“A LOT OF PEOPLE WANT TO KNOW, THEY JUST HAVE NO IDEA HOW TO ASK”: A NEEDS ASSESSMENT OF A REPRODUCTIVE HEALTH PEER EDUCATION PROGRAM

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DEDICATION

To my parents for your endless support.

Dad – you taught me how to persevere. Without the work ethic you instilled in me, I'm not sure how this thesis ever would've been completed. Thank you for your constant encouragement and reassurance.

Mom – I am who I am because of you. Every achievement of mine is also yours. Thank you for teaching me how to stand up for what I believe in. I hope one day I can provide someone else with the patience, selflessness, and care that you have provided for me.

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Anna Catherine Comer

"A LOT OF PEOPLE WANT TO KNOW, THEY JUST HAVE NO IDEA HOW TO ASK": A NEEDS ASSESSMENT OF A REPRODUCTIVE HEALTH PEER EDUCATION PROGRAM

Reproductive health education is an important part of having a comprehensive understanding of health as a whole and sexual health specifically; however, reproductive health is often overlooked in university health education. Peer education initiatives have long been used in sexual health to create a comfortable environment for peer learners, while teaching valuable information that impacts both peer educators and peer learners. Students and peer educators are the primary stakeholders in a university reproductive health education program and can provide insight into topics and delivery that are most salient to them. Using a needs assessment framework, I conducted focus groups with stakeholders (n=10) to understand what information participants found important and how they wanted that information to be presented to them. I analyzed the data using thematic analysis and the social ecological model (Stokols, 1996) to better understand what levels of influence where impacting participants' access to reproductive health education. Results provided practical applications related to content and method of delivery of reproductive health education as well as theoretical applications in regard to the explicit inclusion of communication within the social ecological model.

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LIST OF ABBREVIATIONS

HIV/AIDS: human immunodeficiency virus/acquired immunodeficiency syndrome
IRB: institutional review board
LGBTQ+: lesbian, gay, bisexual, transgender, queer/questioning, and other marginalized sexual and gender identities
PHE: peer health educator
PMDD: premenstrual dysphoric disorder
PMS: premenstrual syndrome
STI: sexually transmitted infection

Chapter 1: Introduction

Reproductive health, which deals with the health of both male and female reproductive systems, is an important factor of sexual health. The inclusion of education concerning reproductive health in sexual health education programs is vital (National Institute of Environmental Health Services, 2023). Sexual health education and reproductive health education, though related, are separate. Sexual health education refers to education about safe sex practices; this includes information about sexually transmitted infections (STIs), consent, healthy relationships, sexual communication, and methods of contraception (World Health Organization). Reproductive health, however, focuses on the reproductive organs of both males and females, but is often more associated with the reproductive organs of females and gynecology (Centers for Disease Control and Prevention, 2024). Reproductive health education may include information related to reproductive anatomy, medical conditions that affect reproductive anatomy (e.g., endometriosis, polycystic ovarian syndrome), the menstrual cycle, contraception, and even legislation that governs reproductive health procedures. Sexual health education is often used as an umbrella term that implies the presence of reproductive health education, though the extent to which reproductive health information is included varies.

Education that includes topics related to reproductive health has been shown to improve knowledge about reproductive function, effective condom use, non-condom contraceptives (i.e., reversible methods of contraception, including hormonal birth control methods, but excluding methods like withdrawal), health facilities, and contraceptive services among adolescent university students in Turkey (Mevsim et al., 2009). Comprehensive education in the United States also shows increased contraception

use among adolescents (Manlove et al., 2015). Frost et al. (2007) found women who felt they could not reach out to their physician with questions about contraceptives, were less likely to use them; researchers attributed this effect to social determinants, including race, access to health insurance, access to health care, and education. This illustrates the importance of both having a trusted clinician to reach out to as well as the importance of education, both of which can be affected by programs centered on reproductive health. Knowledge of reproductive health centers on campus affects whether male students use these centers; those who lack knowledge of these services are less likely to use them (Bersamin et al., 2017). This is especially important as researchers also found that students who use reproductive health services are "more likely to have lower levels of perceived social disapproval, cost and fear of results barriers" than students who do not use these services (Bersamin et al., 2017, pp. 158).

Furthermore, sexual health education that features education on reproductive health has been found to lead to safe sexual health practices. Among Portuguese university students, those students who received sexual and reproductive health education before their first sexual encounter were more likely to engage in lower sexual risk behaviors and have more knowledge and a higher degree of skills related to sexual health (Reis et al., 2011). Comprehensive sexual health education interventions amongst university students, which include information on reproductive systems and contraception, show students who received the intervention have increased knowledge on reproductive health, contraception, condom use, and HIV/AIDs (Chi et al., 2013; Manlove et al., 2015). Increased knowledge of reproductive health is correlated with greater sexual communication and confidence among women; women with more sexual

health knowledge were found to be more sexually assertive and have greater confidence in their ability to effectively use condoms (Weinstein et al., 2008).

While reproductive health education is important in promoting better sexual health outcomes, sexual health education programs tend to focus primarily on sexually transmitted infections (STIs) and condom use. Moore and Smith (2012) noted the majority of students who participated in a sexual health education program learned the most about STIs and condom use. While these topics are no doubt important, it is necessary to ensure the gaps are filled by including reproductive health education within sexual health education programs, but the extent to which this is done in practice is questionable. Students themselves are best able to identify where these gaps in knowledge are, especially those who are tasked with teaching this information to their peers.

Chapter 2: Literature Review

Peer Health Education

Peer health education is defined as the practice of community members, known as peers, teaching other community members about a health practice through communication about a healthy behavior (Webel et al., 2010). Peer health education programs have been used to address a number of health topics, including sexual health, and are a promising tool for teaching reproductive health.

Impact on Peer Learners

Peer health education programs benefit from the practice of peer communication. Peer communication can lead to greater feelings of comfortability and higher levels of quality of conversations about a health topic. For example, university students are fairly comfortable discussing sex-related topics with one another (Rittenour & Booth-Butterfield, 2006). Both peer learners and peer educators note that peer education models make the environment more comfortable and relatable, which encourages peer learners to talk about sex with peer educators (Crocker et al., 2019). Peer-to-peer conversations create a "safe space" for both peer learners and peer educators when discussing sexual health (O'Malley & Horowitz, 2023). Bowling et al. (2021) found that peer education models may actually be preferred at higher education institutions for this reason as opposed to models that use a non-peer or expert instructor. This comfortability can lead to more confidence in practicing healthy behaviors, such as using condoms (Guzman et al., 2003; Lefkowitz et al., 2004). This highlights the importance of using peer health education programs as a tool for peer communication. Peer communication is the preferred method of sexual health education delivery to peer learners due to its unique

ability to create spaces that are comfortable and allow for a relatable connection between peers.

In their systematic review, Dodd et al. (2022) found peer education programs in secondary schools are most effective in increasing knowledge of a topic and changing attitudes when compared to education programs that are not peer-based, like those where an expert instructor or similar authority figure provides the education. Peer educators observed their status as peers helped to engage peer learners in educational programs and build trust that the information they were given was accurate (King et al., 2021). Peer educators at the university level are able to adapt the curriculum to make it more interesting and applicable to their audience, given their shared status as students (King et al., 2021). As Kneavel et al. (2024) found in their evaluation of a peer education program about discussing and reporting concussions among college student athletes, peer educators can navigate and change attitudes and norms related to stigmatized conditions and behaviors. Peer educators have an understanding of the needs of their fellow students that health promotion professionals may not have. Moreover, peer health education programs can have implications for reaching at risk populations (Shoghli et al., 2023). In one study, adolescents were trained as peer health educators (PHEs) and received information on COVID-19; the PHEs then educated family and community members, using the cultural knowledge of their community to better communicate with community members (Shoghli et al., 2023). Peer sexual health educators who are members of hard to reach populations, like the indigenous populations of Australia, are able to gain knowledge that is personally relevant as they are disproportionately affected by disease (Mikhailovich & Arabena, 2005). Paired with the finding that peer health education

programs have particular use in increasing knowledge and changing attitudes, the function of peer health education in reaching populations that may be difficult to reach through traditional education programs is important among those populations who face disproportionately high rates of disease (Shoghli et al., 2023). Peer health education can provide a culturally relevant setting in which people can receive health information.

Impact on Peer Educators

Peer health education programs do not only benefit the learners, but the peer educators as well. In the aforementioned study, Shoghli et al. (2023) found the peer educators' health literacy and knowledge of and adherence to health protocols increased with involvement in this program. Additionally, PHEs trained in a peer education program focused on sexual health gained sexual health knowledge, comfortability in their role, and confidence in their educating abilities (Ehrhardt et al., 2006; O'Malley & Horowitz, 2023). Though there was no statistical significance, owing to the low reported risk behaviors at pretest, eight peer educator trainees reported that their sexual risk behaviors decreased as a result of the PHE training (Ehrhardt et al., 2006). PHEs reported increased knowledge of sexual health information, an effect of which was that they felt empowered in their own sexuality and gained a sense of autonomy related to sexual health decision-making (Senteio et al., 2018; O'Malley & Horowitz, 2023). Similarly, Benton et al. (2020) determined PHEs benefited from increased knowledge of sexual health in their study of a peer health education program focused on sexual education in a high school. These were not the only benefits to PHEs, however. In focus groups conducted after the implementation of the program, PHEs indicated they learned skills such as advocacy, leadership, decision-making, sociability, and public speaking (Benton

et al., 2020). Likewise, parents of the students noticed higher levels of engagement, confidence, and motivation after students took on the role of a PHE (Benton et al., 2020). Peer sexual health educators have also reported that they feel more knowledgeable about other aspects of health, like mental health, and report being committed to combatting stigma in their communities (Senteio et al., 2018). Additionally, being trained as a PHE made PHEs feel more capable of identifying "voids" in their own and their community's education around sexual health (Senteio et al. 2018).

Peer health education programs provide a way for students to communicate about health topics more comfortably, which means students might be more likely to practice healthier behaviors and have better health outcomes. This type of programming is beneficial to both the students who are being taught and the students who are acting as teachers. For this reason, peer health educators offer a unique perspective as they are learners themselves, but also have the ability to get a general feel for the needs of those they are educating. Peer health education programs are an important tool to use in health promotion. While peer education programs can cover a variety of topics, like smoking cessation or physical activity, peer health education is especially helpful in the area of sexual health, and, potentially, reproductive health.

Peer Health Education and Sexual Health

Peer health education programs have been successful in promoting safe sexual health practices, primarily condom use. In their review of peer-based interventions, Webel et al. (2010) found participants who were involved in the peer health education programs were more likely to use condoms than those who were not involved in the peer health education program. Sun et al. (2018) indicated 12 of 13 studies identified

improvement in knowledge, eight of 13 studies showed improvements in attitude toward sexual health topics (e.g., people living with HIV or AIDs, sexual relationships, sexual violence, reproductive health, and HIV Behavioral Surveillance), three of 10 studies found improvements in behavior or behavioral intent (though most studies indicated longer exposure was necessary to drive behavior change), and there were improvements in self-efficacy of safe sex practices in two of four studies. It is important to note only two of the studies measuring knowledge explicitly measured reproductive health knowledge; likewise, only one study measuring attitudes measured attitudes toward reproductive health (Sun et al., 2018). This shows the extent to which peer health education programs may impact sexual health in a number of areas, with improvement in knowledge being most significant. There is evidence that peer health education programs increase HIV knowledge (i.e., prevention strategies) and the use of condoms (Wong et al., 2018). Among the studies Wong et al. (2018) reviewed, a program on HIV prevention targeted toward Latina women detected a significant increase in self-reported condom application skill and an increase in knowledge. Notably, the previously mentioned program strives to encourage peer educators to "own" the curriculum and makes changes to the program based on peer educator's feedback (Jones et al., 2008).

