. G., Schulenberg, J. E., Patrick, M. E. (2017) *HIV/AIDS: Risk and protective behaviors among adults ages 21 to 40 in the U. S.* Ann Arbor: Institute for Social Research, The University of Michigan.
- Josiam, B. M., Hobson, J. S. P., Dietrich, U. C., & Smeaton, G. (1998). An analysis of the sexual, alcohol and drug related behavioural patterns of students on spring break. *Tourism Management, 19*,501–513. doi: 10.1016/S0261-5177(98)00052-1.
- Kaiser, K. (2009). Protecting respondent confidentiality in qualitative research. *Qualitative Health Research, 19*, 1632-1641. doi:10.1177/1049732309350879
- Kalichman, S. C., Heckman, T., & Kelly, J. A. (1996). Sensation seeking as an explanation for the association between substance use and HIV-related risky sexual behavior. *Arch. Sexual Behav. 25*, 141-154.
- Kingori, C., Nkansah, M. A., Haile, Z., Darlington, K. A., & Basta, T. (2017). Factors associated with HIV related stigma among college students in the Midwest. *AIMS Public Health, 4*(4):347–363. doi:10.3934/publichealth.2017.4.347.
- Klinger, L. (2016). Hookup culture on college campuses: Centering college women, communication barriers, and negative outcomes. *College Student Affairs Leadership, 3*(2), 2332- 4430.
- Lall, P., Lim, S. H., Khairuddin, N., & Kamarulzaman, A.(2015). Review: An urgent need for research on factors impacting adherence to and retention in care among

- HIV-positive youth and adolescents from key populations. *J Int AIDS Soc*, 18(Suppl 1):19393.
- Lambert, T. A., Kahn, A. S., & Apple, K. J. (2003). Pluralistic ignorance and hooking up. *Journal of Sex Research*, 40, 129–133. doi: 10.1080/00224490309552174.
- Lamorte, W. (2016). The theory of planned behavior. Retrieved from <http://sphweb.bumc.bu.edu/otlt/MPH-Modules/SB/BehavioralChangeTheories/BehavioralChangeTheories3.htm>
- Lance, L. M. (2001). HIV/AIDS perceptions and knowledge of heterosexual college students within the context of sexual activity: Suggestions for the future. *College Student Journal*, 35(3), 179-196.
- Larkin, M., & Thompson, A. R. (2012). Interpretative phenomenological analysis in mental health and psychotherapy research. In D. Harper & A. R. Thompson (Eds.), *Qualitative research method in mental health and psychotherapy: A guide for students and practitioners* (pp. 101–116). Chichester, UK: John Wiley & Sons.
- Larkin, M., Watts, S., & Clifton, E. (2006). Giving voice and making sense in interpretive phenomenological analysis. *Qualitative Research in Psychology*, 3(2), 102-120. doi:10.1191/1478088706qp062oa
- Laraque, D., McLean, D. E., Brown-Peterside, P., Ashton, D., & Diamond, B. (1997). Predictors of reported condom use in Central Harlem youth as conceptualized by the health belief model. *Journal of Adolescent Health*, 21, 318-327.
- Leigh, B. C., & Stall, R. (1993). Substance use and risky sexual behavior for exposure to HIV: Issues in methodology, interpretation, and prevention. *American Journal of Psychology*, 48 (10), 1035-1048.
- Lewis, J. E., Malow, R. M., & Ireland, S. J. (1997). HIV/AIDS risk in heterosexual college students. A review of a decade of literature. *Journal of the American College of Health*, 45(4), 147-158. doi: 10.2466/pr0.2001.88.2.431
- Lindley, L. L., Nicholson, T. J., Kerby, M. B., Lu, N. (2003). HIV/STI associated risk behaviors among self-identified lesbian, gay, bisexual, and transgender college students in the United States. *AIDS Educ Prev*, 15(5):413-42914626464
- Lin, P., Simoni, J. M., & Zemon, V. (2005). The health belief model, sexual behaviors, and HIV risk among Taiwanese immigrants. *AIDS Education and Prevention*, 17, 469-483.