Following a peer education program for people aged 15-24 in Nigeria, Akuiyibo et al. (2021) observed changes on the views of sexual health related topics; more specifically, researchers noted more positive views of HIV anti-stigma, condom use, and family planning. Participants' belief that certain types of contraception (e.g., condoms, injection birth control, intrauterine devices, birth control pills, and cycle beads) should be more accessible also increased. Researchers attributed this in part to the increase in

knowledge of contraceptive use (Akuiyibo et al., 2021). While knowledge of non-condom contraceptive use increased, knowledge of condom use actually decreased post-intervention; the authors suggest one cause of this could be that the peer educator discussion guide did not sufficiently address misconceptions, like that condoms reduce sexual satisfaction and condoms are only used by promiscuous individuals (Akuiyibo et al., 2021). This finding in particular highlights the importance of understanding what is missing from educational content. The target population could identify what they have questions about, while the PHEs are able to note what changes can be made in the content itself as they are most familiar with it.

Though researchers in White et al.'s (2009) study did not find significant correlations for any other safe sexual practice, students who had contact with PHEs (e.g., attended a PHE presentation, communicated informally with a PHE, and/or attended "awareness activities") reported lower rates of sex under the influence than did those who did not have contact with PHEs (White et al., 2009). The most common types of contact in this study were found to be presentations, followed by informal contact. This highlights the importance of involving PHEs in the evaluation of peer health education programs; even informal contact with PHEs can have effects on the sexual health behaviors of students, so it is important to understand where PHEs feel the knowledge they have received as a PHE is inadequate to serving the student population.

In their study, Nuttall et al. (2022) aimed to increase the knowledge of both university students in the field of health care and teenagers with their peer education program in France. Notably, this program included not only sexual health information, but reproductive health information with units on reproductive biology and laws

concerning reproductive health, such as laws about abortion, free contraception, homophobia, and pornography. Researchers noted the popularity of this program as the "shared student status" between PHEs and secondary school students led to more comfortable, informal discussions of these topics. The peer health education program improved the knowledge and risk perceptions of sexual health among both healthcare students and secondary school students. Additionally, researchers noted the increases in knowledge concerning abortion and hormonal contraception illustrates the importance of communicating information about these topics and recommend the education on these topics be extended (Nuttall et al., 2022).

Including reproductive health information in sexual health education programs is necessary for students to have a full understanding of sexual health. As of a 2016 review of sexual health education programs provided by secondary schools in the United States, Hall et al. (2016) identified only 18 states that require contraceptive information be provided; additionally, 87% of high schools allow parents to prevent students from attending sexual education programs. With such loose regulations on sexual health programs across the states, students are coming to universities with inadequate information concerning sexual and reproductive health. Including reproductive health information that students need and/or want to know is important. Students should be involved in directing what is included in the content of sexual health education programs on college campuses, especially programs that directly involve peers, like peer health education programs.

Using peer health education, Terui et al. (2020) investigated the role social network interventions might play in creating vested interest in sexual health, the impact

on knowledge of sexual health, and the trustworthiness of sources (e.g., community members, family members, and healthcare providers and systems). The results show this intervention was positively received by participants and served to help normalize sexual health discussions and practices. Additionally, it resulted in increased perception of the level of threat, outcome certainty, and self-efficacy in HIV preventive measures. The researchers note the use of peer health educators, in particular, increased the perceived trustworthiness of all of the sources, with healthcare providers and systems maintaining a level of trustworthiness higher than that of community and family members (Terui et al., 2020). Peer-led sexual health interventions are also key to recruiting students to participate in programming and use services, increasing the student population's knowledge of such programs through "peer-to-peer direct messages" (Olson et al., 2024). Similarly, peer education in sexual health areas allows the information being presented to be personalized (Smylie et al., 2008). Researchers also noted how peer educators were able to communicate with peers in ways that would be understood by using language that made sense to peer learners and that was more individualized (Smylie et al., 2008). Along this same line, Layzer et al. (2017) found in their qualitative evaluation of a peer sexual health education program, students considered previous sexual health programs "awkward" and noted they lacked depth (p. 518). These studies show the importance of peer health education in normalizing discussion about sexual health topics. Peer health education programs benefit from making discussions of sexual health seem more accessible and comfortable. Additionally, peer health education programs show promise in getting students to access sources outside of the program.

The value of peer health education as the basis for sexual health education programs is evident. However, each school and audience have its differences and the question becomes how to evaluate the effectiveness of college health promotion, in general, and sexual health education, in particular.

Needs Assessment

The purpose of a health needs assessment, as defined by Stevens and Gillam (1998), is "to gather the information required to bring about change beneficial to the health population" (pp. 1448). In terms of education, needs assessments serve as a way to determine educational priorities and resource allocation (Witkin, 1984). Additionally, needs assessments "should examine and evaluate discrepancies and also facilitate the establishment of priorities of responses to the need" (Young, 1994, pp. 1-2). Taken together a needs assessment of a health education program, should identify what information is integral to the desired goal of the program (i.e., increasing knowledge, promoting healthy behaviors), determine the educational priorities, and develop the program content to meet the needs of the population and achieve the goal of the program.

Sexual health education is an important area for which needs assessments have been conducted. Previous needs assessments offer insight into how this may be done. Researchers often use focus groups with student stakeholders to identify areas of educational content that may be lacking. For example, Layzer et al. (2017) provide insight into the importance of conducting a needs assessment of a program based on the focus group feedback from stakeholders: the students and peer educators. Both groups in this study provide valuable feedback that may direct how the program can be changed to better suit the needs of the stakeholder groups. MacDonald et al. (2011) also used focus

groups to evaluate the sexual health education programs offered to socioeconomically disadvantaged students ages 15-17. Researchers from this study note the way in which participatory research of this nature brings in culturally relevant feedback on programs. Focus groups can also help identify reasons why students may be reticent to attend sexual health education programming or receive sexual health services provided by the university, which can guide the changes college health promotion professionals make to sexual health programming (Breny et al., 2023). Focus groups can highlight specific cultural stigmas associated with sexual health education and communication that could be addressed in programming (Breny et al., 2023; Robinson & Lorenc, 2015). Tipping (1998) offers insight into how and why focus groups should be used in needs assessments as it can allow for clarification where other methods cannot (pp.151). Sava et al. (2021) used focus groups in order to conduct a needs assessment of sexual health for LGBTQ youth in Massachusetts. In this study, surveys were used to gather demographic information and determine participants' experience with sexual education, while a series of online focus groups were used to gather input of health needs of the target population, desired resources, and challenges the population faced. Using focus groups in educational settings may be particularly beneficial as they can be used to determine the direction of a program before the program is implemented, or even developed (Tipping, 1998). Focus groups allow the targeted population to provide input, offer insight that program developers do not have, and can express the ways in which the program was lacking. The needs assessment framework guides the intent of the evaluation process but is made even more useful when paired with theory to better understand the data.

The Social Ecological Model

When conducting analysis on the data gathered from focus groups, needs assessments of sexual health education programs often use some variant of a social ecological model (MacDonald et al., 2011; Hayes & Williams Jr., 2018; Heslop et al., 2020). The purpose of the social ecological model is to take into account the varying levels of influence in health promotion; these levels include individual factors, interpersonal factors, community factors, and societal/policy factors that influence health (Stokols, 1996). The individual level of influence primarily addresses an individual's knowledge of health and health behaviors; this level is the one that health promotion targets. Interpersonal factors, which address interactions and social supports related to health; community factors, which deal with community norms; institutional factors, which address organizational rules and policies regarding health; and public policy factors, which have to do with local, state, and federal policies which affect health, all act as levels of influence which can act either as barriers or supports for knowledge acquisition and behavior change. However, it is important to note that all of these levels of influence, from individual to policy factors, are constantly acting on and changing each other. According to Stokols (1996), health is not just determined by the environment, biology, or individual behavior, but is conceptualized as a "dynamic interplay" between all these factors, both the "situational and personal" (p. 285). The social ecological model takes a systematic perspective. The traditional social ecological model conceptualizes individual health at the center, with healthy individuals making up the whole of a healthy community; however, Golden and colleagues (2015) place policies and environments at the center of the model in order to describe the ways in which health

policies develop “within nested contexts” (p. 9). Ultimately, however the model is framed, in this model the levels of influence are interconnected and act on each other. It is important to note that this model is primarily a health promotion model, not a communication model, though it may provide insight into communicative behaviors at each level of influence.

Researchers who have used this model in needs assessment frameworks typically used it to code themes that are related to the different levels of influence (Heslop et al., 2020; MacDonald et al., 2011). This model can be used to gain an understanding of how health promotion can be used to address the different levels of influence. This model is often used in needs assessment research because it allows researchers to identify the levels of influence at which people are experiencing barriers as well as those levels of influence where needs are being adequately addressed. Health promotion and sexual education programs target health at the individual level with the goal of creating behavior change, but the ecological model shows how other levels of influence can be impacted by the education of the individual.

Summary

The literature illustrates the importance of using peer health education programs in sexual health contexts. Peer communication offers a way in which students can more comfortably discuss sexual health topics and some studies suggest a correlation to better sexual health outcomes (Bowling et al., 2021; Crocker et al., 2019; Guzman et al., 2004; Layzer et al., 2017; Lefkowitz et al., 2004; O’Malley & Horowitz, 2023; Rittenour & Booth-Butterfield, 2006; Smylie et al., 2008; Terui et al., 2020). Peer health education programs are also helpful in targeting traditionally hard to reach populations, which is

especially important considering their use in improving knowledge and attitudes toward health as well as their influence on stigma and norms (Dodd et al., 2022; King et al., 2021; Kneavel et al., 2024; Shogli et al., 2023). These types of programs also have benefits for the PHEs, providing them with increased sexual health knowledge, professional skills, and confidence, among other benefits (Benton et al., 2020; Ehrhardt et al., 2006; O'Malley & Horowitz, 2023; Senteio et al., 2018; Shoghli et al., 2023). Peer health education has been shown to have positive outcomes in sexual health education. Of these studies, many have found significant impacts on condom use and self-efficacy concerning condoms (Webel et al., 2010; Sun et al., 2018; Wong et al, 2018; Jones et al., 2006).When reproductive health education was included, programs saw an increase in knowledge of contraception and reproductive biology, though this type of education is frequently left out of sexual health education in secondary schools in the United States (Akuiyibo et al., 2021; Hall et al., 2016; Nuttall et al., 2022).

Needs assessments offer a way to determine the areas of an educational program that need improvement with the goal of generating better health outcomes (Stevens & Gillam, 1998; Witkin, 1985). Qualitative methods can be used for needs assessments. Focus groups can provide specific and culturally relevant feedback from stakeholders and work well for educational settings, guiding changes to curricula and programming (Breny et al., 2023; Layzer et al., 2017; MacDonald et al., 2011; Robinson & Lorenc, 2015; Tipping, 1998).

This study aims to fill the gap in literature that exists when it comes to conducting a needs assessment focused on reproductive health education in a peer sexual health education program. Reproductive health is particularly important to focus on as few

programs have looked at the outcomes related to reproductive health other than condom use. This suggests some topics have been overlooked in sexual health education. Additionally, this needs assessment includes two stakeholder groups: students and peer health educators. Both groups gain knowledge from the program and can identify unique areas of oversight within the program through their experience.

The current reproductive health education offered by the university at which this study took place primarily focuses on reproductive health topics like contraception and basic reproductive health anatomy, which are covered in the health education office's sexual health presentation. Presentations through this office can be requested by faculty to take place during a class session or by staff and students for student organization meetings. Additionally, students must work through an asynchronous version of this presentation to qualify to order custom, made-to-order f sexual health products (e.g., condoms, lubricant, and dental dams); however, students can still receive free pre-made sexual health products through the office without participating in the presentation. With a focus on reproductive health as it overlaps with sexual health, rather than reproductive health in general, the health education office lacks programming and resources for students specifically related to reproductive health, meaning there has been little evaluation of the reproductive health education currently offered to students. This study aims to answer the following research questions:

RQ1: What do peer health educators think is essential in university sexual health education programs about reproductive health?

RQ2: What do university students think is essential in university sexual health education programs about reproductive health?

Chapter 3: Methods

I used focus groups with the aforementioned stakeholders, as is typical of an educational needs assessment (Tipping, 1998). This method of data collection and analysis is in alignment with the research questions because the nature of the questions requires a qualitative methodology. Focus groups allowed me to gain a better understanding of what a comprehensive sexual and reproductive health education program looks like to the stakeholder groups. Through these focus groups, I gained insight into what information stakeholders find to be important and how stakeholders may want this information to be presented.

Reflexivity Statement

In qualitative research, it is important for researchers to acknowledge how their positionality might affect the study, from how their identities affect their interest in a topic to the data collection and analysis (Tracy, 2020). For this reason, I have included this reflexivity statement to address the ways in which my identities have influenced this study. My identity has played a role primarily through my social identity and my professional identity.

Social Identity

There are a number of social identities I hold that may have influenced interactions with participants. First, I am myself a graduate student at the university where I conducted my study. Additionally, I joined the graduate program through a "four plus one" accelerated program, wherein my last year of my undergraduate education doubled as my first year of my graduate education. This means that I am a student who, at 22 years of age, is closer in age to many of the participants in the study. Participants

understood that I was a student and some even knew that I had participated in the accelerated program for my degree path. This made it easy to build rapport with participants as they could relate to me as their peer. Additionally, this may have influenced recruitment as some participants expressed their willingness to participate because I was a student like them. One participant even mentioned that they had conducted qualitative research and that was one reason why they were interested in participating and helping another graduate student. However, this may have presented problems for some potential participants, especially those who may have been graduate, professional, or post-graduate students, as I may have seemed inexperienced.

Additionally, my identity as a woman likely influenced the gender make-up of my participants, where only 20% of participants identified as men. Due to my gender and the focus of my research, I likely drew more woman-identifying persons to participate in my study. In fact, this was something that some participants pointed out within focus groups, calling out that women were more willing to discuss reproductive health. One participant even wondered about the gender breakdown of other focus groups I had conducted for this study, "I'm interested in if the people who you've spoken to were mainly people that were women or people who had uteruses." My gender may have even affected participants' willingness to talk about certain reproductive health topics with me.

Professional Identity

My professional identity and the roles that I have held have also greatly influenced this study. In fact, the reason I first became interested in peer education as a research topic was because I was a peer health educator as an undergraduate at the university where I conducted this research. As a graduate student, I moved into a

graduate position within the office, but I still work with the peer health educators. For this reason, I had easy access to the peer health educators, and many of them were willing to participate in this study because they knew me as their coworker and peer. This meant that I had an established rapport with the peer health educators whom I interviewed in this study. Though I feared that my position within the office as the graduate student employee might make peer health educators more reticent to be critical of the existing education around reproductive health, I think the opposite is true. I think my dual identities as both a coworker and a student made the peer health educators more comfortable with sharing criticisms because they recognized that we all saw the value and importance of reproductive health education.

Recruitment

The first stakeholder group I identified for this study is peer health educators. PHEs offer insight as both learners and educators. In order to be eligible, participants included in this group had to be current, trained peer health educators over the age of 18. The PHEs were recruited from the health and wellness office at an Indiana University. The health office provided access to the PHEs during student staff meetings. PHE participants were provided with a study information sheet (Appendix A) in which it was made clear that attendance at the meetings in which focus groups took place were not mandatory.

The second stakeholder group is the general student population. Since the programs are aimed at the general student population, it is vital to receive their input as to how the program can be improved concerning reproductive health education. To be included in this group participants had to be current students at the university over the

age of 18. I recruited both students who were familiar and those who were unfamiliar with the health office's current sexual health programming. I shared recruitment materials on the health office's social media. Posts linked to a demographic survey through which students could indicate their interest in participating in the study; a study information sheet was attached to this survey (Appendix B). Additionally, I shared recruitment information with student leadership organizations, such as the undergraduate student government and peer mentors with the leadership scholarship program.

After experiencing some difficulty with the initial round of recruiting amongst the student population, I received IRB approval to provide an incentive for participation in focus groups. Each participant was entered in a drawing for one of seven Target gift cards valued at $25. Each participant was assigned a number, and I used a random number generator to choose seven individual winners of the gift cards. I notified winners via email after all focus groups had been conducted that they had won gift cards and I arranged pick-ups with the assistance of the health office.

In addition to the inclusion of an incentive, the second round of recruiting focused on targeting student organizations that may have interest in areas such as education, health, and student leadership, including academic peer mentors and public health student groups. I sent recruitment materials to representatives from these student organizations to be shared with members. Additionally, I used snowball sampling, wherein participants are asked to share study information with those in their networks that meet the eligibility criteria, in order to recruit more participants (Tracy, 2020).

Participants

I recruited a total of five PHEs from the health office on campus. From the student population, I received ten responses to the recruitment survey. I did not receive a response from three of the people to whom I reached out to schedule a focus group. One participant did not show up to a scheduled focus group and one participant notified me that they were not able to attend a focus group about 30 minutes before the focus group was due to start. For this reason, five participants from the student population took part in this study. Taken together, a total of 10 participants took part in this study. I conducted three focus groups in person and one focus group in a hybrid fashion, with one participant joining over Zoom as the participant unexpectedly was not able to access transportation to meet in person but still wanted to participate.

Of the five participants who were not PHEs, four participants indicated they were familiar with the health office's sexual health programming, and one participant indicated that they were unfamiliar with health office's sexual health programming. Eight participants were undergraduates at the time of the focus groups, with one first year student, three third year students, and four fourth year or more students. Additionally, two graduate or professional school students participated in this study. Two participants identified as international students, while eight students were not international students. Four participants lived on campus at the time the focus group was conducted while six participants lived off campus. No participants had birthed a child. On a reproductive health knowledge scale of one to five, with one being not knowledgeable and five being extremely knowledgeable, five participants ranked their knowledge at a four, four

participants ranked their knowledge at a three, and one participant ranked their knowledge at a two.

Three participants identified as Hispanic or Latino/a/e (30%), three participants identified as White (30%), two participants identified as Black or African American (20%), and two participants identified as Asian or Asian American (20%). Seven participants identified as woman or female (70%), two participants identified as man or male (20%), and one participant identified as genderqueer (10%). Six participants identified as straight/heterosexual (60%), two participants identified as gay (20%), one participant identified as bisexual (10%), and one participant identified as pansexual (10%).

Data Collection

To collect data, I conducted four focus group sessions. Focus groups are ideal for the needs assessment framework as they allow for depth of feedback and clarification (Tipping, 1998). An additional goal of using focus groups in this study was to generate a sense of ownership among stakeholder groups in reference to educational programs that may be developed based on the results of this study (Jones et al., 2008). Participants filled out an initial Qualtrics survey to indicate their interest in participating in the study (Appendix G). This survey provided participants with the study information sheet and acted as a way to collect demographic information. Additionally, through the survey, I collected contact information from participants in order to follow-up about preferred dates for focus groups and to communicate about the incentive drawing. Questions like "Which of these groups do you belong to?" in reference to the participant's status as a PHE or their familiarity with the health office's sexual health programming and "How

would you rank your current knowledge of reproductive health?" helped me to prepare for varied identities and levels of knowledge within the focus groups.

I then scheduled the focus groups with participants. Three of the focus groups took place during a pre-scheduled meeting time where I was allowed to join to conduct the focus groups; two of these took place during a student staff meeting for the PHEs and one took place during a student organization meeting for interested members of the organization. Both of two PHE focus groups had five participants. Another focus group had three participants while the remaining focus group had two participants Primarily, interview questions focused on finding out what information participants found important to include in reproductive health education. Secondarily, some questions addressed preferences as to the ways in which this information should be presented to students (Appendix C, Appendix D, Appendix E). I conducted three focus groups consisting of a PHE focus group and two student focus groups. Using these three focus groups, I identified some preliminary codes that I then shared in a member reflections focus group with the PHEs (Appendix F). Member reflections are used in focus groups in order to engage stakeholder groups in the research process, ensuring that the research is of use to the population the researchers are intending to serve (Tracy, 2020). The purpose of this member reflection was to gain additional insight into what PHEs thought was missing from results based on their interactions with the student population and to check that initial interpretations of data aligned with their professional perspectives. I recorded all interviews using a secure laptop and I transcribed them with the assistance of Microsoft Word transcription technology. I then fact checked the transcripts, editing them to be more accurate and including some indicators of tone (Tracy, 2020).

After focus groups, I wrote brief field notes. Field notes typically concerned observations from focus groups, some initial thoughts as to possible themes, and refining my own techniques for conducting focus groups. For example, following the first focus group I conducted in which some participants voiced confusion as to what reproductive health was, I began asking if participants would like to hear a definition of reproductive health at the beginning of the focus groups. Additionally, field notes helped me identify potential preliminary codes from focus groups that I was able to address and clarify in the PHE member reflections focus group.

Data Analysis

In order to analyze the data gathered from the focus groups, I used the thematic analysis approach as outlined by Braun and Clarke (2006). The analysis includes six steps: familiarizing oneself with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. Thematic analysis is consistent with the goals of this study because it allowed me to identify salient aspects of what stakeholder groups need out of reproductive health education and provided direction for development of future interventions. To familiarize myself with the data I listened to focus group recordings while editing the transcript that was generated by Microsoft Word transcription technology. In this way, I was able to better represent what participants said within the transcript. I then read through all transcripts to gain an understanding of the wider conversation that each focus group had. I developed preliminary codes, whereby I identified themes within the content of the focus groups, using the first three focus groups. To do so, I used the coding software Dedoose, which helped me to read through transcripts, assign codes, and make an informal codebook. For

example, “Maybe some people learned about it, but I feel like no one really talked to me about periods and, like, what the menstrual cycle is. Like, I didn’t even know about the different phases of it until I got a tracking app,” was assigned to the code “demystifying the menstrual cycle.”

I then conducted a member reflections focus group with PHEs in which I presented initial codes to the PHEs to gain insight into how these specific stakeholders interpreted these results and their importance to the community. I recoded the data based on feedback from the member reflections focus group in which stakeholders identified other possible codes and sub-codes. I conducted a final round of primary coding in which I included the final member reflections focus group and solidified a codebook based on initial codes (Tracy, 2020). I used the social ecological model of health promotion in order to guide my secondary coding in which I connected data to concepts from this model (Tracy, 2020). In this coding process, I coded “Maybe some people learned about it, but I feel like no one really talked to me about periods and, like, what the menstrual cycle is. Like, I didn’t even know about the different phases of it until I got a tracking app,” as included within the institutional level of influence, which concerns rules or policies at the organizational level that influence health (Stokols, 1996). Connecting the theoretical framework with the data allowed me to answer my research questions as it helped me to understand what barriers and/or entry points have existed and may currently exist for students to learn about reproductive health. In this way, I was able to identify both the essential information and the essential ways in which reproductive health education can be accessed by students.

Chapter 4: Results

The results of this study give insight into what information the stakeholder groups, the student population and peer educators at a university, expect should be included within reproductive health education offered by the university. Additionally, these findings provide understanding as to how stakeholder groups think this information should be communicated to best serve their needs. Using a needs assessment approach for data collection and thematic analysis driven by social ecological theory to analyze data (MacDonald et al., 2011; Hayes & Williams Jr., 2018; Heslop et al., 2020), I was able to identify what information students feel is most important to them at this point in their lives. Additionally, the social ecological model helped me to identify the levels at which students are currently getting information, which levels they think information should be coming from, and the levels at which they think responsibility lies for making reproductive health information accessible. These findings give insight not only into how students want communication of reproductive health information to take place, but also the way in which students are seeking education as to how to communicate about reproductive health at these various levels.