- Lofland, J., Snow, D., Anderson, L., & Lofland, L. (2005). *Analyzing social settings: A guide to qualitative observation and analysis*, (4th edition). Belmont, CA: Wadsworth Publishing.
- Lopez, K. A., Willis, D. G. (2004). Descriptive versus interpretive phenomenology: their contributions to nursing knowledge. *Qualitative Health Research*, 14 (5), 726-735. 15107174 10.1177/1049732304263638
- Lowry, R., Holtzman, D., Truman, B. I., Kann, L., Collins, J. L., & Kolbe, L. J. (1994). Substance use and HIV-related sexual behaviors among US high school students: Are they related? *American Journal of Public Health*, 84(7), 1116-1120.
- Lubinski C., Aberg, J., Bardequez, A. D., et al. (2009). HIV policy: The path forward-A joint position paper of the HIV Medicine Association of the Infectious Disease Society of America and the American College of Physicians. *Clin Infect Dis*, 48:1335-44.
- Lux, K. M., & Petosa, R. (1994). Using the health belief model to predict safer sex intentions of incarcerated youth. *Health Education Quarterly*, 21(4), 487-497.
- Maiman, L.A., & Becker, M. H. (1974). The health belief model: Origins and correlates in psychological theory. *Health Education Monographs*, 2(3), 36-53.
- Marsiglia, F. F., Jacobs, B. L., Nieri, T., Smith, S. J., Salamone, D., & Booth, J. (2013). Effects of an undergraduate HIV/AIDS course on students' HIV risk. *Journal of HIV/AIDS & Social Services*, 12(2), 172-189. doi:10.1080/15381501.2013.790750.
- Marston, C., & King, E.(2006). Factors that shape young people's sexual behavior: a systematic review. *Lancet*, 368, 1581-1586.
- Matua, G. A., & Van, D. W. (2015). Differentiating between descriptive and interpretive research approaches. *Nurse Researcher*, 22(6), 22. doi:http://dx.doi.org.pluma.sjfc.edu/10.7748/nr.22.6.22.e1344
- McCracken, G. D. (1988). *The long interview*. Newbury Park, CA: Sage Publications.
- McKenzie, J. F., Neiger, B. L., & Thackeray, R. (2013). *Planning, implementing, and evaluating health promotion programs: A primer*. San Francisco, CA: Pearson/Benjamin Cummings.
- Moser, A., & Korstjens, I. (2018). Series: Practical guidance to qualitative research. Part 3: Sampling, data collection and analysis. *European Journal of General Practice*, 24(1), 9-18. doi:10.1080/13814788.2017.1375091

- Muehlenhard, C. L., Humphreys, T. P., Jozkowski, K. N., & Peterson, Z. D. (2016). The complexities of sexual consent among college students: A conceptual and empirical review, *Journal of Sex Research*, 2016, 53(4–5):457–487.
- Mulhall, A. (2003). In the field: Notes on observation in qualitative research. *Journal of Advanced Nursing*, 41, 306–313.
- National Cancer Institute. Theory at a Glance: A Guide for Health Promotion Practice. Washington, DC: U.S. Department of Health and Human Services; 2005.
- National Center for Education Statistics. (2018). *Fast Facts*. Retrieved from <https://nces.ed.gov/fastfacts/display.asp?id=372>
- National College Health Risk Behavior Survey. (1995). *Survey Codebook*. Retrieved from ftp://ftp.cdc.gov/pub/data/yrbs/1995/NCHRBS_1995_National_User_Guide.pdf
- National Institute on Alcohol Abuse and Alcoholism (NIAAA). (2002). Task force of the National Advisory Council on Alcohol Abuse and Alcoholism. A call to action: Changing the culture of drinking at U.S. colleges. Bethesda, MD: National Institutes of Health, U.S. Department of Health and Human Services (DHHS). (NIH publication no. 02–5010).
- NCSL. (2015). *State policies on sex education in schools*. Retrieved from <http://www.ncsl.org/research/health/state-policies-on-sex-education-in-schools.aspx>
- Netting, N. S., & Burnett, M. L. (2004). Twenty years of student sexual behavior: Subcultural adaptations to a changing health environment. *Adolescence*, 39(153), 19-38.
- NYC Department of Education. (2019). *Health Education Requirements*. Retrieved from <https://www.schools.nyc.gov/school-life/learning/subjects/health-education/health-education-requirements>
- Ocfemia, M. C., Dunville, R., Zhang, T., Barrios, L. C., & Oster, A .M. (2018). HIV diagnoses among persons aged 13–29 years — United States, 2010–2014. *MMWR Morb Mortal Wkly Rep*, 67, 212–215. doi: <http://dx.doi.org/10.15585/mmwr.mm6707a2>
- Opt, S. K., & Loffredo, D. A. (2004). College Students and HIV/AIDS: More Insights on Knowledge, Testing, and Sexual Practices. *The Journal of Psychology*, 138(5), 389-403. doi:10.3200/jrlp.138.5.389-403

- Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2013). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health and Mental Health Services Research*, 42(5), 533-544. doi:10.1007/s10488-013-0528-y
- Patton, M. Q. (1990). Enhancing the quality and credibility of qualitative analysis. *Health Services Research*, 34, 1189–208.
- Patton, M. Q. (2005). *Qualitative research and evaluation methods*. Thousand Oaks, CA: Sage.
- Paul, E. L., & Hayes, K. A. (2002). The casualties of ‘casual’ sex: A qualitative exploration of the phenomenology of college students’ hookups. *Journal of Social and Personal Relationships*, 19(5), 639–661.
- Petosa, R., & Wessinger, J. (1990). The AIDS education needs of adolescents: A theory-based approach. *AIDS Education and Prevention*, 2(2), 127–36.
- Pietkiewicz, I., & Smith, J. A. (2012). A practical guide to using interpretive phenomenological analysis in qualitative research psychology. *Psychological Journal*, 18(2), 361-369.
- Piot, P., Bartos, M., Ghys, P. D., Walker, N., & Schwartlander, B. (2001). The global impact of HIV/AIDS. *Nature*, 410(6831), 968–973
- Polacek, G. N., Hicks, J. A., & Oswald, S. B. (2007). 20 years later and still at risk. *Journal of Hispanic Higher Education*, 6(1), 73-88. doi:10.1177/1538192706294949.
- Prejean, J., Song, R., An, Q., & Hall, H. I. (2008). Subpopulation estimates from the HIV incidence surveillance system—United States, 2006. *Morbidity and Mortality Weekly Report*, 57(36):985–989.
- Puentes, J., Knox, D., & Zusman, M. E. (2008). Participants in “friends with benefits” relationships. *College Student Journal*, 42, 176–180.
- Reiners, G. M. (2012). Understanding the differences between Husserl's (descriptive) and Heidegger's (interpretive) phenomenological research. *Journal of Nursing and Care*, 1(5), 1- 3.
- Rosenstock, I. (1960). What research in motivation suggests for public health. *American Journal of Public Health*, 50(3), 295-302.
- Rosenstock, I. (1974). Historical Origins of the health belief model. *Health Education Behavior*, 2(4), 328-335. doi: 10.1177/109019817400200403

- Rosenstock, I., Strecher, V., & Becker, M. (1988). Social learning theory and the health belief model. *Health Education & Behavior, 15*(175), 175-183. doi:10.1177/1090198188015 00203
- Rosenstock, I. M., Strecher, V. J., & Becker, M. H. (1994). The health belief model and HIV risk behavior change. *Preventing AIDS AIDS Prevention and Mental Health, 5*(24). doi:10.1007/978-1-4899-1193-3_2
- Roller, M. (2015). *Qualitative research design*. Gloucester, VA: Roller Marketing Research.
- Rose, M. S. (2008). African American college freshman students' knowledge, attitudes, beliefs, and behaviors related to HIV: A preliminary investigation. *Int. J. Allied Health Sci. Pract., 6*(9).
- Scholly, K., Katz, A. R., Gascoigne, J., & Holck, P. S. (2005). Using social norms theory to explain perceptions and sexual health behaviors of undergraduate college students: An exploratory study. *Journal of American College Health, 53*(4), 159-166. doi:10.3200/jach.53.4.159-166
- Schwandt, T. A., Lincoln, Y. S., & Guba, E. G. (2007). Judging interpretations: But is it rigorous? Trustworthiness and authenticity in naturalistic evaluation. *New Directions for Evaluation, 2007*(114), 11- 25. doi: 10.1002/ev.223
- Seidman, S. N., Mosher, W. D., & Aral, S. O. (1992). Women with multiple sexual partners: USA, 1988. *Am J Public Health, 82*, 1388–1394.
- Sheeran, P., Abraham, C., & Orbell, S. (1999). Psychosocial correlates of heterosexual condom use: A meta-analysis. *Psychological Bulletin, 125*, 90 –132.
- Sheeran, P., & Taylor, S. (1999). Predicting intentions to use condoms: a meta-analysis and comparison of the theories of reasoned action and planned behavior. *J. Appl. Soc. Psychol, 29*, 1624–75.
- Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information, 22*, 63-75.
- Smith, C. A. (1997). Factors associated with early sexual activity among urban adolescents. *Social Work, 42*, 334-346.
- Smith, J. A., Flower, P., & Larkin, M. (2009). *Interpretative phenomenological analysis: Theory, method and research*. Thousand Oaks, CA: Sage.
- Smith, J. A., & Osborn, M. (2007). Interpretative phenomenological analysis. In J. A.