This section details the themes and subthemes that I identified in the analysis of the data, connecting the data with the levels of influence as outlined in the social ecological model. In this section, I will also discuss the ways in which these findings may be used to improve or develop reproductive health education programming at the university level. I used quotations from participants throughout the discussion of each theme to better describe the themes and subthemes. Participants' information has been deidentified in an effort to protect the participants' confidentiality. However, to provide

insight into the perspective of participants as individuals, participants will be referred to as Participant 1-Participant 10. In some instances, I do refer to participants as PHEs or non-PHEs where this status provides necessary context for the quotation.

Institutional Level: Responsibility and Barriers

The institutional level of influence within the social ecological model consists of organizations that impact health behavior (Koch et al., 2019). Within this study the institution in question is the university, so this level may alternatively be thought of as the university level or even the level at which the health education office influences health behavior. Influencing health behavior in a positive way is, of course, the goal of health promotion. In this study, the role of the institutional level was primarily concerned with the degree of responsibility that falls on the health education office to address reproductive health within the organization's educational programming. Since this study took place within an institution and was about the education the institution provides, it was not unexpected that participants expected the institution to be responsible for reproductive health education and for influencing the other levels of community, policy, interpersonal, and intrapersonal. In fact, participants largely expected the institution to be responsible for educating students about the different levels of influence and how to communicate about reproductive health within those levels. The education students expected from the institution then became not only a question of reproductive health education, but also, in many ways, health communication education. This concept will be addressed more in depth within other themes, but it is important to note that ultimately students saw this communication education within various levels of influence as the

responsibility of the institution. For example, when asked what information they thought students need about reproductive health, Participant 6 discussed pregnancy, explaining:

> I mean, like, in case you've not had safe sex. Then the next step being, like, maybe going to a proper doctor and asking them about it, being sure about the- the fact of where do you lie in your cycle at that point in time? Or, maybe just making sure, like, because there's a lot of stress, I think, associated with that part. So just, like, being completely sure about it, yeah. *And talking to a professional, of course* (emphasis mine).

The participant was not only asking for knowledge about pregnancy and the menstrual cycle, but also how to address pregnancy with a doctor and even the process of doing so.

In addition, to the responsibility of the institution in addressing health literacy and health communication, a subtheme emerged in the data of the ways in which the university currently produces barriers to accessing education and, to an extent reproductive care.

Institutional Barriers

The theme of institutional barriers primarily concerns the ways in which the institution of the university's policies and decisions prevent students from accessing reproductive health information and resources. One way in which participants discussed this was when students talked about confusion between the health education office, which provides health education, programs, and some non-clinical services, and Campus Health, which operates as the on-campus health clinic. Even though most participants who were not PHEs indicated they were familiar with the health education office's sexual health programming, they still expressed their confusion between the two offices and the

services that each of them provide. For example, when talking about seeking reproductive care on campus Participant 8 explained:

> …I don't think a lot of people know that Campus- even what Campus Health is, because, truly, I didn't know what Campus Health was until I saw the signs [in the Campus Health building] that they were moving in. Like, I had no idea who these people were. So more advertising, I think, around Campus Health and, like, what they offer, what you can get, prices, anything like that.

When I asked participants about their familiarity with the health education office's sexual health education, Participant 8 explained that, while they were familiar with specific events focused on sexual health, they were not familiar with reproductive health programming:

> But I don't know, like, what, necessarily, like what resources [the health education office] offers, like to students all the time and, kind of, like, what programs the school has implemented for, like, reproductive rights or reproductive health.

Across all focus groups, participants expressed that not having clearly defined offices and services provided by those offices made it difficult to access useful reproductive health resources. This lack of clear communication about reproductive health resources on campus also made it harder for PHEs to perform their jobs, as evidenced in this exchange:

> Participant 4: These two girls came in asking about where [the vending machine with pregnancy tests] was. And I was like, "What's going on, [supervisor's

name]?" And they're like "Yeah, we have pregnancy tests here." They're free and I had no idea.

Participant 1: Where? Since when?

Participants, even PHEs who are expected to be familiar with these resources, indicated that the way in which reproductive health resources were spread throughout campus made it difficult to access these resources and communicate with others about them. The role of the health education office within the institution of the university must be clearly defined. Additionally, a clear emphasis on reproductive health information must be made in communicating to students about the role of the health education office, otherwise they may not know where to turn to for information, nor where to turn to for reproductive health care when they need the services of the health clinic. PHEs also need to be looped into discussions surrounding reproductive health resources on campus so they can better communicate with peer learners about the resources that are available to them.

This subtheme is also indicative of the degree to which the institution should take responsibility for providing reproductive health information and resources. If the institution does not take responsibility for communicating to students at this level, the confusion around access will continue, to the detriment of the campus community.

Community Level: Responding to Norms

In the social ecological model, the community level of influence primarily addresses the norms within groups and relationships between social organizations (Koch et al., 2019). The community level exists in multiple ways on a university campus, from student organizations to academic departments and extending to the campus culture as a

whole. Additionally, university campuses may also be influenced by local communities. A university campus is a microsystem within the larger macrosystem of a locality, state, country, and, of course, the world (Jantzer et al., 2021). The communities within the microsystem of the university campus are diverse, and participants highlighted a need to account for this diversity in reproductive health education, especially addressing the norms within communities that might be barriers to accessing reproductive health information. Participants indicated norms need to be addressed in multiple ways: normalizing discussions of reproductive health across the campus, accounting for differences in education levels as they relate to reproductive health education and including culturally relevant reproductive health information for diverse groups.

Normalizing Reproductive Health

Participants identified a few areas of reproductive health that they saw as stigmatized within the campus community. One main area of reproductive health that they identified as stigmatized was the menstrual cycle. Participants expressed that the education around the menstrual cycle that they had in the past was inadequate, expressing that there was a distinction between their community of origin and their perspectives of what the campus community should support in their view. Participant 2 expressed their dismay with education around the menstruation:

> Maybe some people learned about it, but I feel like no one really talked to me about periods and, like, what the menstrual cycle is. Like, I didn't even know about the different phases of it until I got a tracking app.

Importantly, the participant expressed that "no one" talked to them about menstruation, not just that this topic was overlooked in formal educational programs around sexual

health. This implies an issue within this participant's community of origin when it comes to discussing menstruation that could be addressed within the campus community.

This inadequate education was attributed to the stigma around discussing menstruation. Participant 3 explained:

> …I've seen a lot of people not having periods for a very long time or having them continuously for a month or two months or so and they're still not going and getting it checked up because of, like, the- I mean I've seen people who are scared of showing it to someone else, like, the, the shame of showing it to someone else. And I think if, that if we could find a way to, you know, talk about that and normalize that. I think it would help and say that "this is normal" and "your period is not at regular intervals."

In this excerpt, the participant goes on to explain how the stigma associated with menstruation prevents people from gaining understanding of when something might be wrong and could even prevent them from seeking help from a medical professional. Participant 1 also brought up menopause in this conversation, pointing out that even the cessation of periods is stigmatized in proximity to menstruation explaining, "I know, like, we aren't taught about menopause at all when we're doing, like reproductive stuff," pointing out the consequences of not being provided with this knowledge, "And then, like, when you hit your 40's and 50's as a woman, you're like, 'what is happening in my body?'" Participant 8 mentioned "knowing how your reproductive organs change and things that are going to happen as you get older" as something they thought needed to be normalized in conversations and education about reproductive health.

Participants also noted that discussing reproductive anatomy itself was stigmatized and even purposely glossed over in some participants' experiences:

> Participant 9: It's, like, even in health in high school, they were trying to beat around the bush because they knew people were already having sex. And I feel like that was more reason to give extensive information, but they didn't. So when I got to human anatomy in my freshman year it was a shock. It was a shock. And I felt like everyone knew way more than I did. Yeah, so.
>
> Interviewer: What were some of the things that, like, were shocking to you?
>
> Participant 9: Really just the anatomy of it, I didn't know what most of the stuff was. And I didn't know where certain, like, when they speak about cancers or diseases, I didn't know exactly where it was affecting and what it was affecting. So, like, if there's something going on in your reproductive organs, like, it can affect, like, your brain or it can affect your sleep or your mood or something. So yeah, it's shocking.

Participant 10 explained:

> …I grew up in [participant's place of origin] and we don't have sex education and it's, like, very stigmatized and parents don't talk to us, neither do teachers. No one talks to us about it. And if there's a chapter on reproduction, they skip it. And because it's awkward and stuff.

Many participants were not even taught things as basic as reproductive anatomy due to the stigma around reproductive health and its association with sexual health within their community of origin, even though, as one participant pointed out, reproductive health impacts one's health overall.

Even though menstruation and reproductive anatomy were two topics that participants saw as especially stigmatized within our culture, participants consistently noted that, overall, reproductive health is stigmatized. Participant 8 brought up the topic of normalization, saying, "I think these things need to be normalized a little bit more, so it's not skipped over in anatomy class and so it's not awkward to talk about," emphasizing that reproductive health is normal in a biological sense and that "having more information and more normalization around [reproductive health] will help boost the talk around it." This participant expects that starting the conversation within a health promotion setting and sharing information will create a more open environment to talk about reproductive health in general.

Participant 1 acknowledged a similar sentiment, explaining that some people may be hesitant to ask questions about reproductive health and saw breaking down stigma as key to sharing information about reproductive health:

> A lot of people want to know, they just have no idea how to ask. And they're nervous. I mean, I get it…But the amount of confidence and "I don't care, I am just out and open about it" and so many people are not [that way]. But, yeah, knowing how to ask. You know, breaking down the stigma and knowing how to ask.

Participants recognized the need to normalize reproductive health as a way to start conversations and begin the process of educating about reproductive health. However, participants also identified a barrier within the community that may make doing so harder.

Differences in Education

Participants noted that the differences between students' sexual education may make it harder to discuss reproductive health. Across all focus groups, students brought up the concept of "the basics" as a sort of prerequisite for reproductive health education. When the idea of "the basics" was brought up by another participant, Participant 1 defined "the basics" as "[how] to properly check a condom, put it on, use it, dispose, not throw it in a trash can." Participants also highlighted information about STIs as fitting into their perceptions of "the basics," with Participant 8 saying "all the STIs, the different types, how they manifest themselves" would be a valuable discussion. Participants also brought up anecdotes about why they think continuing education about "the basics" needs to be pursued with Participant 7 mentioning that they knew people who could benefit from "knowing the risk" of unsafe sex and having "information about [the symptoms of STIs] and resources."

Given that participants viewed basic sexual health education as a prerequisite for learning about more specific topics like reproductive health, they also viewed the disparities in sexual health education among university students as a barrier. Participant 2 pointed out that "so many people may not have gotten [sexual health education] before they came to college or they may not have received as much knowledge as they should have for a baseline." Participant 1 brought up that even students who are from Indiana "probably all experienced very vastly different sexual health education before coming [to the university]," since "there's no set curriculum for Indiana."

This participant was accurate in their description of Indiana's standardization of sexual of health education in that it is practically nonexistent. Indiana Code 20-30-5-13

does require that school corporations teach students about HIV, while Indiana Code 20-34-3-27 mandates that any education on HIV must stress the "moral aspects of abstinence" and that the best way to prevent the spread of HIV is to "refrain from sexual activity until they are ready as adults to establish, in the context of marriage, a mutually faithful monogamous relationship" (FindLaw, 2021). Otherwise, no standards for sexual education exist in Indiana.

Additionally, students from other states may have experienced different standards in regards to sexual health education. International students may also, and according to participants do, have vastly different levels of education around sexual health due to taboos within their culture. Participant 10, an international student, pointed out, their country "[doesn't] have sexual education," while Participant 6, also an international student described their friends as "clueless" about safe sex due to the lack of education in her culture.

Participants recognized that the wide array of educational experience when it came to sexual health might create a barrier to effectively teaching about reproductive health. To combat this, participants identified inclusive and culturally specific education as a way to address the unique barriers a specific community of students on campus may face.

Inclusivity

Participants highlighted inclusivity as a necessary part of reproductive health education to better address the needs of specific communities. One community that participants focused on was the LBGTQ+ community, and especially transgender individuals within it. Participant 1 addressed how menstruation should be discussed in

reproductive health education because there might be differences in “the symptoms that people who might not be cisgender women but who also have periods will experience.” Participant 8 pointed out that it would be helpful for transgender people who have had or are considering gender affirming surgery to understand “how this might affect them in the long run as [they] get older, like, ‘look for these signs’ or’ you might experience’ these” in terms of the way their reproductive health may need to be addressed over time.

Those who did not identify as transgender or LGBTQ+ acknowledged that having this knowledge was important for them. In talking about transgender reproductive health, Participant 1 noted “that stuff I don’t know as much about. Yeah, I probably should. I need to learn.” Participant 8 mentioned that LGBTQ+ health “needs to be talked about a lot” because “a lot of our health [education] does focus on heterosexuals and, being 2024, that’s not really the majority case,” acknowledging that reproductive health education should be more diverse to mirror the changing societal norms.

Participants also identified a need for more culturally diverse reproductive health information. Participant 1 pointed out that “bringing in education that’s more open for race and ethnicity” was important to creating a “culturally competent” program. Participant 4 explained their reasoning for including culturally competent education:

> Including different races and ethnicities with health education because most medical treatments and everything is targeted for white people. So just including that because I know everyone has different signs and symptoms that could be portrayed in a different way, rather than what it’s generally viewed as.

Participants offered a solution for the stigmatization of reproductive health and the disparities in sexual health education that students received prior to attending the

university by addressing reproductive health as it relates to different sexualities, gender identities, races, and ethnicities. However, participants foresaw another possible barrier as well as an opportunity for further education on reproductive health when it came to public policy and advocacy.

Policy Level: Laws Surrounding Reproductive Health

In the social ecological model, the public policy level of influence describes how local, state, and federal laws operate to support or create a barrier to health (Koch et al., 2019). Participants identified the role of public policy in multiple ways. Participants identified public policy barriers to reproductive health access that they thought should be addressed in educational programs as well as opportunities for advocacy.

State Laws as Barriers

Participants often identified Indiana's laws around reproductive health, especially those related to access to abortions, as barriers to accessing reproductive health and Participant 1 noted that this was an important piece of reproductive health education:

> Given everything, when I think of reproductive rights, I think more along the lines of everything with *Roe v. Wade*. And there's always, everyday the law is changing, or I feel like it's changing. I have no idea. I can't keep up to date on what my actual rights are, at least in Indiana. I know, I know it better in other states, but not here. It's very confusing to know what's happening here and what our access looks like to that kind of care, if necessary.

When discussing how this impacts reproductive health education in Indiana, Participant 7 described it as "not the greatest and it's definitely heavily censored" and explained that knowledge around public policy is "beneficial information that's very important and

central to the role of what's going on [in Indiana]." Participant 4 suggested that providing education about laws that are already established in regard to reproductive health in Indiana is important because "I know a lot of people don't read the news or aren't aware of that actual laws that are in place."

Participants also indicated that providing this education to students now was a prime time to talk about reproductive health and policy. Participant 1 explained:

> For, I think, everyone in this room for the most part, we could probably say that [Indiana] is a bad place for reproductive health. On that same subject, you could say other people on the opposite side of the spectrum say this is exactly what we need. You know, we need to absolutely teach abstinence and not allow for abortion access and reproductive healthcare access…If you were to have conversations like this with different demographics the opinions would vary, and I think it's really based on age, a lot of it.

This participant indicated that college students would be more open to discussing reproductive health and may even be more critical of existing policies around reproductive health, because younger people are more progressive. Participant 4 echoed this sentiment as "[college students] are more open to this sort of education because they're more aware that there's education to it," describing that college students are more aware that education around reproductive health should exist.

For this reason, participants also described wanting to see education around reproductive health that also incorporates advocacy, and especially creating inclusive conversations around reproductive justice.

Creating Advocates

When participants discussed public policies that influence reproductive health, inevitably a discussion of the positionality of advocates came up, with people pointing out that women were not only more likely to be advocates for reproductive health education and access, but that they were also more likely to be willing to discuss it. Participant 10 brought up this subject, asking other focus group participants:

> So, have we seen men ever participating in, if there's a round table discussion or panel about women's health or reproductive health? Like have, have you ever seen men participating in that? Like, I'm not aware.

Participant 8 described their view of men's current role in reproductive health:

> Usually I hate to say this, but a lot of men that are involved in women's health and reproductive rights are not for it. They're usually against it. But you do have men that do support women and do support their rights and stuff, but I feel like a lot of times it's mostly women having to speak up for themselves.

Participants saw this as a disadvantage. Participant 1 described why they thought the inclusion of men in discussions around reproductive health was important because "I'm interested to hear voices other than my own, than women or people who can get pregnant, because I'm interested to know how it can affect men…I like hearing other points of view." Participant 8 expressed that "it would be nice to have the other sex in our corner." Participant 10 summed it by saying, "So I'm asking the question, 'how to get men engaged there too?'"

Participants clearly saw the importance of engaging men in conversations about reproductive health policy, but participants also recognized that, historically, creating this

engagement in a positive way may be difficult. Throughout conversations, however, participants identified a key way to engage people across the campus in conversations about reproductive health: interpersonal communication.

Interpersonal Level: The Role of Communication

Within the social ecological model, the interpersonal level of influence refers to interactions between friends, family, and social networks which can create social support for a health behavior change (Koch et al., 2019). Participants in this study identified a few key ways in which the interpersonal level of influence impacted them, their reproductive health knowledge, and their access to reproductive care. Interpersonal communication in particular became a key point of interest among participants as within each subtheme participants were curious about how to better communicate within these kinds of interpersonal interactions. Participants identified communication between relational partners, patient-provider communication, and peer education as important topics and strategies for addressing reproductive health.

Communication about Reproductive Health in Relationships

Participants saw reproductive health education as a necessary part of facilitating conversations about reproductive health within interpersonal relationships. In discussing the menstrual cycle, participants expected that more in depth information about the menstrual cycle might make it easier to discuss symptoms associated with premenstrual syndrome (PMS), as Participant 1 joked:

> I feel like I become insane the week before my period. When I'm on it, I feel like "Oh, well I was insane." I'm like "I'm sorry for how I acted this past week." Once I start, it's like a relief. I'm like "Oh, ok, I'll be normal again."

This participant describes how their PMS symptoms can sometimes cause tricky interpersonal situations. Participant 5 described their experience in a similar way and elaborated that "teaching people about [handling emotions caused by PMS or similar conditions] and possibly getting diagnosed for it from a doctor if you feel like it's an issue." Participants acknowledged that understanding what is "normal" when it comes to menstruation is important both in knowing when to elevate the issue to medical intervention, but also for others to know that interpersonal conflicts may occur. Participant 8 described this saying:

> Irritation is normal during periods and just understanding that you can just talk through these emotions with the people around you so they realize this is because of this, not because I hate you (laughs). So, yeah, I think a lot of time people get really worked up with how things change during that time and it's going to happen for a lot of people. So you might as well be used to it.

Participants saw information about PMS and other symptoms of menstruation as important to having expectations and strategies for regulating emotions during one's period to communicate in a healthy way in an attempt to prevent or resolve interpersonal conflicts.

Participants also saw education around reproductive health as necessary for communicating with partners about safe sex. Participant 10 described knowing the symptoms of STIs as important to having discussions about sex with partners:

> …there might be other people who know they have [an STI] or who don't know, who can't diagnose it themselves. I mean they can't spot something's wrong with them, or they give it to other people. So I think, as much as it's important for

> women to know when they're having sex with someone, it's also important for the man to know that it's not ok when he knows something's wrong. Yeah, he should know that he has it first before. Yeah, so, something to talk about with men, like if you know something's wrong with you go get it checked first or something like that.

Participants did not just find this important in cases of STIs, but also when it came to pregnancy, especially pregnancy prevention. Participant 1, in talking about state laws related to abortion access, wondered "I'm interested to see what a man who has sex with women would say on reproductive laws and education, what they know about their own body as opposed to their partner's body? And the risks they could put them at." This participant expressed the sentiment that this question is important in a relationship between a cisgendered man and cisgendered woman. Participant 5 shared an anecdote where a partner would not help finance emergency contraception, or Plan B, due to religious beliefs and how this made the participant realize that conversations about "how to choose a sexual partner you can actually trust," was important.

Participants expressed that reproductive health education should include information about how to communicate about expectations within a relationship. They found this important because disagreements on things like pregnancy and responses to becoming unintentionally pregnant were vital in their relationships. Also, participants expressed that learning how to communicate about the menstrual cycle would be helpful in maintaining relationships. In addition to interpersonal communication within a relationship, participants also recognized the importance of seeking treatment from a professional, though they expressed the need for more education around this.

Patient-Provider Interactions

Participants first identified the need for education around when to seek help from a health professional. Participant 7 explained that having an understanding of "what healthy is and what not healthy is" so that students an identify "the point where you should probably go see a doctor." Participant 8 identified education around "self-exams" as key to this so that people could identify what is normal or not normal for them:

> Self-exams, a lot of times we'll just skip over that. Like, I know what this part of my body should look like. So this is just how it is. And if it changes you're like, oh, I guess I'm just getting older or I guess it's just because I had a cold last week, but it could be something way more.

In this way, participants identified the first step of the patient provider interaction of determining that seeing a provider is necessary. Participants then explained that when it comes to reproductive health, finding a provider they trust is important to them. As previously mentioned, participants recognized a certain "shame" associated with talking about reproductive health, even with a professional. Participant 8 also described their difficulties with seeking treatment from a professional after being sexually assaulted as a child, and shared how their provider made them feel more comfortable when getting a pap smear:

> I just really didn't really want to open up in that way and be that vulnerable to people. But I found a female provider, she was very, you know, we talked about what I'd been through. And what, exactly she was going to do. She even gave me the option of coming in a different day, like just coming in that day to just talk about it and then coming in another day. So, I think finding a good provider that is

> going to listen to your needs and not feel any type of way about things like that, I think that makes a world of difference.

Other participants agreed that having the knowledge of how to find a provider that fit you would be helpful. Some expressed this by providing examples of patient-provider interactions that they did not think were satisfactory. For example, Participant 4 described what they see as a typical instance of getting contraception:

> And I think included with [education about the menstrual cycle] is what can happen to you if you take birth control because I know a lot of people aren't informed and I guess their doctors tell them to take birth control, but sometimes they don't really mention the side effects of what may happen because of hormones and all.

Participant 5 had a similar view in describing seeking treatment for their premenstrual dysphoric disorder (PMDD), explaining that they expected to be prescribed birth control:

> But I don't want to get on hormones because I don't want to go through that period where I have to adjust to new hormones being introduced to my body and then possibly getting worse. And then dealing with that on top of what I'm already dealing with.

This expectation that providers will prescribe one type of hormonal birth control, without fully explaining the possible side effects, discouraged this participant from seeking treatment from a professional and instead "finding more natural ways of combating emotions and hormone regulation, instead of looking toward or looking for medication to solve some issues."

While participants think that knowing when and how to seek treatment from a medical professional is important, it is the patient-provider interaction that is more important to them. Participants identified tenets of good patient-provider communication, a key aspect of health communication, that might help others find providers as providing thorough explanations of procedures, explaining different options, and listening. Participants recognized that these need to be taught within reproductive health education given the sensitivity of reproductive health topics. Participants then turned to the question of how reproductive health education should take place.

Peer Education

Given the participants of this study it may not seem surprising that the interpersonal model of peer education was identified as a prime way to educate others on reproductive health, but it is important to note that nowhere in the focus groups did I as the interviewer explicitly bring up peer education. Instances in which participants brought up a peer education model were entirely organic, even amongst the focus groups that were not peer educators. Participant 8 explained:

> And I feel like a lot of students just talk to each other. Yeah, about things like this. So there's not necessarily, like, and expert opinion on anything. It's just kind of students educating students on what they know. And, I mean, they're comfortable talking to other students, talking to their friends about the stuff rather than an adult that they don't know.