- Smith (Ed.), *Qualitative psychology: A practical guide to research methods* (pp. 51-80). Thousand Oaks, CA: Sage
- Smith, M. L., Menn, M., Dorsett, L., & Wilson, K. (2012). College students' perceptions of HIV risk, importance of protective behaviors, and intentions to change behavior after attending an HIV/AIDS awareness event. *Texas Public Health J*, 64, 23–29.
- Spiegelberg, H. (1975) *Doing Phenomenology: Essays On And In Phenomenology* , Martinus Nijhoff, The Hague, The Netherlands.
- Staveteig, S., Croft, T. N., Kampa, K. T., & Head, K. S. (2017). Reaching the 'first 90': Gaps in coverage of HIV testing among people living with HIV in 16 African countries. *PloS one*, 12, 186-316.
- Steers, W. N., Elliot, E., Nemiro, J., Ditman, D., & Oskamp, S. (1996). Health beliefs as predictors of HIV-preventive behavior and ethnic differences in prediction. *Journal of Social Psychology*, 136, 99-110.
- Stine, G. J. (2014). *AIDS update 2014: An annual overview of acquired immune deficiency syndrome*. New York, NY: McGraw-Hill.
- Streubert, H. J., Carpenter, D. R. (2011). *Qualitative Research In Nursing: Advancing The Humanistic Imperative*. Fifth Edition. Lippincott, Williams and Wilkins, Philadelphia PA.
- Subramoney, R. (2015). The lived experience of Indian women with HIV/AIDS in South Africa: A phenomenological inquiry. *International Journal of Health Sciences (IJHS)*, 3(2). doi:10.15640/ijhs.v3n2a10
- Sutton, M. Y., Hardnett, F. P., Wright, P., Wahi, S., Pathak, S., Warren-Jeanpiere, L., & Jones, S. (2011). HIV/AIDS Knowledge Scores and Perceptions of Risk Among African American Students Attending Historically Black Colleges and Universities. *Public Health Reports*, 126(5), 653–663.
- Syracuse University. (2013). *HIV/AIDS policy*. Retrieved from <https://policies.syr.edu/policies/academic-rules-student-responsibilities-and-services/hivaids-policy/>
- Taylor, S. E. & Jones, T. (2007). African American college students' attitudes toward HIV/AIDS: Implications for Historically Black Colleges and Universities. *Challenge: A Journal of Research on African American Men*, 13, 1-12.
- The World Health Organization (WHO). (2017). *HIV/AIDS*. Retrieved from <http://www.who.int/gho/hiv/en/>