This sentiment is consistent with other findings that peer education models provide a more comfortable environment to talk about subjects that may be viewed as more taboo,

like sexual health and reproductive health (Bowling et al., 2021; Crocker et al., 2019; O'Malley & Horowitz, 2023; Rittenour & Booth-Butterfield, 2006).

Participant 9 suggested having an event that featured the non-expert exchange of information where there would be "a panel discussion of women of different ages, men of different ages," where people could anonymously ask questions and others could "answer it to the best of their knowledge…which is pretty similar to people just sharing what they know, but it's a space where you can learn and give." This participant likewise highlighted a peer model where peers exchange information through interpersonal interactions. Participants in one focus group co-created the concept for a peer mentor program where students could exchange information across genders "because obviously, you would assume, that you know the most about your gender's reproductive health." These suggestions demonstrate that participants value communication with their peers and learning from them about reproductive health.

Peer health educators also acknowledged the importance of peer education. Participant 5 noted that "more tabling events" focused on reproductive health would be helpful "because that's a more direct way to speak to people…so I feel like that would be a good way to talk about different topics." Participant 1 suggested having peer-led "crash course" tabling events based on reproductive health topics so students could quickly and easily get information. Participants also mentioned modeling behaviors related to reproductive health, like Participant 1 who said of getting tested for STIs, "I don't care anymore; I just went and got tested in front of the whole entire world down there" to help break the stigma.

Using interpersonal communication through the peer education model is a valuable resource when providing reproductive health education. Participants want an environment that is comfortable to discuss topics like reproductive health and they value the exchange of information that can take place in peer models. In addition to using interpersonal communication as a teaching tool, participants also indicated it should be included in reproductive health education, so students have the information necessary to navigate conversations about reproductive health in their relationships and are able to identify good communication behaviors in patient-provider interactions.

Overall, participants primarily identified reproductive health education being influenced by institutional, community, public policy, and interpersonal levels. One level that is not explicitly addressed in this report is the intrapersonal level of influence, which primarily deals with an individual's knowledge of health. This is not to say that the intrapersonal level of influence was not addressed in the data, it absolutely was. The reason that the intrapersonal level was addressed in the same ways as the others is because the intrapersonal level is the one that is being targeted by health promotion interventions like reproductive health education. By the very nature of reproductive health education, the intrapersonal level of influence is being addressed in every way. For this reason, I omitted it in this report as every piece of data, in some way, related to the intrapersonal level of influence as reproductive health education seeks to increase knowledge of reproductive health topics.

Participants identified institutional responsibility in that they thought the institution should provide comprehensive reproductive health education. They also identified institutional barriers primarily consisting of confusion and lack of

communication around where to access education versus care on campus. Participants identified stigma, especially around topics like the menstrual cycle and reproductive anatomy, as other possible barriers that students may face to accessing reproductive health information. Additionally, participants noted that the setting of the university made it difficult to access reproductive health education because not every student had the same basic level of sexual health education that they saw as necessary to understand reproductive health. However, students did identify inclusive education, centering diverse identities of LGBTQ+ people as well as people across different racial and ethnic backgrounds as a possible solution. Participants also identified Indiana's state policies about reproductive health as a barrier to care as there was confusion about what exactly was legal. Conversations around this turned to ways in which to engage students in conversation and advocacy about reproductive health, with participants especially interested in engaging men in these conversations. Interpersonal communication was likewise seen as a possible solution with participants suggesting peer education models as a way to engage students in learning about reproductive health. Students also saw a need for education at this level about interpersonal communication as it relates to conversations about reproductive health in relationships and patient-provider communication. These findings suggest implications that are both practical and theoretical.

Chapter 5: Discussion

These data provide answers as to what students and PHEs want to see in reproductive health education and, to an extent, how they would want this information to be presented to them. The data also serve to illustrate why research on health promotion from a communication studies perspective is important given the dearth of literature that addresses health promotion needs assessments in such a way. Using a health promotion model with a communication studies lens enabled me to see the ways in which communication about reproductive health is necessary at every level. In this section, I outline the ways in which the results of this study can be used in terms of theoretical and practical implications, as well as the strengths and weaknesses of this study when it comes to the qualitative approach.

Theoretical Implications

The social ecological model (Stokols, 1996) is a health promotion model, not a communication studies model, but the results of this study show that communication may play a more significant role in the social ecological model and could be addressed more explicitly in future iterations of the model. Participants indicated that reproductive health education has a role to play in health literacy. They noted that one barrier of access to care was the lack of education around when to seek help from a medical professional concerning reproductive health, which was, in part, also a product of stigma around reproductive health. Knowing how a patient-provider interaction is initiated and knowing how to identify a provider that works well with the individual were salient topics in this discussion of seeking care. Participants saw communication as key to identifying a provider with whom they would want to interact, with communicative providers being

labeled as “good” providers. The question then becomes, how do students know when a provider is being a “good” communicator?

This is the question that participants want to see answered in reproductive health education so that students are prepared to handle an interaction with a provider about reproductive health and be empowered to advocate for themselves as a patient. Effective patient-provider communication, as participants described it in their own examples of “good” and “bad” patient-provider interactions, takes a patient centered approach. This approach is characterized by Epstein and Street (2007) as understanding patient’s perspectives, cultural contexts, and values with the intent of co-creating an understanding of an issue and the treatments and procedures that align with the patient’s values. Patient centered communication must include interactions that elicit information about the patient’s perspectives, cultural contexts, and values and must build trust, make the language of medical information easily accessible, and encourage the patient to participate in their own health decision-making (Street, 2017).

Reproductive health education through the health education office could draw on research from health communication scholarship to understand what “good” communication looks like in a patient-provider interaction. In this way, health education becomes not just about the facts of health, but also about communication as a tool to enhance the influence of the social ecological model’s levels of influence. Cusanno and colleagues (2022) conceptualized patient-provider interactions as “an inherently communicative endeavor, with interpersonal communication at its core” (p. 194). Patient-provider interactions operate within the interpersonal level that addresses the way that social connections impact health. In the same way that the university may impact the

interpersonal interactions between peer educators and peer learners, a hospital system may impact the interpersonal interaction between the patient and the provider, but this interaction is fundamentally interpersonal (Street, 2017). Including patient-provider communication within the interpersonal level of influence may help frame the interpersonal level as fundamentally communicative as it deals with the interactions between people that influence health. Within the social ecological model, communication plays a significant role in creating an environment where students feel comfortable to not only discuss stigmatized health topics, but also seek treatment with the reassurance that they will be able to access treatment that truly works for them.

Along these same lines, communication came up in some way in every other finding in this study and in relation to the levels of influence of the social ecological model (Sokols, 1996). For example, the solution to the institutional barrier of confusion around where to access reproductive health education versus reproductive health care offered by participants was clear communication about the difference between the health education office and the health clinic. Also, participants saw an opportunity to address the policy level by opening up communication among sexes. Communication played a role, also, in the ways that students conceptualized solutions to the stigma surrounding reproductive health as they perceived more frequent communication about this topic between peers as the best way to normalize reproductive health, opening the door for more in depth education. In many ways, education and health promotion are communication (Nutbeam, 2000). Institutional responsibility to promote the health education office is a communication issue, normalization of reproductive health topics at the community level is a communication issue, teaching students how to engage others in

advocacy at the policy level is a communication issue (Zoller, 2005), and the peer education that participants were asking for is an interpersonal communication solution.

The social ecological model serves to explain the ways in which different environments impact a person's individual health and vice versa. Integrating communication into this model can help researchers and public health professionals understand how health communication can be used at the various levels to make these environments supportive for the individual. Golden and colleagues (2015) explored how adaptable the social ecological model is. In their conceptualization, they placed policy at the center of the model in order to address the ways that the levels of influence can operate to affect policy through individual and collective action and in their reconceptualization, they implicitly addressed some ways that communication can be included in the model (Golden et al., 2015). Within policy, they conceptualized policy about communication systems as playing a vital role in health as "facilitators of social interaction" (Golden et al, 2015, p. 10). Golden and colleagues (2015) also identified communities that champion "health-supporting policies" (p. 10) as communities that can set norms and organizations that can act as ways to identify public health issues that need to be focused on. Here, they are essentially talking about the role of communities in acting as agenda-setting bodies when it comes to what is platformed through media and other public forms of communication. These communities and organizations can act as gatekeepers, influencing the other levels to prioritize one health issue and/or deprioritize another. Golden and colleagues (2015) also described interpersonal connections as key to creating grassroots collective action.

It could be helpful to draw on social network theory to explain the role of communication within the social ecological model. Craig (2013) explained society operates "as an open network linked by channels of communication processes that empower individuals and agencies to form network structures" (p. 9) around a wide array of areas. In this conceptualization it is communication that operates as the tool to generate connection and act as the catalyst for information to spread. Golden and colleagues (2015) provided insight into how communication may be explicitly included within the social ecological model, but communication may also be used as a lens through which to use the social ecological model, as I did in this study. In this way, communication is framed as necessary to understanding the role of the different levels of influence within the social ecological model.

Practical Implications

The needs assessment framework operates to identify changes that need to be made to an educational or health program related to information, educational priorities, resources allocation, and discrepancies within existing programs (Witkin, 1984; Young, 1994; Stevens & Gillam, 1998). Ultimately, a needs assessment should be viewed as providing guidelines for the development and implementation of a program. For this reason, through this study, which operates from a needs assessment framework, I have identified areas of practical improvement and creation of the reproductive health programs on the campus where I conducted this study that will provide meaningful education for the student population. These practical implications can be applied in two ways: content changes and changes to the method of delivery.

Content Changes

Participants identified multiple areas of reproductive health that they thought would be helpful information for themselves and other students to have knowledge of. More importantly, they also identified why this content would be important to them by addressing how the different levels of influence from the social ecological model impact their knowledge and vice versa.

Perhaps most importantly, it should be noted that participants recognized the importance of communication at every level, from the institutional to the interpersonal, though they may not have explicitly framed it this way. For example, at the institutional level, one major theme that emerged from the data was that participants were confused about the difference between the health education office and the health clinic. This difference essentially ensured that students were not able to access the information they needed because they did not know where to find it to begin with. This is a massively overlooked opportunity for communication on the side of the institutional level, in this case the university. There should be a clear delineation between the two offices, and though it might be clear to professional staff members, this difference is not so clear to students. Participants in this study demonstrated how lack of access to information provided by the health education office made it more difficult to access reproductive care because students could not identify when they may need to seek out care from a medical professional. This finding is consistent with findings from other universities where education related to reproductive health improved knowledge and use of health facilities (Frost et al., 2007; Mevsim et al., 2009; Bersamin et al., 2017). Improving the health of students on campus must start with communication from the institution. Students need to

know where they can access education and resources, and more resources need to be allocated to eliminating these barriers to care wherever possible. The social ecological model outlines a system in which different levels of influence are constantly acting on each other (Stokols, 1996); this communication change at the institutional level will affect all other levels of influence and contribute to making a campus community that values students' health and well-being.

Participants also saw the health education office, and especially the peer education program, as acting as a force to normalize conversations around reproductive health that many participants saw as stigmatized. Participants especially wanted more open conversations around menstruation, reproductive anatomy, basic sexual health, and conversations that are inclusive of the LGBTQ+ community, especially transgender people. To participants, breaking down stigma was key to getting accurate reproductive health information into the hands of students. Students called for peer education programming that centered reproductive health in a way where other students would easily be able to see that peers were having these conversations. For example, one participant suggested tabling events located in the campus food court where students would be unlikely to miss it. Participants are looking for programs that communicate to students that reproductive health is not only an important topic of conversation, but a normal one. Descriptive norms, wherein the behavior of a peer group is described in a way to indicate what is normal, have been found to increase the wanted behavior among adolescents (Stok et al., 2024). This shows that students care about what behaviors their peers think is normal through the observation of what their peers are doing, and participants agreed that having programs about reproductive health that are visible could

be the start of a larger cultural change on campus. This finding shows the importance of communication as it impacts the various levels of influence. Communication can target community issues at an interpersonal level, between peers, that affects the individual and reverberates throughout the community. By openly communicating about reproductive health, in spaces where other students can easily see and hear discussions, the health education office can create a lasting cultural change on campus and change perceptions of norms at the individual level where students can bring this open mindset to other communities they may belong to.

Participants also expressed that having inclusive conversations about reproductive health could affect public policy. Participants pointed out that conversations around reproductive health are typically dominated by women and expressed that they viewed women as more willing to participate in discussions about reproductive health. This perception was true of this study, where I had only two participants who identified as men. This also provided insight into the way in which reproductive health is framed as women's health in our culture though every person, regardless of sex, deals with reproductive health. Quinlan and Bute (2013) had similar findings in their research on a sexual and reproductive health seminar that a university required women to take before receiving free gynecological examinations. The way in which men were not required to take this seminar as well as the lack of information provided about men's reproductive health reinforced the framing of reproductive and sexual health as a woman's responsibility and silenced men (Quinlan and Bute, 2013). Participants in my study saw this as a major issue, though they themselves typically framed reproductive health as a women's issue, when it came to discussions about reproductive health, noting that often

the people who legislate reproductive health, like in the case of access to abortion, are men. Despite this, participants saw the potential for men to be advocates for reproductive health just as women are if they are included in conversations about reproductive health. In this way, participants identified a specific need for reproductive health education that is geared toward the inclusion of men. Reproductive health programs that target men and men's reproductive health are necessary in order to have conversations across many different communities on campus. Offering male voices in the form of peer health education is vital in this effort as participants expressed; the literature shows that peer education can be useful in targeting typically hard to reach populations and can provide information that is targeted to the needs of those groups (Mikhailovich & Arabena, 2005). Though female reproductive health surely should not be ignored in reproductive health education programs, the health education office should consider a comprehensive approach that includes education on reproductive health across biological sex and gender identities in order to generate the discussions that are necessary to change behavior and even generate advocacy.

Changes to Method of Delivery

Participants highlighted peer education as key to accomplishing the aforementioned goals of the changes to the reproductive health education through the health education office. They stressed that peer-to-peer education was the best way to learn about reproductive health because it lessened the stigma associated with these conversations and made topics more comfortable to discuss. Participants suggested a number of formats in which peer education might take place, including a mentoring program, interactive tabling, panel events, and synchronous or asynchronous presentation

options. The aspect of interpersonal communication through interactions with peer educators was key to participants as it made this education visible and normalized asking questions about reproductive health. These interactions with peer educators can take place through peer education programs organized by the health education office, like during presentations or tabling but may also take place in non-organizational settings. Since peer educators are the front-facing staff of the health education office, facilitating presentations and welcoming students at events and programs, they act as ambassadors for health on campus and may encounter questions from their peers outside of a professional setting. This, too, is key to reducing stigma associated with reproductive health. Normalizing health and wellness behaviors is one key goal of peer health education on college campuses (Keeling, 2000). Peer education programs related to sexual health have been shown to do just that and are important tools for creating change at the community level of the campus to promote an individual behavior change that is supported interpersonally by peers (Kneavel et al., 2024). Participants also noted that the normalizing effect of peer education would be helpful in developing interpersonal communication skills when it comes to discussions of health. Participants indicated that peer education support could help students develop skills such as asking questions about health and starting conversations about health. This finding shows that participants see the value in peer education programs and want access to them. For this reason, it is important to include peer educators in conversations around program building related to reproductive health. They can offer key insights as to how results from this study could best be incorporated into existing and new peer education initiatives.

Strengths

This study explores a topic that has not been greatly explored in research related to health promotion and health education. In this way, it has filled a gap in the literature by providing insight into what students may be looking for when it comes to reproductive health education, both in terms of content and method of delivery. Additionally, this study provides insight into the importance of peer education, as perceived by both peer learners and peer educators. Both groups acknowledge the potential of this model to make effective change in terms of norms and knowledge.

The qualitative nature of this study provided insight into both practical applications and theoretical implications. The focus groups generated discussions in which participants were able to draw on their own experiences as well as the knowledge of peers' experiences. It also provided a space for participants to reflect, leading to discussions about topic like the way in which reproductive health is framed as a gendered issue. This gave rise to problem-solving discussions in which participants offered solutions to what they saw as barriers to reproductive health education.

Another strength of this study is the implications related to the social ecological model (Stokols, 1996). The inclusion of communication and the framing of the social ecological model as a theory of communication is something that should be explored further, but this study provides a basis for insight into how communication may be included within the model at each level of influence. The explicit inclusion of communication in the social ecological could generate insight into the use of communication theory within health promotion.

Limitations

One primary limitation of this study was the sample size. While I was striving for depth, rather than breadth, to better understand the student population and how these findings may be applied in practice, the health education office might consider distributing a survey to gather more information on how these finding might be useful in addition to more feedback from students. This type of survey sent out over email may help address some of the issues I ran into when it came to recruiting.

Another limitation was the gender makeup of participants. The majority of participants (70%) were women, which is in alignment with the social framing of reproductive health as a women's issue. Future research may do well in just looking at the perspectives of male-identifying students as this might provide insight into both the exclusion of men's voices and what information men may be interested in learning when it comes to reproductive health. The same can be said of people of other diverse gender identities who were not well-represented in this study.

Furthermore, due to my position within the health education office (see Reflexivity Statement), participants may have held back when it came to criticisms of existing programs about sexual health education and reproductive health education. While I saw this as a strength when it came to conducting focus groups with PHEs as I had an established rapport with them and they understood the importance of evaluation of health education programming through their position, non-PHE participants who were familiar with programs and, therefore, may have recognized me as an employee of the office, may have felt reticent to share some feedback about existing programs. However,

I did not see a difference when it came to providing feedback and suggestions in terms of the development of new programs.

Additionally, suggestions for peer educations programs came from peer educators. A more diverse sample may show the extent to which suggestions for peer education and the perceived importance of peer education hold true. A sample with more non-PHEs may also provide insight into the types of peer education that students may see a need for outside of those methods of programming that peer educators are already familiar with. This may help to generate ideas about how reproductive health peer education programs can be innovated to meet the needs of the student population.

Chapter 6: Conclusion

The purpose of this study was to investigate the reproductive health education needs of students at a Midwestern university. Using a needs assessment framework (Stevens & Gillam, 1998; Witkin, 1984; Young, 1994) and the social ecological model (Stokols, 1996) I was able to identify stakeholder groups and conduct focus groups in order to examine which reproductive health topics they considered most salient in regard to reproductive health education provided by the university and how this education might be delivered. This study provided insight into both practical and theoretical applications.

Participants' responses in focus groups showed that communication must be more explicitly included within the social ecological model (Stokols, 1996). Participants expressed finding a reproductive health care provider who one feels comfortable around as an important aspect of reproductive health education and characterized a good provider as a communicative provider. This kind of interpersonal communication, however, is not explicitly addressed within the social ecological model. Knowledge provided by communication scholars who study patient-provider interactions (Cusanno et al., 2022; Epstein & Street, 2007; Street, 2017) could be incorporated into the social ecological model to better understand how these levels of influence are affected by communication processes. Health promotion is an issue of communication (Nutbeam, 2000), as participants implied as they identified problems and solutions within the distribution of reproductive health education as primarily communication issues within and between levels of influence. Golden and colleagues (2015) provide insight into how communication may be more explicitly included in the social ecological model in their restructuring of the model to focus on influencing the policy level. Social network theory

may be useful in illuminating how communication plays a role in the influence the levels have on each other (Craig, 2013). Communication is a necessary part of the way that the social ecological model works and must be more explicitly included in order to better understand how the levels of influence can best be served or wielded in health promotion and other public health campaigns.

Participants framed communication as key at all levels of influence within the social ecological model (Stokols, 1996) in order to reduce barriers to information and seeking care, consistent with other findings that showed reproductive health education improved the use of health facilities on campus that provide reproductive health care (Frost et al., 2007; Mevsim et al., 2009; Bersamin et al., 2017). Participants also highlighted the importance of reproductive health education operating as a way to normalize reproductive health and make it easier to ask questions and seek care without shame. Peer education has been found to be a useful way in which to set norms associated with health (Stok et al., 2024) and participants also pointed out the importance of having peers initiate reproductive health education. Inclusivity within education about reproductive care was also salient to participants, especially where sex and gender are concerned. Participants noted the gendered division of who seeks out conversations about reproductive health, with women primarily being the focus of these conversations. Men are often silenced in reproductive health education, even though it is an issue that affects everyone (Quinlan & Bute, 2013). Participants thought it was vital that men also be included in reproductive health education and that is not just framed as affecting women. Peer education was the primary way that participants saw this education taking place. Peer education initiatives should be developed in order to address barriers to information

and care, normalization of reproductive health, and the reframing of reproductive health as something that all people, regardless of sex and gender, should be knowledgeable about.

Appendices

Appendix A: Peer Health Educator Study Information Sheet

You are being asked to participate in a research study. Scientists do research to answer important questions that might help change or improve the way we do things in the future. This document will give you information about the study to help you decide whether you want to participate. Please read this form, and ask any questions you have, before agreeing to be in the study.

All research is voluntary. You can choose not to take part in this study. If you decide to participate, you can change your mind later and leave the study at any time. You will not be penalized or lose any benefits if you decide not to participate or choose to leave the study later.

This research is intended for individual 18 years of age or older. If you are under age 18, do not complete the survey.

The purpose of this study is to gain an understanding of what reproductive health information is missing from the peer health education program at Indiana University-Purdue University Indianapolis through focus groups with students.

We are asking you if you want to be in this study because you are a trained Peer Health Educator at the [health education office] at [the university]. The study is being conducted by Dr. Jennifer Bute and Anna Comer from IUPUI's Department of Communication Studies.

If you agree to be in the study, you will do the following things.

First, complete the demographic survey before participating in the focus group. This should take about 5 minutes.

Second, participate in a focus group about the reproductive health education provided by [the university's health education office]. The focus group should take about one hour. This will take place in [the health education office conference room] during the Peer Health Educator weekly meeting. Please note: participation is optional; whether you choose to participate or not, you will receive payment for the hour of the weekly meeting as always.

Third, participate in a second, follow-up focus group in which preliminary findings from initial focus groups will be presented to you. In this focus group, you will be asked to provide feedback on preliminary findings. This focus group will take no more than one hour to complete. This focus group will take place at [the health education office conference room] during the Peer Health Educator weekly meeting. Please note: participation is optional; whether you choose to participate or not, you will receive payment for the hour of the weekly meeting as always.

The focus groups audio will be recorded, and transcripts will be made.

Before agreeing to participate, please consider the risks and potential benefits of taking part in this study.

You may be uncomfortable while answering the survey questions. While completing the survey, you can skip any questions that make you uncomfortable or that you do not want to answer.

Focus group conversations may lead to topics that make you uncomfortable. While participating in the focus group, you may leave if the conversation becomes uncomfortable.

There may be disagreement in the focus group. We ask that all participants maintain respect for each other while communicating.

Interviews will be scheduled over email. Email is not a secure method of communication. Information sent over email, which for some research studies may include sensitive or personal information, could be accessed or read by someone other than you. If you participate in this study, you are agreeing that we can contact you by email.

There is a risk someone outside the study team could get access to your research information from this study. More information about how we will protect your information to reduce this risk is below.

You may personally benefit from this study because the results may impact the material about reproductive health that is covered in [the university's] sexual health programming. As students at [the university], you may take advantage of the sexual health programs and services and gain knowledge about reproductive health. We also hope to learn things that will help researchers and health and wellness promotion offices in the future.