- Tolich, M. (2004). Internal confidentiality: When confidentiality assurances fail relational informants. *Qualitative Sociology*, 27, 101–106.
- Tung, W., Ding, K., & Farmer, S. (2008). Knowledge, Attitudes, and Behaviors Related to HIV and AIDS Among College Students in Taiwan. *Journal of the Association of Nurses in AIDS Care*, 19(5), 397-408. doi:10.1016/j.jana.2008.04.009
- Turpin, G., Barley, V., Beail, N., Scaife, J., Slade, P., Smith, J.A., Walsh, S. (1997). Standards for research projects and theses involving qualitative methods: suggested guidelines for trainees and courses. *Clinical Psychology Forum*, 108, 3-7.
- United Nations. (2016). Children’s fund, for every child, end AIDS – Seventh Stocktaking Report, UNICEF, New York: NY.
- United States Census Bureau. (2016). *Quick facts Oswego County New York*. Retrieved from <https://www.census.gov/quickfacts/oswegocountynewyork>
- Van der Zalm, J. E., Bergum, V. (2000). Hermeneutic-phenomenology: Providing living knowledge for nursing practice. *Journal of Advanced Nursing*, 31(1), 211- 218. 10632811 10.1046/j.1365-2648.2000.01244.x
- Van Manen, M. (1997). *Researching Lived Experience: Human Science for an Action Pedagogy*. (2nd edition). Ontario, Canada: The Althouse Press.
- Van Manen, M. (2011) *Orientalisms in phenomenology*. Retrieved from <http://www.maxvanmanen.com/files/2014/07/SAGE-Phenomenology.pdf>
- Vogt, P.W. (2005). *Dictionary of statistics & methodology: A nontechnical guide for the social sciences*. (3rd ed.). Thousand Oaks, CA: Sage Publications.
- Weinstock, H., Berman, S., Cates, W. (2000). Sexually transmitted diseases among American youth: incidence and prevalence estimates. *Perspectives on Sexual and Reproductive Health*, 36(1), 6–10.
- Welman, J. C., & Kruger, S. J. (1999). *Research methodology for the business and administrative sciences*. Johannesburg, South Africa: International Thompson.
- Williams, S. S., Kimble, D. L., Covell, N. H., Weiss, L. H., Newton, K. J., Fisher, J. D., & Fisher, W. A. (1992). College students use implicit personality theory instead of safer sex. *Journal of Applied Social Psychology*, 22(12), 921-933. doi:10.1111/j.1559-1816.1992.tb00934.
- Wolf, L. (2017). *Substance abuse ravages Oswego County*. Retrieved from www.oswegonian.com/2017/04/13/substance-abuse-ravages-oswego-county/

- Yep, G. A. (1993). HIV prevention among Asian American college students: Does the Health Belief Model work? *Journal of American College Health, 41*(5), 199–205.
- Zanoni, B. C., Archary, M., Buchan, S., Katz, I. T., & Haberer, J. E. (2016). Systematic review and meta-analysis of the adolescent HIV continuum of care in South Africa: The cresting wave. *BMJ Glob Health, 1*(3).

Appendix A

Recruitment Script

This script is intended to be read to classes for recruitment to participate in the interview process.

Hello, my name I am a professor in the department of health promotion and wellness on campus. I would like to invite you to participate in a study about college students and their sexual health.

I am interested in learning more about students' knowledge, behavior, and attitudes are regarding HIV/AIDS. College students between the ages of 18 and 24 are eligible to participate. Participation is completely voluntary, and you will not be penalized for not participating or withdrawing from the study.

The study will consist of one-on-one face-to-face interviews with myself as the principal researcher. I will be asking questions related to your experiences and attitudes related to HIV/AIDS as well as your sexual activity. This study calls for undergraduate SUNY Oswego students between the ages of 18-24 who have HIV knowledge and who have participated in risky sexual behavior (Risky sexual behavior refers to sexual activity that increases your probability of contracting a sexually transmitted infection or unintended pregnancy) while at college.

If you are interested in participating in this study, I will be handing out my business card with my contact information. Upon meeting the criteria for the study during an initial meeting you may or may not be selected to participate in the study. If you meet the criteria, we will start the interview process and you will be given a \$15 Wal-Mart gift card for your participation in the interview. If you do not qualify for the study during our initial discussion, you will not receive a gift card or compensation.

Participation is voluntary and you may choose not to take part, leaving the study will not result in any penalty or loss of benefits to which you are entitled. Your decision whether or not to participate in this study will not affect your current or future relations with the investigator, course instructor, nor will it impact your grade for this course.

Appendix B

Qualifying Questions

The following questions are intended for the selection of participants during the initial interview with the principal researcher.