You will not be paid for participating in this study. However, each participant will be entered in a drawing for one (1) of seven (7) Target gift cards valued at $25. Each participant will be assigned a number and researchers will use a random number generator to choose seven (7) individual winners of the gift cards. Winners will be notified via email after the focus group has been conducted. **There is no cost to participate in the study.**

We will protect your information and make every effort to keep your personal information confidential, but we cannot guarantee absolute confidentiality. No information which could identify you will be shared in publications about this study. All audio recordings and transcripts will be stored in a secure folder on a password protected computer. All identifiable information will be removed from the data. Audio recordings will be destroyed upon completion of the writing of the research paper, in May 2024. Your personal information may be shared outside the research study if required by law. We also may need to share your research records with other groups for quality assurance or data analysis. These groups include the Indiana University Institutional Review Board or its designees, and state or federal agencies who may need to access the research records (as allowed by law).

If you have questions about the study or encounter a problem with the research, contact the researcher, Anna Comer, at [researcher's email].

For questions about your rights as a research participant, to discuss problems, complaints, or concerns about a research study, or to obtain information or to offer input, please contact the IU Human Research Protection Program office at 800-696-2949 or at irb@iu.edu.

Appendix B: Student Study Information Sheet

You are being asked to participate in a research study. Scientists do research to answer important questions that might help change or improve the way we do things in the future. This document will give you information about the study to help you decide whether you want to participate. Please read this form, and ask any questions you have, before agreeing to be in the study.

All research is voluntary. You can choose not to take part in this study. If you decide to participate, you can change your mind later and leave the study at any time. You will not be penalized or lose any benefits if you decide not to participate or choose to leave the study later.

This research is intended for individual 18 years of age or older. If you are under age 18, do not complete the survey.

The purpose of this study is to gain an understanding of what reproductive health information is missing from the peer health education program at [the university] through focus groups with students.

We are asking you if you want to be in this study because you are a student at [the university]. The study is being conducted by Dr. Jennifer Bute and Anna Comer from IUPUI's Department of Communication Studies.

If you agree to be in the study, you will do the following things.

First, complete the demographic survey before participating in the focus group. This should take about 5 minutes.

Second, participate in a focus group about the reproductive health education provided by [the university's health education office]. The focus group should take about one hour. This will take place either on campus or over Zoom, depending on the availability of participants.

The focus group audio will be recorded, and a transcript will be made.

Before agreeing to participate, please consider the risks and potential benefits of taking part in this study.

You may be uncomfortable while answering the survey questions. While completing the survey, you can skip any questions that make you uncomfortable or that you do not want to answer.

Focus group conversations may lead to topics that make you uncomfortable. While participating in the focus group, you may leave if the conversation becomes uncomfortable.

There may be disagreement in the focus group. We ask that all participants maintain respect for each other while communicating.

Interviews will be scheduled over email. Email is not a secure method of communication. Information sent over email, which for some research studies may include sensitive or personal information, could be accessed or read by someone other than you. If you participate in this study, you are agreeing that we can contact you by email.

There is a risk someone outside the study team could get access to your research information from this study. More information about how we will protect your information to reduce this risk is below.

You may personally benefit from this study because the results may impact the material about reproductive health that is covered in [the university's] sexual health programming. As students at [the university], you may take advantage of the sexual health programs and services and gain knowledge about reproductive health. We also hope to learn things that will help researchers and health and wellness promotion offices in the future.

You will not be paid for participating in this study. However, each participant will be entered in a drawing for one (1) of seven (7) Target gift cards valued at $25. Each participant will be assigned a number and researchers will use a random number generator to choose seven (7) individual winners of the gift cards. Winners will be notified via email after the focus group has been conducted. **There is no cost to participate in the study.**

We will protect your information and make every effort to keep your personal information confidential, but we cannot guarantee absolute confidentiality. No information which could identify you will be shared in publications about this study. All audio recordings and transcripts will be stored in a secure folder on a password protected computer. All identifiable information will be removed from the data. Audio recordings will be destroyed upon completion of the writing of the research paper, in May 2024. Your personal information may be shared outside the research study if required by law. We also may need to share your research records with other groups for quality assurance or data analysis. These groups include the Indiana University Institutional Review Board or its designees, and state or federal agencies who may need to access the research records (as allowed by law).

If you have questions about the study or encounter a problem with the research, contact the researcher, Anna Comer, at [researcher's email].

For questions about your rights as a research participant, to discuss problems, complaints, or concerns about a research study, or to obtain information or to offer input, please contact the IU Human Research Protection Program office at 800-696-2949 or at irb@iu.edu.

Appendix C: Focus Group Guide – Peer Health Educators, Initial

What would you say is missing from the HWP sexual health education programs concerning reproductive health?

Have you ever received questions about reproductive health from students? What were they about? Were you able to answer them given the knowledge you have as a PHE?

What questions do you have about reproductive health that you think should be addressed?

What do you think other students need to learn about reproductive health?

What do you think other students want to learn about reproductive health?

What discussions about reproductive health would you benefit from?

Do you have any suggestions for reproductive health information that can be incorporated into HWP sexual health education programming?

Appendix D: Focus Group Guide – Students Familiar with Programming

Which of IUPUI's sexual health education programs are you familiar with?

How familiar are you with reproductive health topics?

What would you say in missing from the HWP sexual health education programs concerning reproductive health?

What questions do you have about reproductive health that you think should be addressed?

What discussions about reproductive health would you benefit from?

What discussions about reproductive health do you think other IUPUI students would benefit from?

How would you like it to be presented to you?

Appendix E: Focus Group Guide – Students Unfamiliar with Programming

In what ways are you familiar with sexual health education?

How familiar are you with reproductive health topics?

What questions do you have about reproductive health that you think should be addressed by university sexual health education programs?

What discussions about reproductive health would you benefit from?

What discussions about reproductive health do you think other IUPUI students would benefit from?

How would you like it to be presented to you?

Appendix F: Focus Group Guide – Peer Health Educators, Member Reflection

What findings would you have expected that you didn't hear?

What about these findings surprised you?

What do you think is missing from these findings?

What other reproductive health information should be incorporated into HWP's sexual health programming?

What did you think was most valuable about these findings?

Do you think these findings should be incorporated into HWP's sexual health programming? Why or why not?

How would you incorporate these findings into HWP's sexual health programming?

Appendix G: Demographic Survey

Please read attached study information sheet before completing this survey: [attached study information sheet]

First name:

Last name:

[University] email address. We will use this to reach out with more information (including a Zoom link to the focus group you choose to participate in):

Which of these groups do you belong to

a. [University] Peer Health Educator with the [health education office]
b. Student at [university], familiar with [the health education office's] sexual health programs
c. Student at [university], unfamiliar with [the health education office's] sexual health programs

Could you meet in person or online over Zoom?

a. In person
b. Online
c. Either

Please choose the year in school that best describes you:

a. 1st year undergraduate
b. 2nd year undergraduate
c. 3rd year undergraduate
d. 4th year undergraduate
e. Graduate/professional student

Are you an international student?

a. Yes
b. No

Do you live on or off campus?

a. On campus
b. Off campus

Please choose the race that you identify with.

a. Asian or Asian American
b. Indigenous or Native American
c. Black or African American
d. Hispanic or Latino/a/e
e. Middle Eastern/North African (MENA) or Arab Origin
f. Pacific Islander Native
g. White
h. Biracial or Multiracial
i. Another identity:

Please choose the gender identity you identify with:

a. Woman or Female
b. Man or Male
c. Transgender Woman
d. Transgender Man
e. Genderqueer
f. Agender

g. Genderfluid

h. Non-binary

i. Another identity:

Please choose the sexual orientation that you best identify with.

a. Asexual

b. Bisexual

c. Gay

d. Lesbian

e. Pansexual

f. Queer

g. Questioning

h. Straight / Heterosexual

i. Another identity:

Have you ever birthed a child?

a. Yes

b. No

How would you rank your current knowledge of reproductive health? (1 = Not knowledgeable, 5 = Extremely knowledgeable)

a. 1: Not knowledgeable

b. 2: Slightly knowledgeable

c. 3: Moderately knowledgeable

d. 4: Very knowledgeable

e. 5: Extremely knowledgeable

Appendix H: Recruitment Language

Social Media Instagram Post Description and Caption

Description: Stock photo of a focus group. 2 red bubbles with text. Top left bubble reads: Reproductive Health Education. Bottom right bubble reads: Share Your Thoughts!

Caption: Do you want to share your thoughts about the reproductive health education offered through our office AND be entered in a drawing to win a $25 Target gift card? Join researchers to participate in a focus group discussing the reproductive health information provided in our sexual health education program. Whether you are familiar with our sexual health programming or have never used any of our sexual health programs, your opinion matters! If you're interested in participating in any of the focus group discussions, please visit this link for more information: [demographic survey link] (Note: the demographic survey will have the study information sheet attached to read before potential participants see the demographic questions. For more details, see Demographic Survey Questions.)

Social Media Instagram Story Description

This story consists of 3 slides. Each slide has a stock photo of a focus group with a red tint overlay. There is white text on each slide. Below is the text for each slide.

Slide 1: Reproductive Health Education. Share your thoughts on our sexual health programs!

Slide 2: Participate and be entered in a drawing to win a $25 Target gift card.

Slide 3: Join if: You are familiar with HWP's sexual health education OR You are unfamiliar with HWP's sexual health education

Slide 4: If familiar, join a focus group on: Monday, February 5, Noon-1 p.m. OR Thursday, February 8, 4-5 p.m.

Slide 5: If unfamiliar, join a focus group on: Monday, February 19, Noon-1 p.m. OR Thursday, February 22, 4-5 p.m.

Slide 6: If interested, please click the link for more info: [demographic survey link]

Flyer Language

Reproductive Health Education

Participate in focus groups and share your thoughts about the reproductive health education offered through the Office of Health and Wellness Promotion at IUPUI! Be entered in a drawing to win a $ Target gift card!

[QR code for demographic survey]

For more information, scan the QR code or follow this link [demographic survey link]

Peer Health Educator Email

Hello Peer Health Educators,

As you know, I am completing my MA and conducting a thesis project. This thesis project will be focusing on the peer health education program as it teaches about reproductive health. I will be conducting a "needs assessment" to understand the quality of reproductive health education included in our sexual health programming.

For my thesis, I would like to conduct a focus group with you all. Please read the study information sheet attached to this email and complete the demographic survey if you choose to participate in the study. You can find the survey here: [demographic survey link]

This focus group will take place during our normal weekly meeting time on November 27. However, I want to make this extremely clear: **you do not have to participate in this focus group. Participation is completely voluntary, and you will receive payment as usual for the weekly meeting time whether you attend the focus group or not.**

If you have any questions, please feel free to contact me at [researcher's email].

Thanks,

Anna

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Curriculum Vitae

Anna Catherine Comer

Education

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Concentration: Health Communication

Thesis: *"A lot of people want to know, they just have no idea how to ask": A needs assessment of a reproductive health peer education program"*

Advisor: Dr. Jennifer Bute

Committee Members: Dr. Maria Brann and Dr. Katharine Head

Bachelor of Arts May 2023

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Department of English

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Professional Experience

Graduate Student Employee of Health and Wellness Initiatives May 2023-May 2024

IUPUI Office of Health and Wellness Promotion

Peer Health Educator January 2022-May 2023

IUPUI Office of Health and Wellness Promotion

Graduate Mentor (Fundamentals of Speech Communication) January 2023-May 2023

IUPUI Department of Communication Studies

Life Health Sciences Intern August 2021-August 2022

Kids Healthcast Podcast – IU School of Medicine

Honors and Awards

IUPUI Graduate Student Employee of the Year Nominee and Honorable Mention (2024)

NASPA Gerardo Gonzalez Award for Graduate Student Service in Peer Education (2023)

Graduated with Highest Distinction (2023)

IUPUI School of Liberal Arts Dean's List 8 consecutive semesters (Fall 2019-Spring 2023)

IUPUI Honors College Chancellor's Scholarship (Fall 2019-Spring 2023)