Age Questions

1. Are you between the ages of 18-24? (yes/no)

HIV Knowledge Questions

1. Give an example of how to protect yourself against sexually transmitted infections and HIV/AIDS?
2. How is HIV transmitted?

Engagement of Risky Sexual Behavior Questions

(Risky sexual behavior is defined as any behavior that puts a participant at risk for sexually transmitted infections (such as herpes, HIV/AIDS, HPV, etc.) occurring from not using a condom during their sexual activity OR participating in judgment inhibiting behavior such as alcohol or drug use and then participating in sexual activity).

1. Have you ever engaged in risky sexual behavior?

Appendix C

Interview Protocol

Interview Protocol: An Interpretative Phenomenological Analysis Study of the Knowledge, Behavior, and Attitudes of College Students Regarding HIV/AIDS.

Date of Interview: _____ Time of Interview: _____

Location of Interview: _____

Interviewee: _____

Review purpose of the study: The purpose of the study is to explore college student's knowledge, behaviors, and attitudes regarding HIV/AIDS. The study will aid new insight on why students are continually participating in risky behavior that puts them at the forefront for HIV infection.

Review participant rights: Participation in this study is completely voluntary. Participants can withdraw from the study at any time by informing the researcher. There will be no repercussions for withdrawing from the study.

Interview Questions

Knowledge

1. Is there a cure for HIV/AIDS? How did you learn this information?

2. Is there a vaccination for HIV/AIDS to prevent infection? How did you come to learn this information?
3. What preventative measures can be taken to protect against HIV?
4. How many sexual partners can increase your chance of HIV/AIDS? Explain why you chose this number?
5. Do you think HIV/AIDS can be spread through coughing and sneezing? Why or why not?
6. How is HIV transmitted?

Prompts: Can you tell me a little more about that? Do you have an example or an experience you could share to help me understand better? Help me understand more about this experience? What I am gathering from your description is _____ would this be correct?

Attitudes

1. What are your opinions about HIV/AIDS? Do you think it is a serious issue?
2. Are you concerned with contracting HIV/AIDS? Why or why not?
3. Have you ever been tested for HIV/AIDS? Why or why not?
4. If someone you knew were to contract HIV, how severe do you think it would be? What led you to this conclusion?
5. What are your thoughts and opinions about condom use during sexual activity?
6. Do you communicate with your partners about HIV/AIDS and if they have been tested?
 - a. Does testing influence how you chose a partner?

7. What might you suggest for new and improved programming on college campuses regarding HIV education and sexual health?

Prompts: Can you tell me a little more about that? Do you have an example or an experience you could share to help me understand better? Help me understand more about this experience? What I am gathering from your description is _____ would this be correct?

Behavior

Before we get started into the next set up questions, I want to remind you that at any time you feel uncomfortable you can ask to stop the interview. Or if you would like to skip certain questions that you do not want to answer you can simply tell me “pass” or skip this question please.

1. Risky sexual behaviors or high-risk behaviors are commonly referred to as behavior that can increase one’s risk of contracting sexually transmitted infections (STIs), HIV/AIDS, or unintended pregnancies through unprotected sex (not using a condom), having unprotected sex with multiple sexual partners, unprotected sex under the influence of drugs or alcohol.
 - a. Have you engaged in any activities similar to what is in this definition?
 - b. If yes, how frequently do you engage in the behaviors.
2. Do you use condoms in your sexual activity?
 - a. What led to your decision to use condoms or not use condoms in your sexual experience?

3. How often do you drink alcohol and participate in risky sexual activity?
4. How often do you use drugs and participate in risky sexual activity?

Prompts: Can you tell me a little more about that? Do you have an example or an experience you could share to help me understand better? Help me understand more about this experience? What I am gathering from your description is _____ would this be correct?

Closing Questions

1. Are there any other experiences you would like to share regarding this subject?
2. As a college student what needs to be done further on college campuses regarding sexual health?

Prompts: Can you tell me a little more about that? Do you have an example or an experience you could share to help me understand better? Help me understand more about this experience? What I am gathering from your description is _____ would this be correct?

Close Interview: Thank you for agreeing to participate in this study. I'd like to remind you about the resources on the consent form if you have any follow-up questions or concerns in regard to what we discussed today.